



Bi-County Infrastructure Funding
Working Group

WSSC
WASHINGTON SUBURBAN SANITARY COMMISSION

Consultants' Report
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rfc
RAFTELIS
FINANCIAL CONSULTANTS, INC.

Table of Contents

Section 1: Executive Summary	2
1.1 Capital Funding Analysis	2
1.2 Finance Operational Review	2
1.3 Revenue Generation Structures and Practices	3
1.4 Customer Affordability Programs	3
Section 2: Introduction	4
Section 3: Capital Funding Analysis	7
3.1 Existing Debt Service Methodology	7
3.2 Debt Service Projections	8
3.3 Projections Under A Modified Debt Approach	8
3.4 Restructuring of Existing Debt	9
3.5 Recommendations	10
Section 4: Finance Operational Review	11
4.1 Approach	11
4.2 Operating Budgeting Review	11
4.3 Capital Budgeting Review	12
4.4 Conclusions	14
Section 5: Revenue Generation Structures and Practices	15
5.1 Analysis Approach	15
5.2 Capital Cash Needs	15
5.3 Annual Rate Revenue Requirements	16
5.4 Short-term Versus Long-term Funding of System Reconstruction	17
5.5 Pricing Objectives Prioritization	17
5.6 Status Quo	18
5.7 Non-Utility Revenue Alternatives	19
5.8 Utility Non-Rate Revenue Alternatives	20
5.9 Utility Rate Revenue Alternatives	21
5.10 Recommendations	23
Section 6: Customer Affordability Programs	25
6.1 Program Considerations	25
6.2 Recommendation	32
Appendix: Bi-County Infrastructure Funding Working Group Charter	

Section 1: Executive Summary

WSSC is one of many water and wastewater utilities across the country dealing with the issues of complying with more stringent regulatory requirements and replacing aging system infrastructure. In 2010, it re-established the Bi-County Infrastructure Funding Working Group (Working Group) to identify near-, medium- and longer-term options for obtaining access to alternative and/or less costly sources of revenue or methods of funding for operating and capital requirements in the context of the growing need to rehabilitate, upgrade and replace water and wastewater infrastructure and related facilities. The Working Group engaged Raftelis Financial Consultants and its subconsultants, Davenport & Company, LLC and SOA Financial, collectively the RFC Project Team, to assist in this process. This Consultants' Report documents the Project Team's approach and presents its recommendations to the Working Group, including:

1. Capital Funding Analysis
2. Finance Operational Review
3. Revenue Generation Structures and Practices
4. Customer Affordability Program

1.1 Capital Funding Analysis

A primary focus area for the Working Group was the use of alternative financial instruments and funding mechanisms. The objective of this analysis was to determine if cash could be freed up to help fund additional needs such as system reconstruction. Specifically, the Working Group wanted to look at the feasibility and potential benefits of alternative approaches to structuring existing and future debt. The analysis consisted of four major tasks:

- ◆ Analyzing the financial results of funding the capital program under WSSC's traditional financial approach;
- ◆ Analyzing the impact of structuring debt using longer maturity bonds – 30 year vs. 20 year amortization;
- ◆ Analyzing the benefit of a restructuring of a portion of WSSC's existing debt; and,
- ◆ Quantifying those results from the perspective of customer current and future rates and WSSC's overall financial position.

Recommendations from this analysis include issuance of 30 year debt for capital financing and adoption of specific financial policies that assure both short- and long-term financial benefits accrue to all utility water and sewer customers over time.

1.2 Finance Operational Review

This section discusses the care taken to ensure that WSSC is pursuing efficiencies in its operational finance area. The Working Group's goal is to assure the Commission that operations are being run in a prudent financial manner prior to investigating additional revenue streams to fund system reconstruction. The investigation included the operating budget process, the capital budget process, and the Commission's financial policies and practices.

The review indicated that WSSC incorporated internal processes that seek and implement operational efficiencies. WSSC is in line with best practices in the water and wastewater industry. Continued attention to these processes should assure the Commission that appropriate efficiencies are being vigorously pursued. WSSC may benefit from additional periodic targeted benchmarking to ensure that its financial processes are continuing to employ best practices in the industry. We have not identified any other specific analyses that need to take place as part of this review.

1.3 Revenue Generation Structures and Practices

WSSC faces a massive capital investment and associated debt for system reconstruction to address the growing need to rehabilitate, upgrade and replace water and wastewater infrastructure and related facilities. Feedback from utility stakeholders, presented in the Introduction section, indicated a desire to look into separating system reconstruction costs and recovering them through dedicated revenue streams. This section looks into how fees or charges may be structured. A separate volumetric charge was determined to be the most viable alternative based on a customer impact analysis. Recommendations include further analysis of the adequacy of the existing structure covering short-term costs and the addition and structure of a separate volumetric fee to recover costs specifically for System Reconstruction.

Among the Utility Non-Rate Revenue Alternatives noted in the June 15, 2011 Bi-County Infrastructure Funding Working Group Status Report was “Miscellaneous Revenue” from outside sources. WSSC is a well-established large water and wastewater utility with operations and assets located in two counties over a 1,000 square mile area. It has accumulated a broad foundation of material and human resources over a long period of time, including, for example, real estate, surplus and other facilities, and patents. The sale of certain assets may provide a one-time revenue benefit; other initiatives could potentially result in a continuing revenue stream and savings. Analysis of these revenue generating alternatives requires case-specific review, and the Project Team regards this detailed analysis as beyond the reasonable scope of this engagement; we recommend that WSSC take the necessary steps to evaluate these diverse outside revenue and cost-saving alternatives.

1.4 Customer Affordability Programs

Like WSSC, even the most efficient utilities face increasing costs as they confront the need to invest in their capital infrastructure and their operations in response to the combination of environmental regulations, aging infrastructure, system maintenance, technology and an aging workforce. These known and emerging issues are expected to confront utilities and their customers with a continuing challenge with respect to affordability. WSSC has an existing Customer Assistance Program funded through voluntary customer contributions and employee fundraising activities, and administered by the Salvation Army. The existing program is designed to provide assistance only when a customer is in the dire situation of having their service shut-off, and as a result, the program assists a limited number of customers. The Working Group and utility stakeholders have recognized that a more aggressive program could target economically disadvantaged customers and provide assistance with water and sewer bills. To this end, the Working Group requested a study to identify a Customer Affordability Program (CAP) structure that will achieve the objective effectively and efficiently. This section discusses alternatives for structuring an affordability program as well as specific considerations for WSSC as it incorporates affordability into its revenue generation objectives. Recommendations in this section include a framework upon which WSSC can structure a more robust CAP to assist economically disadvantaged customers.

Section 2: Introduction

The Washington Suburban Sanitary Commission (WSSC) is a bi-county state government agency providing water supply and wastewater treatment services throughout most of Montgomery and Prince George's counties, Maryland. WSSC established the Bi-County Infrastructure Funding Working Group (Working Group) in 2010 to identify near-, medium- and longer-term options for obtaining access to alternative and/or less costly sources of revenue or methods of funding for operating and capital requirements in the context of the growing need to rehabilitate, upgrade and replace water and wastewater infrastructure and related facilities. This purpose and the fundamentals of the Working Group are detailed in the Bi-County Working Group Charter provided in the Appendix. Its members include representatives of the WSSC commissioners, the General Manager/CEO, representatives of the Prince George's and Montgomery County legislative and executive branches, as well as WSSC management staff.

In November, 2010, the Working Group contracted with Raftelis Financial Consultants (RFC), an independent financial management consultant, to provide objective expertise, benchmarking, best practice and other measures of effectiveness, as well as economic, municipal and bond market analysis, related research and other management support required to facilitate sound decision-making based on a structured strategic review of current and alternative sources of revenue and methods of funding for the WSSC. The range of support to be available and provided at the client's discretion included, but was not limited to:

- ◆ Developing and presenting a proposed contractor work plan intended to achieve the Working Group objectives in a manner that is consistent with a realistic timeframe and budget, internal staff resource requirements, and schedule for providing deliverables;
- ◆ Assessing existing WSSC financial instruments and funding methods and assessing the appropriate balance of various means to fund capital improvements;
- ◆ Evaluating policies related to debt service and financial management;
- ◆ Reviewing the existing annual budget, and other financial practice, policy, and statutory parameters established by the State of Maryland and Prince George's and Montgomery Counties, the WSSC Commissioners and management;
- ◆ Analyzing types and appropriate levels of reserves associated with uses of capital;
- ◆ Evaluating exogenous factors such as regulatory actions, conservation, growth and affordability.
- ◆ Assisting in identifying and delineating the appropriate framework of WSSC financial policy and pricing objectives;
- ◆ Conducting a structured environmental scan of alternative financial strategies, programs and instruments with the potential for providing additional revenues or savings, including regional and national benchmarking;
- ◆ Evaluating risks associated with current and alternative rates and rate structures;
- ◆ Identifying and evaluating potential capital or operating program/project investments, like automated meter reading, that may yield additional revenues or savings;
- ◆ Assessing impediments to the implementation of proposed actions, programs or strategies; and,
- ◆ Providing briefings or testimony pertaining to analyses, proposals and recommendations that are a product of the engagement.

RFC, along with its subconsultants Davenport & Company, LLC and SOA Financial, collectively the RFC Project Team, prepared a Project Approach to meet the objectives of the Working Group. The work plan was divided into four major areas:

- ◆ Capital Funding Analysis;
- ◆ Finance Operational Review;
- ◆ Revenue Generation Structures and Practices; and,
- ◆ Customer Affordability Programs.

The RFC Project Team also interviewed internal utility stakeholders (WSSC Staff and Commissioners) as well as external stakeholders (Prince George's and Montgomery County elected officials) to incorporate their opinions on the direction of the Working Group's efforts. External stakeholder feedback is summarized below.

Perception of WSSC

- ◆ Stakeholders were generally positive on their perception of WSSC though some mentioned that has not always been the case;
- ◆ Management team has trust of stakeholders;
- ◆ There was concern over ability to meet goals with respect to renewal projects but recent efforts are improving credibility; and,
- ◆ All agree that infrastructure renewal is an issue needing attention.

Funding for Infrastructure Renewal and Other Needs

- ◆ Stakeholders showed no support for any tax funding alternatives (property tax, sales tax, income tax, tourism tax);
- ◆ Most indicated a preference for a utility based alternative such as a volumetric rate or fixed fee;
- ◆ Most thought the previous effort failed due to poor communication and neglect of the impacts on low income customers;
- ◆ No one had strong feelings as to how the revenue recovery should be structured and all seemed open to an “equitable” solution;
- ◆ Some indicated a strong preference for a mechanism that differentiates among customers in the residential class;
- ◆ Most expressed that they would consider de-coupling the rate structure issue from the infrastructure renewal issue and that they would prioritize the latter; and,
- ◆ Most saw the wisdom in designating a funding source for infrastructure renewal and separating funds exclusively for that purpose.

Affordability Program

- ◆ All expressed some interest in considering a more aggressive Affordability Program that could target low income customers;
- ◆ All acknowledged voluntary contributions in the existing WSSC program are probably insufficient and that WSSC should/may have to consider a rate funded subsidization program; and,
- ◆ An effective Affordability Program would help reduce political opposition to revenue increases from rates and fees.

Other Considerations

- ◆ All expressed the expectation that reason and cooperation would be part of this discussion;
- ◆ The Counties seem to be working better together;
- ◆ Some seemed to want more frequent updates on the decision-making process than others; and,
- ◆ Most agreed that if the County stakeholders were in agreement, all other obstacles could be overcome.

Feedback from these stakeholder interviews will be incorporated into the recommendations resulting from this study.

This report summarizes the Project Team’s methodology and conclusions drawn from its analysis. The report also identifies recommendations WSSC should pursue to further its stated objective of fully funding system reconstruction costs.

Section 3: Capital Funding Analysis

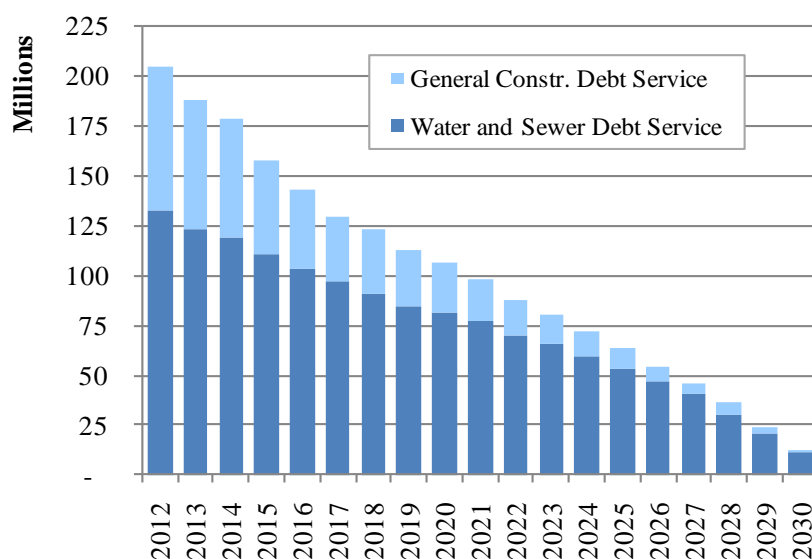
A primary focus area for the Working Group was the use of alternative financial instruments and funding mechanisms to determine if cash could be freed up to help fund additional needs such as system reconstruction. The Working Group looked at the feasibility and potential benefits of alternative approaches to structuring existing and future debt.

- ◆ The analysis consisted of four major tasks. The RFC Project Team analyzed the financial results of funding the capital program under WSSC's traditional financial approach, as well as the impact of structuring debt using longer maturity bonds – 30 year vs. 20 year amortization. The effort included an analysis of the benefit of a restructuring of a portion of WSSC's existing debt. The results were quantified from the perspective of customer current and future rates and WSSC's overall long-term financial position.

3.1 Existing Debt Service Methodology

Historically, WSSC has employed 20-year General Obligation (GO) bonds to fund the capital program. GO bonds are backed by WSSC taxing authority, but debt service is paid through water and sewer revenues. Debt service on existing obligations is shown in Exhibit 1. General Construction Debt is incurred for service extensions and is recovered through Front Foot Benefit Charges and Connection Fees from new customers connecting to the systems. General Construction Debt and associated Front Foot Benefit Charges are becoming less prevalent as a mechanism for WSSC's service extension financing. Water and Sewer Debt is paid primarily through customer rates. This Debt Service analysis and resulting alternatives focus exclusively on Water and Sewer Debt.

Exhibit 1: *Existing Debt Service*



Shorter term debt has the advantage of minimizing interest costs over the life of the bond. However, longer term debt may reduce total cost to customers in the near term because a portion of the cost of

the current debt service is extended to and absorbed by future customers who will continue to rely on the system for services in the future (beyond the current 20 year term of existing debt).

3.2 Debt Service Projections

Capital needs will continue at WSSC primarily to meet federal and state government regulations and provide for adequate system reconstruction. Capital Improvement Plan (CIP) projections are shown in Exhibit 2. System reconstruction, along with additional needs identified in the Asset Management Plan, is shown as well to complete the capital requirements picture. Based on needs identified between 2012 and 2017, WSSC has been able to project an annual capital expenditure baseline after 2017.

Exhibit 2: *Capital Expenditure Projections (shown in 2012 dollars)*

	Base Case
CIP Expenditures (State defined)	
(2012-2017 total)	\$ 1,390,231,200
System Reconstruction (all other capital)	
(2012-2017 total)	\$ 1,133,542,000
Annual Capital Expenditures after 2017	\$ 570,142,933

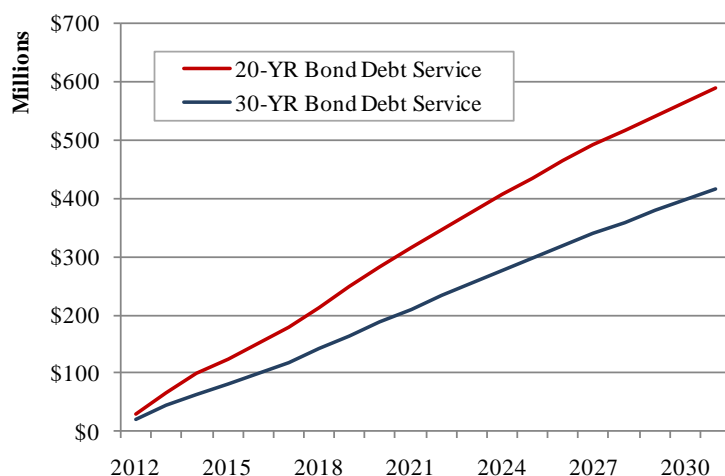
Source: WSSC Asset Management Plan

Exhibit 2 shows total capital needs between 2012 and 2017 exceed \$2.5 billion. Beyond the 2017 planning horizon, capital needs are still projected at \$570 million annually in 2012 dollar terms.

3.3 Projections Under A Modified Debt Approach

The Working Group looked at options for financing planned new debt under the existing 20-year approach and under an alternative 30-year level debt service approach. In this analysis, under the 30-year approach, it was assumed that a 1.25x debt service coverage target was maintained. “Debt service coverage” is generally the amount of cash flow available after operating expenses have been paid to meet annual interest and principle payments on debt. A debt service coverage target of 1.25x is a benchmark for revenue bonds based on bond covenants for revenue bonds issued by water and wastewater utilities. Establishing a debt service coverage target of 1.25x provides a financial cushion, allows cash contributions in the form of Pay-Go funding, which will lower debt issuance, and benefits customers through lower water and sewer rate increases in the future. A comparison of the results under the two approaches is shown in Exhibit 3.

Exhibit 3: *30 Year vs. 20 Year Amortization Results (of the above capital financing)*

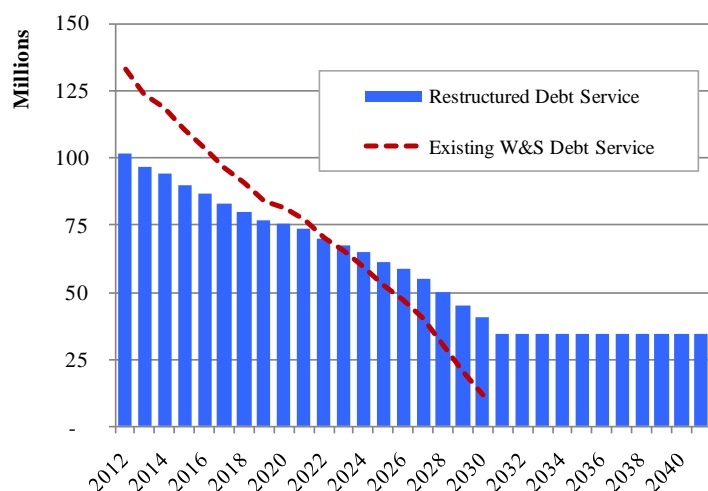


Under the assumptions shown in this exercise WSSC would issue new bonds with a 30-year level debt service structure and allocate a portion of the debt service savings to Pay-Go funding (financing expenditures with funds available rather than borrowed). WSSC would have the opportunity to produce \$2.0 billion in total debt service payment reductions over 20 years. These reductions would then be utilized to further reduce future debt issuance and enhance the utility’s financial position as long as WSSC and its stakeholders exercise discipline in applying savings from a modified debt approach to fund Pay-Go capital to address infrastructure costs. By reducing borrowing and debt service as well as funding Pay-Go capital, WSSC will establish a financial cushion and improve financial stability, while simultaneously lowering future water and sewer rate increases.

3.4 Restructuring of Existing Debt

The Working Group looked at additional benefits that may be available through the partial restructuring of a portion of WSSC’s existing water and sewer debt in connection with issuance of new bonds over a 30 year period. This structure results initially in lower annual payments on the existing debt as shown in Exhibit 4 below:

Exhibit 4: *Partial Restructuring of Existing Water and Sewer Debt*



In Exhibit 4, the savings that accrue in the short term appear to be offset by debt service in later years. However in an atmosphere with a continuing capital program and continuing financing needs, the 30-year approach captures the short term savings without debt service in future years ever exceeding annual debt service under a 20-year approach. Control of annual debt service under the 30-year approach is contingent upon use of savings for Pay-Go capital to reduce future borrowing needs.

In this exercise, restructuring a portion of the existing debt while issuing new bonds with a 30-year level debt service structure has the opportunity to produce \$2.2 billion in total debt service payment reductions over 20 years, which is an additional \$200 million compared to just utilizing the 30-year approach for new bonds. However, no additional benefits would be available to reduce future water and sewer rate increases when compared to utilizing the 30 year approach for new bonds. With a partial restructuring, WSSC could achieve a 1.25x debt service coverage target on all debt, which would provide improved financial stability.

3.5 Recommendations

Based on these findings, we recommend the Commission consider adding four financial policies:

- ◆ Issue its bonds with 30 year level debt service amortization;
- ◆ Maintain debt service coverage of 1.25x;
- ◆ Apply excess cash flow generated by debt service coverage to establish reserves at adequate levels with mandatory Pay-Go capital funding to reduce borrowing; and,
- ◆ Maintain reserves of 365 days cash on hand (benchmarking median) or some other tangible measure in order to mitigate cash flow fluctuations.

Implementation of these financial policies will allow WSSC's staff to make recommendations during the annual budget review with regard to customer rates that will be consistent with these policies. Adoption of these policies will enhance funding of infrastructure projects while reducing pressure on customer rates. The modest increase in debt service coverage will improve financial operations, enhance liquidity, reduce reliance on debt, and position WSSC to better meet unexpected financial challenges. **However, failure to exercise discipline in utilizing the debt service savings for Pay-Go funding of the capital projects will likely result in sizeable future rate increases.**

While we do not have a recommendation that WSSC restructure a portion of its existing debt over a 30 year period, we recognize there are potential benefits. These benefits include additional funds available for Pay-Go capital and WSSC immediately reaches the 1.25x coverage target due to a large reduction in debt service.

However, along with these benefits, there are also costs. The restructuring will provide a reduction in interest expense in the early years, but will also add proportionally more interest expense to the long end of WSSC's debt service, addressed in sections 3.3 and 3.4. There will also be an economic cost of the transaction, which will vary depending on the size of the restructuring.

Section 4: Finance Operational Review

The previous section discussed opportunities to reduce annual cash needs in the capital financing area. This section discusses the care taken to ensure that WSSC is pursuing efficiencies in its operational finance area. In conducting the financial operational review as a part of this engagement, the Working Group’s goal is to assure the Commission that operations are being run in a prudent financial manner prior to investigating additional revenue streams to fund system reconstruction. The investigation included the operating budget process, the capital budget process, and the Commission’s financial policies and practices.

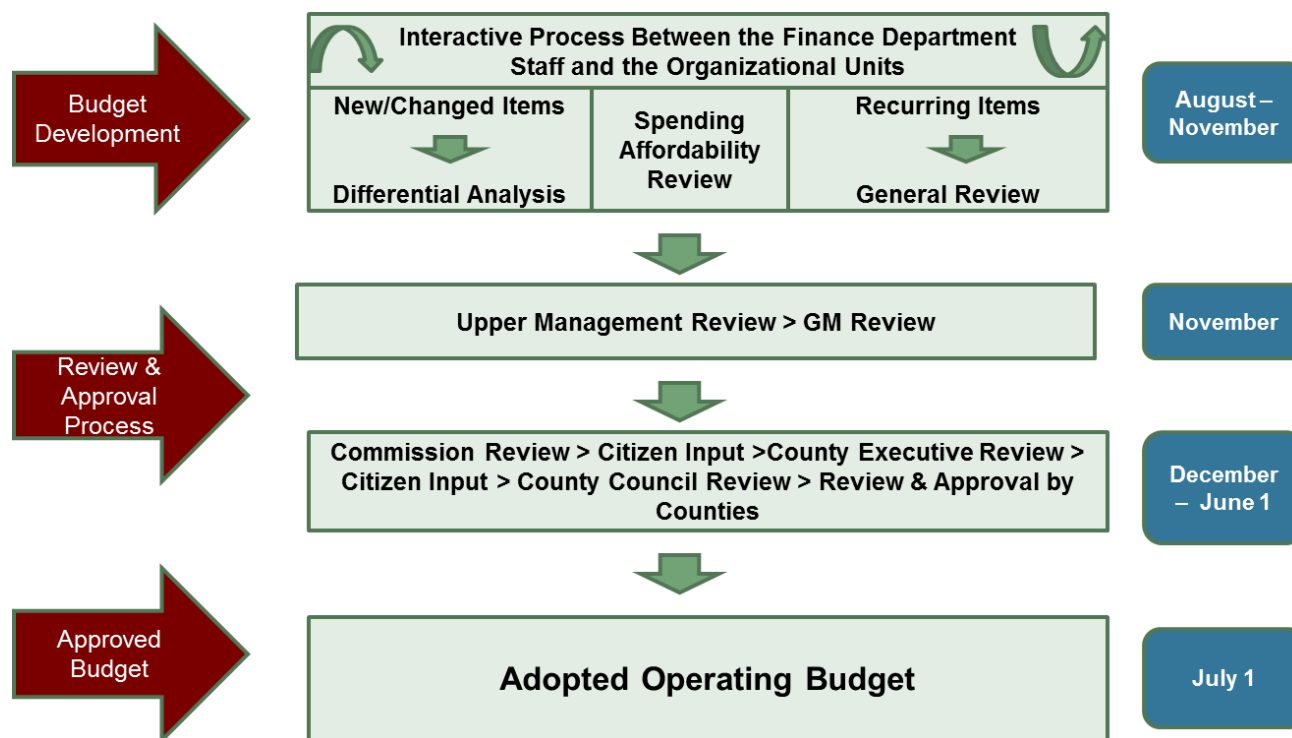
4.1 Approach

In conducting the investigation, the “Qualitative” aspects (processes, systems, and activities) of the operational finance area were first reviewed to provide a sound general understanding before the “Quantitative” aspects (budget performance, expenses, expenditure forecasts, and other financial measures) were reviewed and analyzed. The following sections present our investigations and major findings.

4.2 Operating Budgeting Review

The first step in the review was an investigation of the operating budget. A flow diagram of the operating budget process is shown below in Exhibit 5.

Exhibit 5: *Operating Budget Process*



The review of the operating budget found that annual cost increases were within industry standard ranges (as measured by the AWWA/RFC Biennial Water and Wastewater Rate Survey). Major observations included:

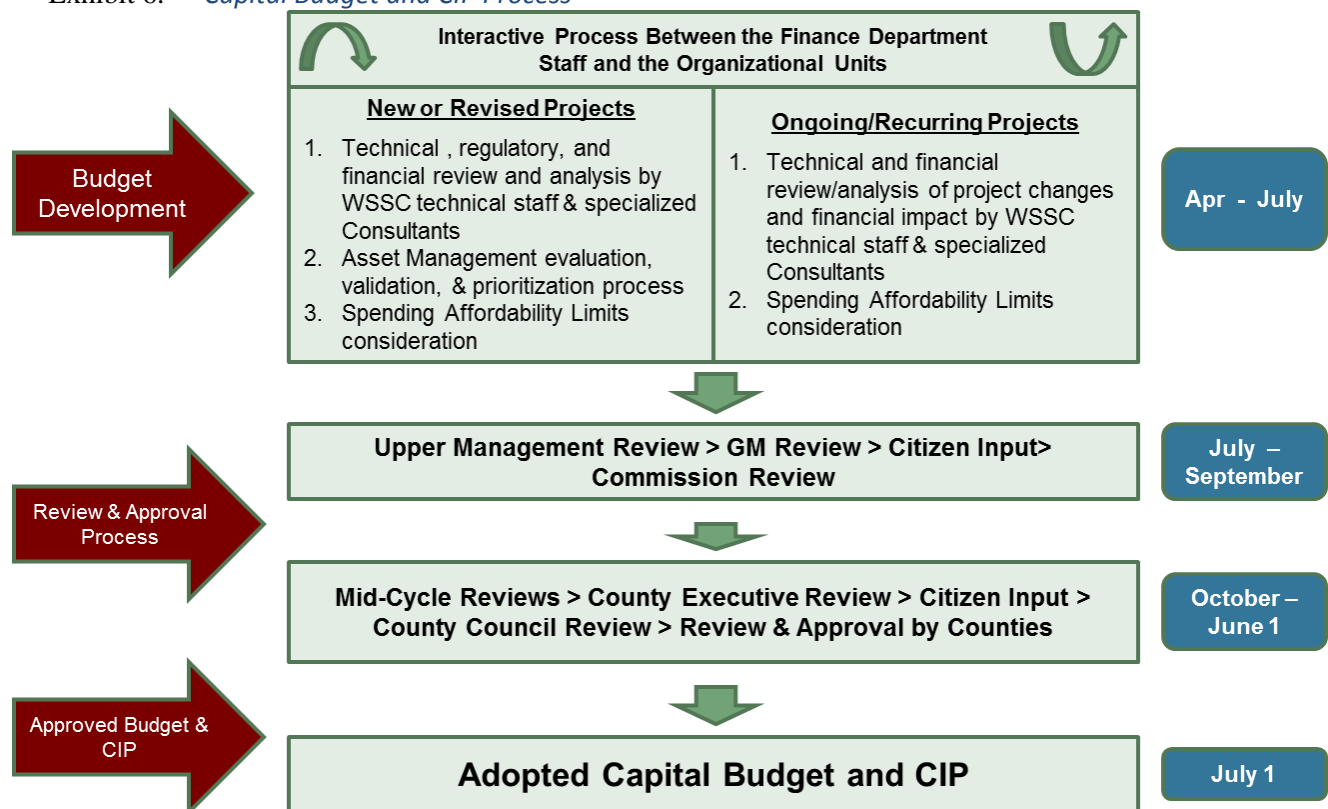
- ◆ The budget is relatively stable (gradually increasing, but minimal fluctuation in amount and composition);
- ◆ Major drivers include debt service, personnel, regional sewage disposal, and utilities;
- ◆ Use of budget line-item controls is effective in reducing cost and improving budget performance;
- ◆ The Spending Affordability process is effective in the budget process by reducing actual budgets and associated rate increases, however, it introduces tension with respect to ensuring adequate support for operations and capital programs;
- ◆ Substantial communication and information flow exists between the Finance Department, other departments and the two counties;
- ◆ Accounting systems provide effective tracking and reconciliation of budget and GAAP figures;
- ◆ Management information systems provide detailed and timely information, and efforts are being made to make them more robust; and,
- ◆ Major operating budget challenges are:
 - Obtaining well detailed information from all departments;
 - Estimating expenditures for items with significant uncertainties;
 - Impact of conservation on projecting revenues; and,
 - Affordability Analysis process requires additional effort on the part of WSSC and Counties' staffs to achieve the objectives of rate setting.

WSSC's operation is consistent with industry best practices. In comparison to peer utilities, benchmarking found that WSSC's operating cost rate, staffing, and total cost per million gallons delivered were at or below industry averages. The benchmarking study also indicated that debt service cost in relation to total agency expenditures is slightly above industry average.

4.3 Capital Budgeting Review

Next, the analysis turned to the capital budget and Capital Improvement Plan (CIP). A flow diagram of the Capital Budget process is shown below in Exhibit 6.

Exhibit 6: *Capital Budget and CIP Process*



Major observations included:

- ◆ The budget involves complex issues and development is labor intensive;
- ◆ The CIP is relatively large and has potential to increase significantly;
- ◆ Major drivers include regulatory projects and other DC Water Blue Plains cost (e.g. Enhanced Nutrient Removal and Sewer System Overflows), and the WSSC reconstruction program;
- ◆ There is a multi-level review process which requires significant coordination;
- ◆ Use of budget line-item controls is effective in reducing cost and improving budget performance;
- ◆ Spending Affordability limits are effective in reducing budget amounts and rate impacts;
- ◆ Asset Management Program has the potential to significantly enhance operating and capital planning and budgets, as well as maintenance programs and project delivery;
- ◆ Substantial communication and information flow exist between the Finance Department, other departments, and the two counties; and,
- ◆ Major capital budget process challenges are:
 - Projecting exact DC Water Blue Plains cost;
 - Capital project schedule changes and delays; and,
 - Permitting process associated with the Consent Decree.

Benchmarking found that WSSC per capita capital costs were in line with industry averages. Further, implementation of a comprehensive asset management plan is consistent with industry best practices for stewardship of system capital components.

4.4 Conclusions

Exhibit 7 below shows that WSSC is in line with best practices in the water and wastewater industry with respect to financial and fiscal management.

Exhibit 7: *WSSC Best Practices Scorecard*

Financial/Fiscal Management Best Practices Indicators *	Yes	No
Financial Planning (regular short-term and long-term planning & documentation)	√	
Financial Budgeting (development and communication of annual budget documents)	√	
Financial Accounting (use of GAAP, systems, and preparation of statements)	√	
Financial Reporting (development & communication of financial reports and updates)	√	
Debt Management (written procedures to determine timing and size of issues)	√	
Reserve Management (written procedures to identify target levels to meet requirements)	√	
Rate Making Policies and Process (performance of regular rate reviews)	√	
Asset Management Plan ** (integrative optimization process that facilitates the minimization of the life cycle cost of owning and operating infrastructure assets)	√	

* AWWA and AwwaRF, *Selection and Definition of Performance Indicators for Water and Wastewater Utilities* (2004)

** NACWA *Financial Survey* (2008)

The review indicated that WSSC incorporated internal processes that seek and implement operational efficiencies. Continued attention to these processes should assure the Commission that appropriate efficiencies are being vigorously pursued. WSSC may choose to do some additional targeted benchmarking to ensure that its financial processes are employing best practices in the industry. We have not identified any other specific analyses that need to take place as part of this review.

Section 5: Revenue Generation Structures and Practices

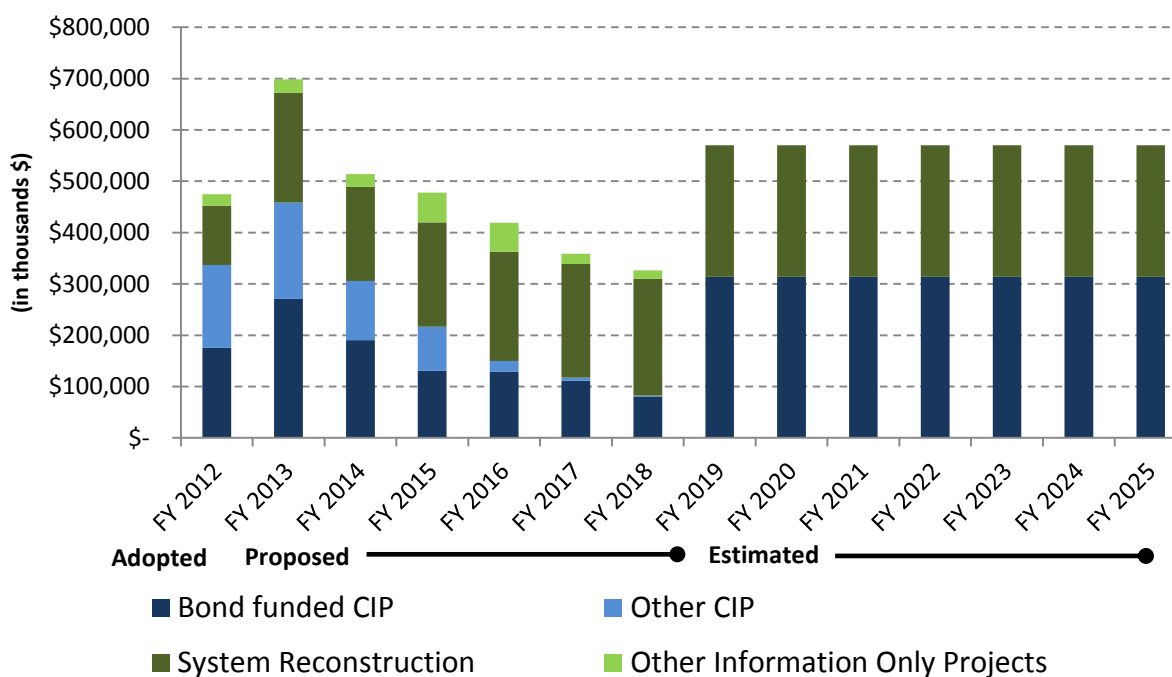
5.1 Analysis Approach

WSSC is implementing large capital construction and asset management plans to address the growing need to rehabilitate, upgrade and replace water and wastewater infrastructure and related facilities. Feedback from utility stakeholders, presented in the Introduction section, indicated a desire to look into separating system reconstruction costs and recovering them through dedicated revenue streams. This section looks into how fees or charges may be structured.

5.2 Capital Cash Needs

WSSC maintains and updates a capital improvement program forecast for the current fiscal year and five subsequent years. The capital financing analysis presented in Section 3 used the FY 2012 CIP, which included a capital improvement program through FY 2017. Over the course of the project, the FY 2013 CIP became available and was used for subsequent analysis. Based on the October version of the FY 2013 CIP forecast, WSSC plans to spend approximately \$3.27 billion on capital projects through FY 2018. Nearly \$1.4 billion is scheduled to address system reconstruction issues. Exhibit 8 shows the annual capital cash needs for the forecast broken down by regular CIP (Bond funded CIP), Other CIP, System Reconstruction, and Other Information Only Projects. Beyond FY 2018, CIP spending is predicted to be approximately \$570 million per year (Exhibit 2), approximately 45% of which will be spent on System Reconstruction. The forecast includes an 80% annual spend out for regular CIP projects and 100% annual spend out on system reconstruction projects.

Exhibit 8: *Annual Capital Cash Needs by Type*



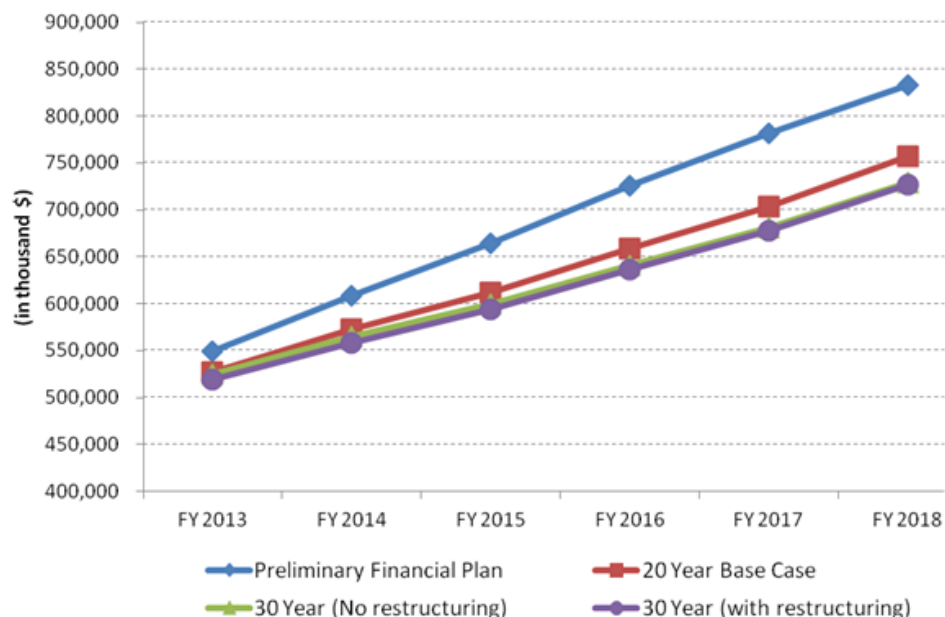
5.3 Annual Rate Revenue Requirements

The CIP forecasts for system upgrade and expansion and for system reconstruction represent considerable spending by WSSC in the next six years. While most of this will be funded with General Obligation bonds, the debt service associated with \$3.27 billion over six years will add significantly to the annual revenue requirements for the utility. Exhibit 9 presents the trajectory of annual rate revenue requirements through 2018 based on the following debt financing scenarios:

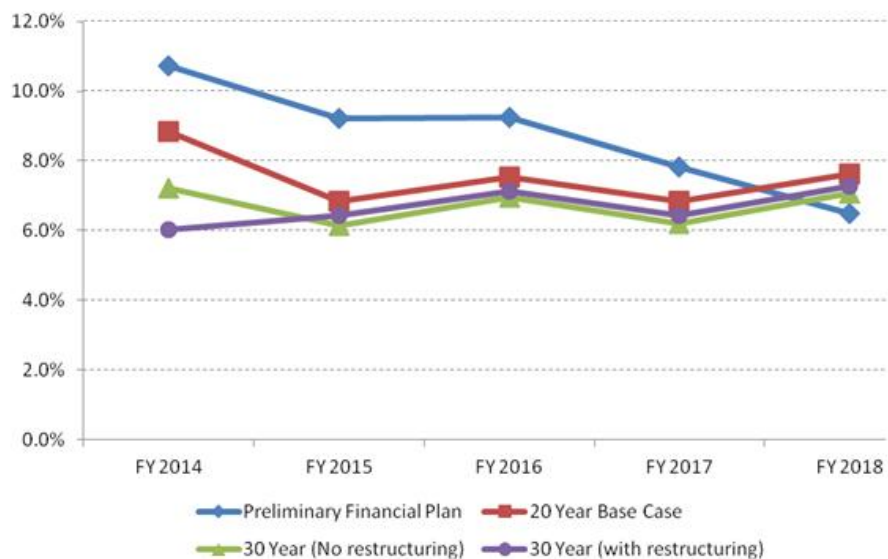
- ◆ Preliminary Financial Plan: FY 2013 preliminary financial plan and CIP;
- ◆ 20 Year Base Case: Baseline scenario used for the capital funding analysis based on the FY 2012 financial plan and CIP;
- ◆ 30 Year (no restructuring): Scenario based on the FY 2012 financial plan and CIP in which WSSC implements 30 year revenue bonds for all future issuances, but does not refinance and restructure any existing debt; and,
- ◆ 30 Year (with restructuring): Scenario based on the FY 2012 financial plan and CIP in which WSSC implement 30 year revenue bonds for all future issuances and refinances and restructures a portion of existing debt.

Rate revenue requirements are the level of revenue that will need to be recovered from user charges, representing the annual revenue requirements less any miscellaneous revenue from fees, interest earnings, etc. Even in the most advantageous financing scenarios, rate revenue requirements are expected to increase by \$200 million over the forecast period.

Exhibit 9: *Trajectory of Annual Rate Revenue Requirements*



The examples in Exhibit 10 demonstrate sets of annual rate revenue increases to recover the level of rate revenue requirements presented in Exhibit 9. These rate increases are not being recommended for implementation; these are examples for illustration purposes only of what WSSC may be facing in the near term.

Exhibit 10: *Trajectory of Rate Revenue Increases – For Illustration Purposes Only*

5.4 Short-term Versus Long-term Funding of System Reconstruction

WSSC realizes that increasing the term of its borrowing can generate additional cash flow that can help fund system reconstruction needs. After reviewing the potential savings from debt financing scenarios in Section 3, it now looks likely that this savings and prior forecasted preliminary rate adjustments could completely meet projected capital expenditures in the short-term. In other words, it is likely the system reconstruction funding needs will not increase the rate burden to the customer immediately and in the short term as once speculated. However, the Working Group is still looking at other methods of revenue generation to cover funding system reconstruction for the long term that may better communicate to the stakeholders the importance and true costs of system reconstruction. That process is covered in the remainder of this section.

5.5 Pricing Objectives Prioritization

An invaluable exercise for utilities is to prioritize a set of pricing objectives to establish a more cohesive direction for the utility's rate structure and financial planning. The Working Group went through an exercise to help prioritize WSSC's pricing objectives. Twelve common objectives were ranked from "essential" to "least important" based on the collective rankings of Working Group members. Highest priority objectives are shown below in Exhibit 11, circled in red.

Exhibit 11: *Pricing Objectives Prioritization Results*

Classification	Rank	Objective	Score
Essential	1	Financial Sufficiency	60
	2	Defensibility	56
	3	Revenue Stability	53
	4	Rate Stability	46
	5	Affordability to Disadvantaged Customers	45
	6	Minimization of Customer Impacts	42
	6	Cost of Service Based Allocations	42
	8	Equitable Contributions from New Customers	37
	9	Ease of Implementation	31
	10	Simple to Understand and Update	29
	11	Conservation Initiatives	23
Least Important	11	Economic Development	23

While this exercise was initially intended to prioritize objectives to identify alternative rate structures for the current rate structure, the Working Group conceded that funding for system reconstruction was a more pressing need. Stakeholders commented that it seemed reasonable to develop a new, designated funding source for system reconstruction, and that would allow decoupling between the new funding source and the existing rate structure. In short, a new funding source could be developed that optimized priority pricing objectives while the appropriate redesign of the existing rate structure could be deferred for future consideration. The list below introduces the possibilities under consideration for funding system reconstruction, which are provided in more detail in following subsections.

- ◆ Status Quo;
- ◆ Non-Utility Revenue Alternatives;
- ◆ Utility Non-Rate Revenue Alternatives; and,
- ◆ Utility Rate Revenue Alternatives.

5.6 Status Quo

WSSC currently funds the bulk of its annual operating and capital cash needs through its tiered volumetric rate structure for water and sewer service. Since potential savings from debt financing alternatives could pay for system reconstruction in the short-term, system reconstruction costs could continue to be rolled up in the overall revenue requirements and recovered through the current rate structure. The rate structure is shown in Exhibit 12. These tiered rates are based on customer water usage (residential customers billed quarterly). In addition, WSSC residential customer bills include an Account Maintenance Fee of \$44/year to cover the costs of quarterly meter reading, billing and collections.

Exhibit 12: WSSC Water and Sewer Rate Schedule (effective July 1, 2011)

Average Daily Consumption by Customer Unit During Billing Period(Gallons Per Day)	1-Jul-11 Water Rate Per 1,000 Gallons	1-Jul-11 Sewer Rate Per 1,000 Gallons	1-Jul-11 Combined Rate Per 1,000 Gallons
0 - 49	\$2.82	\$3.27	\$6.09
50 - 99	3.16	3.81	6.97
100 - 149	3.46	4.47	7.93
150 - 199	3.89	5.15	9.04
200 - 249	4.53	5.61	10.14
250 - 299	4.91	6.07	10.98
300 - 349	5.19	6.48	11.67
350 - 399	5.42	6.79	12.21
400 - 449	5.63	6.94	12.57
450 - 499	5.77	7.17	12.94
500 - 749	5.88	7.31	13.19
750 - 999	6.03	7.47	13.5
1,000 - 3,999	6.14	7.79	13.93
4,000 - 6,999	6.29	7.97	14.26
7,000 - 8,999	6.36	8.09	14.45
9,000 - Greater	6.48	8.3	14.78

* Flat Sewer Rate Charge - \$80.00 per quarter

This is likely the best avenue for WSSC in the short-term before a full cost of service study can be carried out that would ensure accuracy of segregated costs into the appropriate cost pools necessary to derive a new rate structure that may be more in-line with WSSC's results from the pricing objectives exercise, and that would establish a separate charge or fee for system reconstruction related costs. The Working Group has requested that the consultants undertake additional analysis of the current rate structure and various options for funding system reconstruction through separate charges or fees.

5.7 Non-Utility Revenue Alternatives

The first group of new funding alternatives evaluated was composed of non-utility alternatives – revenue sources outside the system of utility rates and charges. Examples of non-utility alternatives are:

- ◆ General Fund Transfers;
- ◆ Property/Ad Valorem Taxes;
- ◆ Local Income Taxes;
- ◆ Sales Taxes;
- ◆ Hotel/Tourism Taxes; and,
- ◆ Other Non-Utility Revenue.

External stakeholders were consistent in their criticism of these alternatives. In general, they thought system reconstruction was a utility problem that demanded a utility-funded solution. They also thought tax revenues were stretched to the limit in the current economic environment and that taxes did not represent an equitable solution as they did not serve as an appropriate proxy for use of the utility systems. The evaluation of non-utility revenue alternatives is shown below in Exhibit 13. As a result of

the overall negative feedback, the Working Group is no longer considering non-utility revenue alternatives as viable alternatives.

Exhibit 13: *Rating the Alternatives – Non-Utility Revenue*

Pricing Objectives	General Fund Transfers	Property/ Ad Valorem Tax	Local Income Tax	Local Sales Tax	Hotel/ Tourism Tax	Other Non-Utility Revenue
Financial Sufficiency	O	O	O	O	O	O
Defensibility	—	—	—	—	—	—
Revenue Stability	O	O	O	O	O	O
Rate Stability	+	+	+	+	+	+
Affordability to Disadvantaged Customers	O	O	O	O	O	O
Minimization of Customer Impacts	+	+	+	+	+	+
Cost of Service-based Allocations	—	—	—	—	—	—
Stakeholder Input	—	—	—	—	—	—
Industry Standard Practices	—	—	—	—	—	—

+: *Contributes to achieving pricing objective*
O: *Neutral in achieving pricing objective*
—: *Detracts from achieving pricing objective*

5.8 Utility Non-Rate Revenue Alternatives

The next group of new funding alternatives considered was composed of non-rate revenue alternatives – revenue sources within the utility fee structure, but outside the rate structure seen on the customer’s quarterly bill. Examples of utility non-rate revenue alternatives are:

- ◆ Front Foot Benefit Charges;
- ◆ System Development Charges;
- ◆ Maryland Bay Restoration Fee;
- ◆ Sale of Assets; and,
- ◆ Miscellaneous Revenues from Entrepreneurial Activities (for outside services).

External stakeholders had mixed reactions to these alternatives. Front Foot Benefit Charges and System Development Charges are currently applied only to extending services to new customers. The Maryland Bay Restoration Fee would have to be modified at the State level in order to re-task funds from Chesapeake Bay restoration to system reconstruction. Miscellaneous revenues could help bridge the funding gap assuming they generated a consequential amount of revenue. Sale of assets could provide a one-time revenue benefit but these options would require consideration of the Commission as well as case-specific analysis and a long-term management strategy. The evaluation of non-rate revenue alternatives is shown below in Exhibit 14.

Exhibit 14: *Rating the Alternatives – Non-Rate Revenue*

Pricing Objectives	Front Foot Benefit Charge	System Development Charge	Maryland Flush Tax	Misc. Revenues (fees & outside services)	Sale of Assets (as-available basis)
Financial Sufficiency	—	—	O	—	?
Defensibility	+	+	O	O	+
Revenue Stability	O	O	—	O	+
Rate Stability	+	+	+	O	+
Affordability to Disadvantaged Customers	O	O	O	O	O
Minimization of Customer Impacts	+	+	+	O	+
Cost of Service-based Allocations	—	—	O	O	O
Stakeholder Input	O	O	—	O	?
Industry Standard Practices	O	—	O	—	O

+: *Contributes to achieving pricing objective*
O: *Neutral in achieving pricing objective*
—: *Detracts from achieving pricing objective*

After the initial assessment, detailed above, only sale of assets and miscellaneous revenues from entrepreneurial activities are being seriously considered to recover revenue for system reconstruction. Entrepreneurial activities may be easy to implement and be effective in demonstrating fiscal responsibility, but the net revenue would most likely be minimal compared to the annual debt costs for system reconstruction. Sale of assets, such as capacity at Blue Plains, may represent a cash infusion that could be used to offset future capital needs and capital spending obligations, but without approaching other jurisdictions and beginning a negotiation process, the level of additional funds and the timing of availability are currently unknown. The Commission can assign Staff to continue exploring these two options for additional revenue, but should not rely on these for funding system reconstruction until revenue from such sales or services can be quantified.

5.9 Utility Rate Revenue Alternatives

The final group of new funding alternatives considered was composed of rate revenue alternatives – additional revenue sources seen on the customer’s quarterly bill. Examples of rate revenue alternatives are:

- ◆ Uniform Volumetric Charge;
- ◆ Fixed Fee (scaled by an appropriate measure of customer benefit); and,
- ◆ Franchise Fee (a percentage amount added to the bill).

External stakeholders had more positive reactions to these alternatives. The Working Group agreed that rate alternatives seemed like the most equitable method of system reconstruction funding since these better reflect a customer’s use of the utility system. Adding a new fee or charge to the quarterly bill would keep the importance of system reconstruction in front of the customer base. These rate alternatives also have the advantage of being scalable to address the desire to differentiate among large and small residential customers. The evaluation of rate revenue alternatives is shown below in Exhibit 15.

Exhibit 15: *Rating the Alternatives – User Rates*

Pricing Objectives	Current Rates	New Franchise Tax	New Uniform Volumetric Charge	New Graduated Fixed Charge
Financial Sufficiency	O	O	O	+
Defensibility	—	—	+	+
Revenue Stability	—	—	+	+
Rate Stability	O	O	O	O
Affordability to Disadvantaged Customers	+	+	—	—
Minimization of Customer Impacts	+	+	—	+
Cost of Service-based Allocations	—	—	+	+
Stakeholder Input	O	O	O	O
Industry Standard Practices	—	—	+	+

+: Contributes to achieving pricing objective
O: Neutral in achieving pricing objective
—: Detracts from achieving pricing objective

Of the utility rate revenue alternatives, the Working Group identified the fixed fee or the uniform volumetric charge as the most viable alternatives for alternative revenue generation to fund System Reconstruction. In order to develop a preference for one of these alternatives, the Working Group asked for additional analysis to project the magnitude of customer impacts.

5.9.1 Rate Revenue Alternative Analysis

RFC conducted a preliminary analysis on the approaches described above. The analysis began with the most recent WSSC financial plan and then segregated System Reconstruction costs from other CIP capital. The System Reconstruction costs could then be recovered by a special charge, either a fixed fee or volumetric charge, determined by forecasted units of service. The number of accounts by meter size was forecasted to derive the fixed fee, and similarly, units of metered consumption were forecasted for the calculation of the volumetric charge. The model then removed revenue for System Reconstruction from the total revenue requirements recovered through existing User Charges. As a result, existing User Charges had to be reduced across the board. The reduced User Charges and the special System

Reconstruction Charge (fixed or volumetric) were used to calculate projected customer impacts at various levels of consumption and meter sizes.

5.9.2 Projected Customer Impacts

RFC presented the sample customer impacts to the Working Group. The fixed fee alternative resulted in high impacts, on a percentage basis, for low volume customers. In addition, the Working Group noted that a fixed fee concept did not allow customers to mitigate bills through controlling consumption. The Working Group expressed a preference for a separate volumetrically based charge. While designed to equitably recover an appropriate level of revenue determined by WSSC for System Reconstruction, a volumetric charge would allow a customer some control over increases in the cost of water and wastewater service. A volumetric approach also addresses Stakeholder feedback that the chosen methodology should differentiate among residential customers based on their use of the utility system. The impact analysis modeled a uniform volumetric charge, but the exact design and implementation of a volumetric charge would be at the discretion of WSSC.

5.10 Recommendations

The Working Group has accepted and discussed the revenue generation alternatives analysis. The Working Group has narrowed the viable options for recovering system reconstruction costs. These include:

- ◆ *Maintain Existing Rate Structure* – because of the considerable savings generated from the alternative debt financing scenarios, system reconstruction costs could be recovered through the existing rate structure without rate increases above those already projected. This would allow WSSC to continue operating without any changes to how customers are assessed rates and fees.
- ◆ *Separate System Reconstruction Charges from Overall Rates and Fees* – another option is to segregate system reconstruction costs from the overall utility revenue requirements and implement a separate fee or charge to recover the level of revenue necessary to fund system reconstruction. [Note: Many External Stakeholders indicated a preference for de-coupling system reconstruction costs and designating a separate funding source (see p. 5). At the time of those interviews, the perception among external stakeholders was that rates would have to increase significantly to recover system reconstruction costs.]
 - A fixed fee could be assessed to every customer and would be an additional item and charge on a customer's quarterly bill. In theory a fixed fee could be graduated by meter size, average account usage, or front footage to reflect each customer's appropriate share of reconstruction costs.
 - A uniform volumetric charge would be assessed equally to every unit of a customer's demand and be shown as a separate line item on the quarterly bill. The uniform volumetric charge differs from the existing volumetric charge which is applied at an increasing rate as customer usage increases.

As a result of the preliminary customer impact analysis, the Working Group preferred a volumetrically based charge. The volumetric approach recovers System Reconstruction costs in proportion to a customer's use while providing them with control over the rising cost of utility service.

The fixed fee and uniform volumetric charge were analyzed, example fees and rates were calculated based on FY 2013 financials, and sample customer impacts were determined. The Working Group

discussed the advantages and disadvantages of each alternative in light of the customer impact analysis. A separate volumetrically-based fee segregated from other fees and charges on a customer's bill was preferred. However, an alternative for a separate fee in coordination with the existing rate structure is, most likely, the best alternative for the short-term until costs and fees can be fully analyzed and developed during a more comprehensive cost of service and rate development study.

Section 6: Customer Affordability Programs

WSSC has an existing Customer Assistance Program called the “Water Fund” which is funded through voluntary customer contributions and employee fundraising activities, and administered by the Salvation Army. The existing program is designed to provide assistance only when a customer may have their service shut-off because of payment delinquency, and as a result, the program assists a limited number of customers. A more aggressive Customer Affordability Program (CAP) could provide assistance with water and sewer bills and target economically disadvantaged customers. Throughout the industry, utilities are recognizing that a comprehensive affordability program is necessary to mitigate the burden caused by a need to generate additional revenue. To this end, the Working Group requested a study to identify a CAP structure that will achieve the objective effectively and efficiently. This section discusses alternatives for structuring an affordability program as well as specific considerations for WSSC as it incorporates affordability into its revenue generation objectives.

6.1 Program Considerations

Affordability programs have become a focal point throughout the water and wastewater industry. The Working Group understands that many utilities are facing increased capital needs caused by aging infrastructure and regulatory requirements. At the same time, customer growth that mitigated the need for rate increases has abated due to moderating consumption patterns and slower economic growth. Public utilities, in particular, are extremely sensitive to the financial hardship rate increases place on economically disadvantaged customers. Utilities have begun to realize that an effective affordability program is essential to address the needs of disadvantaged customers while rates increase to fund critical programs.

The Working Group acknowledges that WSSC’s existing program is not be adequate to address the needs of disadvantaged customers given the current need for rate increases. A more aggressive program may address disadvantaged customers’ needs adequately while allowing rates to increase to fund the needs of the utility system as a whole. Addressing affordability needs requires consideration of several key issues such as how the program must be administered, who will be subsidized and to what extent, and how the program will be funded. In identifying a WSSC CAP that will achieve the objectives effectively and efficiently, the following key issues must be considered:

1. Program Structure and Scope
2. Criteria for Qualifying Customers
3. Level of Subsidy
4. Funding Source and Impact on Revenue
5. Legal and Administrative Requirements
6. Program Risks
7. Customer Acceptance

6.1.1 Program Structure and Scope

The existing WSSC assistance program is funded through voluntary contributions from customers and administered through the Salvation Army. Outside program administration is certainly more cost effective, and WSSC does not control or influence who receives assistance and how much assistance they receive. The existing program provides assistance on a case by case basis. That is to say, assistance

is distributed on an ad hoc basis and not targeted to continuing needs of economically disadvantaged customers. In order to achieve the impact proposed by external stakeholders, WSSC may consider an in-house administered program structure or a structure that “piggy-backs” on an existing federal or state program that satisfies WSSC values, objectives, and quality standards. An in-house administered program will require extensive administrative effort and relatively high cost, though it will presumably provide more program control. An in-house administered program will also entail a high level of administrative effort to certify and re-certify applicants. A “piggy-back” structure will have a relatively lower administrative burden and lower cost. However, it results in less direct program control. WSSC could potentially look at other complimentary services within county governments to serve this function.

After careful investigation and discussions with management, the “piggy-back” structure was determined to be a favorable structure for a WSSC CAP, given the factors considered. In identifying a suitable “piggy-back” structure, the following desirable attributes were sought:

- ◆ Eligibility requirement includes verification of the following:
 - Economic Disadvantage (low-income)
 - County Residence (Montgomery or Prince George’s)
 - Identity (requiring presentation of at least one photo ID);
- ◆ Stable, established, and well structured;
- ◆ Equitable;
- ◆ Secure and compatible database;
- ◆ Similarly and consistently administered in Montgomery and Prince George’s counties; and,
- ◆ Governmental oversight.

Assessing the alternatives based on these attributes, the Maryland Energy Assistance Program (MEAP) was found to be a suitable program for a WSSC “piggy-back” CAP structure (WSSC may wish to investigate other appropriate program administration options, as well). MEAP is a program under Maryland’s Office of Home Energy Programs (OHEP) that provides assistance grants to help qualifying Maryland residents with their home heating bills. It is federally funded through the Low Income Energy Assistance Program (LIEAP). MEAP has the following qualities that make it a desirable program for a WSSC “piggy-back” CAP structure:

- ◆ Eligibility requirement includes verification of the following:
 - Qualification under income limit guidelines
 - County Residence (administered by county governments)
 - Requires copy of applicant’s photo ID
 - Requires copy of Social Security cards for all household members;
- ◆ Maryland State Program established in both Montgomery and Prince George’s counties;
- ◆ Secure and compatible database;
- ◆ Similarly and consistently administered in Montgomery and Prince George’s counties; and,
- ◆ Precedence (current “piggy-back” MOUs with telephone companies).

These qualities greatly satisfy the desired attributes being sought. Consultant meetings with MEAP management confirmed these program attributes and their interest in working with WSSC to implement the program. MEAP manager’s interest in introducing water assistance to the program was clear based on their confidence that a relationship with WSSC will increase the overall value of MEAP services.

Bi-County Infrastructure Funding Working Group – Consultant Report

MEAP's income eligibility standards and some major statistical information on MEAP are shown in Exhibits 16 and 17 respectively below:

Exhibit 16: *MEAP Income Eligibility Standards (Effective July 1, 2011 - June 30, 2012)*

Household Size	Maximum Monthly Income Standards	Maximum Annual Income Standards
1	\$ 1,588.12	\$ 19,057.50
2	\$ 2,145.20	\$ 25,742.50
3	\$ 2,702.29	\$ 32,427.50
4	\$ 3,259.37	\$ 39,112.50
5	\$ 3,816.45	\$ 45,797.50
6	\$ 4,373.54	\$ 52,482.50
For Each Additional Person, Add	\$ 557.08	\$ 6,685.00

Exhibit 17: *Major Statistical Information on MEAP and some MEAP "Piggy-Back" Quantitative Projections*

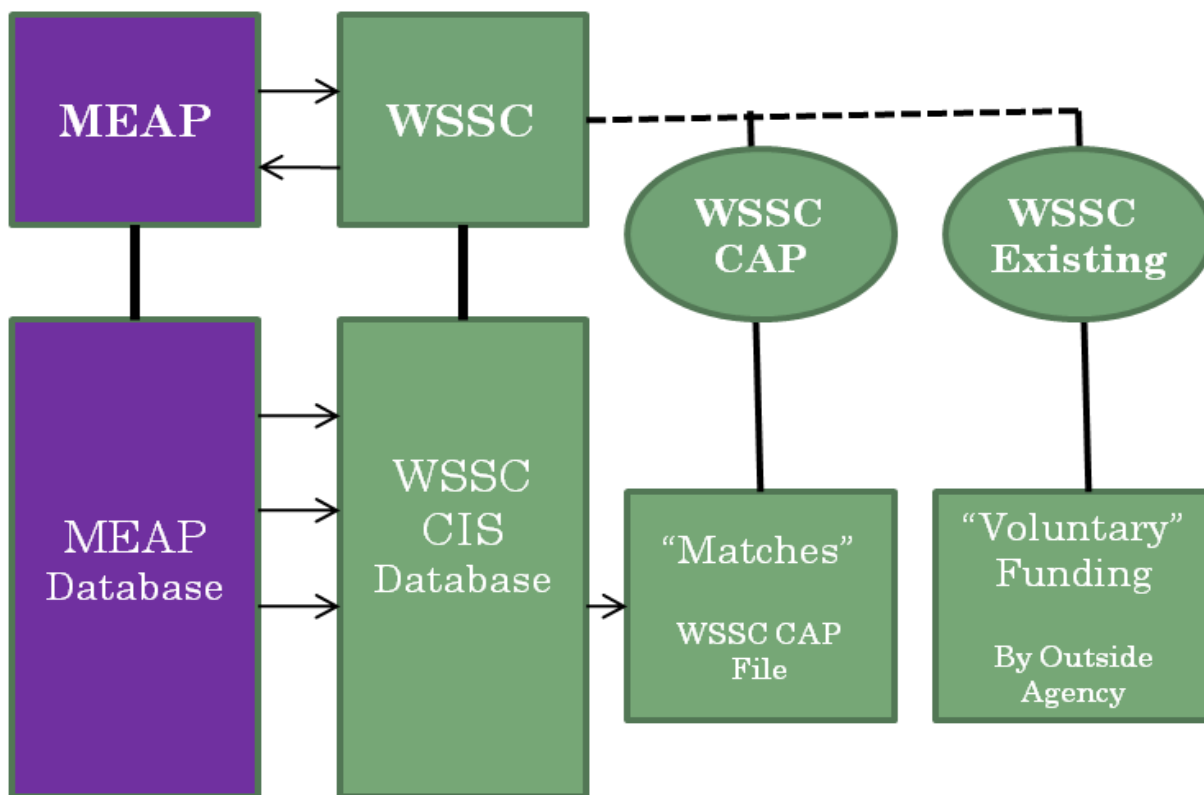
	Montgomery County	Prince George's County
Total (Cum) MEAP Participants – FY2010	12,315	16,302
Total (Cum) MEAP Participants – FY2011	9,241	13,137
Property Owners in MEAP Database	23%	31%
Renters in MEAP Database	34%	45%
Public Subsidized in MEAP Database	<u>39%</u>	<u>21%</u>
Total Non-Owners in MEAP Database	73%	66%
Estimated WSSC CAP Accounts (excl. non-owners)	2,544	4,467
Estimated WSSC CAP Accounts (incl. renter allowance)	3,816	6,701
Projections for Future (FY2013)	-15% to -40%	-20% to -50%

Proposed Program Structure and Flowchart

Under the MEAP “piggy-back” CAP structure, MEAP participants will automatically qualify for WSSC CAP. MEAP and WSSC staff will work together under a Memorandum of Understanding (MOU) to administer the CAP. The following brief program description and flowchart provides a better understanding of the scope and logistics of the proposed CAP structure:

- ◆ MEAP customers automatically qualify for WSSC CAP;
- ◆ MEAP provides monthly database file;
- ◆ WSSC identifies matches within WSSC Customer Information System (CIS) accounts (eligible to account holders only);
- ◆ WSSC flags accounts to receive CAP credit;
- ◆ WSSC applies CAP credits to the accounts (volumetric credit can index CAP assistance with future rate increases);
- ◆ MEAP responsible for customer requalification; and,
- ◆ WSSC responsible for identifying matches, confirming and terminating CAP credits.

Exhibit 18: *Proposed CAP Flowchart*



6.1.2 Criteria for Qualifying Customers

This consideration involves identifying the factors and elements to be used in determining who qualifies as a program participant. This may include factors such as personal identification, residency, income level, household size, property ownership, type of WSSC account, etc. The MEAP “piggy-back” CAP structure assumes that the MEAP criteria will be adopted. However, additional criteria beyond those of MEAP can be considered. Care should be taken to ensure that the criteria used are objective, legally defensible, and not overly burdensome to administer.

6.1.3 Subsidization Level

Another important consideration is the level of subsidization program participants (economically disadvantaged customers) should receive. This is an important consideration because each dollar of subsidization is a dollar of lost revenue that must be made up through other sources. The Environmental Protection Agency provides some criteria for affordability of services. Their guidance says that service is unaffordable once water OR sewer services exceed two percent of Median Household Income (MHI). For combined water and sewer utilities, four percent of MHI is used. Of course, this is a macroeconomic measure that does not translate well to economically disadvantaged customers at or below the poverty level particularly where a jurisdiction has both very high and relatively low incomes. For instance, in the case of WSSC, MHI is quite high due to the socioeconomic profile of the sanitary district, but there are still many households at or below the poverty level that may struggle to afford essential water and sewer services.

Another approach is to set a fixed amount of water usage (or subsistence level of consumption) that program participants will be allowed without charge during a specific period of time (e.g. monthly). The dollar equivalent of the volumetric credit or actual customer bill (whichever is less) can be applied to the accounts of the program participants. Estimation of program cost is relatively simpler under this approach.

WSSC must seek a balance between the level of subsidization and the affordability program cost as measured in lost income to the utility.

6.1.4 Funding Source and Impact on Revenue

Both additional administrative controls and the need for increased subsidization will increase the cost of an aggressive affordability program. As such, no program can be considered without a funding source. The Working Group indicated interest in additional analysis on the matter of affordability. As a result the consultant has developed some additional baseline information that could help the Working Group determine its direction on issues it may consider in this area.

Clearly, voluntary customer contributions will not be sufficient to fund a substantially more robust program. Exhibits 20 through 23 show the potential costs of different affordability programs assuming a higher level of internal administration and varying levels of customer subsidy. These exhibits assume the subsidies apply only to qualifying WSSC account holders.

Exhibit 19: *Affordability Program Costs (Current Program – The Water Fund)*

Fiscal Year (FY)	Annual Distributions	Annual Recipients	Admin Cost (estimated)	Total Annual Program Cost
FY 2009	\$ 61,595	264	8-10%	\$ 67,800
FY 2010	\$ 46,707	192	8-10%	\$ 51,400
FY 2011 YTD	\$ 56,449	237	8-10%	\$67,800*

**estimated full year based on 11 months of actual distributions*

Exhibit 19 shows historical program costs over the last three years. The program has been scaled around the limited funding provided by voluntary contributions. Likewise, administration costs are also relatively low at about \$6,000 annually. For the purpose of illustration only, Exhibit 20 shows the projected cost of a program constructed to cap a customer's annual bills at four percent of poverty level income (per EPA guidelines).

Exhibit 20: *Scenario 1A - Affordability Program Costs (Fixed Subsidy based on 4% EPA Affordability Guideline)*

Projected Qualifying Accounts	10,517
Estimated Average Annual Income Level of Qualifying Customers	\$15,000
Estimated Percentage of Customer Accounts	7.7%
4% of Annual Income (EPA Affordability Threshold)	\$600.00
Estimated Average Annual WSSC Residential Bill (based on 6,500 gals/mth)	\$ 773.22
Estimated Annual Subsidy	\$173.22
Estimated CAP Cost (Lost Revenue)	\$1,820,000
Estimated WSSC Administrative Cost	\$200,000
Estimated Total Program Cost	\$ 2,020,000

The current average household bill does exceed four percent of poverty level income, so a small subsidy would be required. If this level of subsidy were extrapolated over the total estimated accounts at or below the poverty level, subsidies would total approximately \$1.82 million annually. WSSC would probably incur additional administration costs to determine applicant eligibility and re-determine them annually. Again, solely for the purpose of illustration (as actual costs are not known), program administration costs are estimated at \$200,000 annually, similar to administration cost percentages in the current program. Total program costs, given these assumptions, would be approximately \$2.02 million annually or about 0.4% of 2010 Operating Revenue.

Structuring an Affordability Program in this manner provides a fixed subsidy, in dollar terms, to economically disadvantaged customers. Customers at the poverty level receive the same discount as customers with incomes of half the poverty level. Another option is to provide a variable subsidy that increases as income levels drop. In other words, a customer at the poverty level may have 50% of their bill subsidized while a customer with a lower income has a higher percentage subsidy. Exhibit 21 shows the potential cost of this type of program structure (assuming an even distribution of qualifying customers among the household salary range).

Exhibit 21: *Scenario 1B - Affordability Program Costs (Variable Subsidy based on 4% of Customer Income)*

Household Salary Range	Avg. Annual Residential Bill	Est. Annual Subsidy Needed	Est. Number of Qualifying Customers	Estimated Cost of Annual Assistance
\$0 to \$10,000	\$ 773.22	80%	2,629	\$ 1,626,247
\$10,001 to \$15,000	\$ 773.22	50%	2,629	\$ 1,016,398
\$15,001 to \$25,000	\$ 773.22	20%	2,629	\$ 406,549
\$25,001 and above	\$ 773.22	0%	2,630	\$ 0
Total Estimated Annual Lost Revenue from Subsidy				\$ 3,049,194
Estimated Additional Program Administration Cost				\$ 300,000
				\$ 3,349,194

This program structure comes at a higher cost because it attempts to provide additional assistance to customers at lower income levels. At an estimated cost of \$3.3 million annually, this program could cost 0.7% of 2010 Operating Revenue.

Another Affordability Program subsidy structure is the volumetric based structure mentioned earlier in this section. Under this subsidy structure, a subsistence level of water consumption is established and a fixed credit is provided based on this consumption level. This subsidy structure provides some protection to participants against rate increases since it is volumetric based. However, it will also increase WSSC's exposure to program cost increases. Exhibit 22 shows the potential cost of this type of subsidy structure if a 99 gals/day subsistence level of consumption is assumed for the total estimated qualifying customers (per MEAP statistical analysis).

Exhibit 22: *Scenario 2A - Based on Subsistence Level Consumption*

Projected Qualifying Accounts	10,517
Assumed Gallons Per Day Credit	99
Assumed Rate Per 1,000 gallons	\$ 6.97
Estimated Annual Credit (Subsidy)	\$248.41
Estimated Average Annual WSSC Residential Bill (based on 6,500 gals/mth)	\$ 773.22
Estimated CAP Cost (Lost Revenue)	\$2,612,528
Estimated WSSC Administrative Cost	\$200,000
Estimated Total Program Cost	\$ 2,812,528

Scenario 2B (Exhibit 23) below shows what the estimated program cost will be if a higher subsistence level of consumption (149 gals/day) and lower number of participants (e.g. property owners only) is assumed. This illustrates the scalability of this approach in providing CAP subsidy.

Exhibit 23: *Scenario 2B - Based on Subsistence Level Consumption (Property Owners Only)*

Projected Qualifying Accounts	7,011
Assumed Gallons Per Day Credit	149
Assumed Rate Per 1,000 gallons	\$ 7.93
Estimated Annual Credit (Subsidy)	\$425.37
Estimated Average Annual WSSC Residential Bill (based on 6,500 gals/mth)	\$ 773.22
Estimated CAP Cost (Lost Revenue)	\$2,982,269
Estimated WSSC Admin Cost	\$200,000
Estimated Total Program Cost	\$ 3,182,269

It is clear that voluntary contributions will not provide adequate funding for a more aggressive affordability program. In addition, the funding source must be stable and have the ability to increase as utility rates increase. That is why most utilities rely on rate revenue to fund these types of programs. In effect, the lost revenue from subsidized customers must be made up by increasing rates on the customer base as a whole.

6.1.5 Legal and Administrative Requirements

Review by the WSSC Office of the General Counsel confirmed that enabling legislation will be required to implement the proposed CAP as currently conceived. Current legislation does not allow the use of rate revenues to fund CAP. The following legal considerations were identified:

- ◆ Process of obtaining legislation;
- ◆ Scope of legislation; and,
- ◆ Period of legislation.

WSSC management could prepare appropriate proposed legislation detailing new customer affordability measures as early as the end of Fiscal Year 2012 for approval by the State Legislature.

6.1.6 Program Risks

It is important to be aware of the risks that are associated with the proposed program. The following risks have been identified:

- ◆ Dependent on MEAP funding continuation – MEAP funded through LIHEAP and LIHEAP funding has been declining lately;
- ◆ Exposure to MEAP’s database issues – Inconsistencies between MEAP’s and WSSC’s databases might create data integrity issues; and,
- ◆ Changes in Authority – A change in authority in either organization might result in program termination or significant modification.

Other considerations include:

- ◆ Administrative burden (e.g. CIS impact and liaison with MEAP staff); and,
- ◆ Communication of information to the customer base.

6.1.7 Customer Acceptance

Another important key issue to consider is the “buy-in” of customers into the program. Care should be taken to ensure the program is implemented and administered in a manner that will promote perceptions of equity amongst all customer classes.

6.2 Recommendation

Key WSSC stakeholders have acknowledged that affordability for the economically disadvantaged portion of the customer base is becoming an obstacle to raising revenue to fund the long-term needs of the utility system. The Working Group would like a more aggressive affordability program developed. To this end, we recommend that the Commission direct management to evaluate and take action to implement a more aggressive CAP as detailed in this section and summarized below:

- ◆ Pursue enactment of enabling legislation;
- ◆ Develop a CAP that “piggy-backs” on MEAP to be used in tandem with the existing voluntary program;
- ◆ Fund the program using a combination of user rates, contributions, and grants;
- ◆ Establish budget line item for CAP funding;
- ◆ Set subsidization level and structure through policy and ensure appropriate balance between the level of subsidization needed and the cost of providing the subsidy; and
- ◆ Administer the CAP on an annual basis.

APPENDIX

Washington Suburban Sanitary Commission (WSSC)
Bi-County Working Group
Charter (Adopted 10-18-10)

PURPOSE: The Bi-County Working Group provides a structure for key stakeholders, subject matter experts, and management to identify near-, medium- and longer-term options for obtaining access to alternative and/or less costly sources of revenue or methods of funding for operating and capital requirements in the context of the growing need to rehabilitate, upgrade and replace water and wastewater infrastructure and related facilities. .

APPROACH: The Bi-County Working Group approach is to undertake a structured strategic review of:

1. existing WSSC financial instruments and funding methods, e.g. rates, rate structure and rate stabilization, grants, partnerships, investments, short and longer term debt, cash, working capital and other assets, financial plans and relevant aspects of operating and capital budget programs;
2. existing operating and capital program requirements, including exogenous factors such as conservation and affordability;
3. existing statutory and annual budget and financial policy parameters established by the State of Maryland and Prince George's and Montgomery Counties and the WSSC Commissioners;
4. a structured environmental scan of alternative financial strategies, programs and instruments with the potential for providing additional revenues or savings, including regional and national benchmarking;
5. potential capital or operating program/project investments, like automated meter reading, that may yield additional revenues or savings, and;
6. address any impediments to the implementation of proposed actions and strategies.

GOALS: The Bi-County Working Group goals are as follows:

- provide actionable recommendations to the WSSC General Manager/CEO and to the Washington Suburban Sanitary Commissioners for the implementation or further study of near-, medium- and longer-term options for attaining access to alternative and/or less costly, sustainable sources and methods of support for operating and capital requirements of the WSSC
- provide strategic guidance and support in the implementation of Bi-County Working Group recommendations that are adopted by the General Manager/CEO and/or the WSSC Commissioners.

ORGANIZATION: The Bi-County Working Group will be convened by the WSSC General Manager/CEO, and it will be comprised of the WSSC General Manager/CEO, two WSSC Commissioners, a representative of the Montgomery County Council, a representative of the Prince George's County Council, a representative of the Montgomery County Executive and a representative of the Prince George's County Executive. WSSC staff and external subject matter experts will participate as appropriate. The framework and timeline for providing a final report and recommendations will be determined by the GM/CEO in consultation with the Bi-County Working Group.