

Prepared for



City of Arnold, MO

Wastewater Rate Study

Prepared by



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A. EXECUTIVE SUMMARY

This document was prepared to summarize the work performed by the Municipal & Financial Services Group (MFSG) during the wastewater cost of service study authorized by the City of Arnold, MO. The study is predicated on the use of a cash flow analysis to support the pricing of utility services. The cost of service analysis uses a planning period of 11 years (Fiscal Years 2008 - 2018). The study evaluates the cost of providing wastewater service, how these costs should be allocated to the users of the system and financial projections for the system based on known operating and capital expenditures. This portion of the report summarizes the findings, conclusions and recommendations developed during the course of the study.

1. Findings and Conclusions

- Current sewer rates do not produce sufficient cash revenue to cover cash revenue requirements within the Sewer Fund for Fiscal Year 2009 or the years following. Based on projected water sales, the current rates will produce cash revenues roughly 20% less than the required cash revenue in Fiscal Year 2009 with subsequent significant shortfalls annually over the planning period.
- The capital expenses, in the form of annual debt service, related to the new Lower Meramec Treatment Plant is the primary reason for the current and projected shortfall in the Sewer Fund.
- The City does not have any dedicated reserves within the Sewer Fund.
- The City incurs costs while operating and maintaining the sewer system that do not benefit customers in the Rock Creek District.
- A significant portion of the City's sewer collection system was installed in the 1950's and will reach its estimated useful life over the next 10 years.
- The current residential sewer rate structure which charges all customers the same fixed amount does not allocate costs proportionately among residential customers (i.e. large residential users pay the same amount as small users).
- The current connection fee of \$2,500 for connecting to the wastewater system is set at the appropriate level to recover the cost of providing capacity to new wastewater connections.

2. Recommendations

- We recommend that the City formally establish an O&M Reserve and a Repair, Renewal and Rehabilitation ("3R") Reserve for the sewer system. The O&M Reserve should be set at 90 days of operating expenses. The "3R" Reserve should be based on the value of the sewer system and its useful life. We recommend that the City begins contributing to the "3R" Reserve by Fiscal Year 2012 at the latest to allow the City to begin planning for the significant repairs and replacements that will be required within the collection system

as it begins to reach its useful life. Both reserves should be designated as restricted reserves with policy clearly establishing uses for each reserve.

- We recommend that the City charge Rock Creek customers approximately 17% less than City of Arnold customers due to the fact that the City does not provide local maintenance to lines serving these customers and because the City incurs expenses not related to serving these customers.
- We recommend that the City increase sewer rate immediately due to the shortfall within the Sewer Fund. The recommended annual increases for the next five years are shown below. The increases for years following 2009 are based on current conditions and are subject to change based on regulatory mandates and/or unforeseen increases in sewer system expenses.

	2009	2010	2011	2012	2013
Recommended Rate Increases	20%	4%	3%	3%	2%

- We recommend that the City adopt a new rate structure that will more appropriately charge residential customers based on their contribution to the City's system and the costs they cause the City to incur. The rate structure consists of a fixed charge which includes 15,000 gallons of usage per quarter and a usage charge based on winter quarter usage for residential customers and actual usage for non-residential customers. The following table presents the current sewer rates and the recommended rates for Fiscal Year 2009.

	Current Rates	Proposed Sewer Rates
Residential Customers		
Quarterly Fixed Charge (per housing unit)	\$62.13	\$67.00
Usage Charge (per 1,000 gallons)	NA	\$3.98
Non-Residential Customers		
Quarterly Fixed Charge (per housing unit)	\$62.13	\$67.00
Usage Charge (per 1,000 gallons)	\$3.45	\$3.98
Rock Creek Customers		
Quarterly Fixed Charge (per housing unit)	\$62.13	\$55.77
Usage Charge (per 1,000 gallons)	NA	\$3.31

- We recommend that the City maintain its sewer connection fee set at \$2,500 per connection.

B. BASIS FOR THE STUDY

1. Scope of Work

The scope of services set forth in the contract between the City of Arnold and the Municipal and Financial Services Group specifies several related tasks:

1. **Revenue Requirements** - Determine the true cost of providing wastewater service the cost of service identified as the system revenue requirements.
2. **Financial Plan** - Develop an Excel model by which the City can project cash flows and future wastewater rates over a 10-year period using varying revenue, expense, capital project cost assumptions and customer growth rates.
3. **Rate Design** - Design a sewer rate structure that appropriately allocates costs among the City's customers based on the City's goals and objectives.

The outline of this cost of service report has been developed based on these three tasks.

2. Background

The City of Arnold provides sanitary sewer service to approximately 8,814 customer accounts with the majority being residential accounts. There are approximately 340 non-residential sewer accounts in the City. The City's sewer collection system conveys sanitary sewerage to the Metropolitan Sewer District (MSD) for treatment. The City does not own or operate a wastewater treatment facility. The City sent an average of 3.74 million gallons per day (MGD) to the MSD treatment facility in 2007. The first quarter of 2008, the City was billed for an average of 4.32 MGD. The City's treatment charges are determined by a formula that allocates the cost of treatment at MSD's Lower Meramec Treatment Facility (LMTF). Prior to the construction of the LMTF the City's sewage was treated at the Meramec Lagoon Facility. The cost of constructing of the LMTF has been allocated to the City based on an allocation of flow. The City has agreed to a flow allocation of 4.5 MGD for average daily flows and a peak flow (based on peak day) of 18 MGD. The total capital costs allocated to the City for the LMTF equals approximately \$16 million. At some point in the future MSD plans to further expand and upgrade the LMTF identified as Phase II and III expansions. MSD has estimated that the City's portion of the Phase II expansion will cost \$9.0 million. In addition to the capital costs associated with the LMTF, the City has also experienced increased treatment charges from MSD. The capital costs and increased treatment charges combine to have a significant impact of the City's ability to cover the cost associated with managing the sewer system.

3. Assumptions Used in the Study

The following assumptions were used to guide the cost of service analysis and were developed with the assistance of the City staff:

- The wastewater system must be self-supporting. It is assumed that the cost of operating and maintaining the wastewater system must be supported by the wastewater fees and charges collected from wastewater customers.
- One of the City's principal objectives is to keep rates and fees low over time.
- The City should develop reserves to provide for contingencies and unplanned expenses.
- The expenses related to operating and maintaining the wastewater utilities should be equitably distributed among the users of the respective systems.

In order to project future revenue requirements and offsetting revenues from wastewater rates, several assumptions were made regarding future economic conditions and growth within the City's service area. Assumptions (which can be varied as needed from year to year) made regarding various items are shown below:

<u>Element</u>	<u>FY 09 Percentage</u>
Inflation Rate – Wastewater O&M Expenses	3.00%
Customer Growth Rate	0.25%
Sewer Production Growth Rate	0.25%
Interest Rate on Borrowing	5.00%
Operating and Maintenance Reserve	90 days of operating expenses
Repair, Renewal & Replacement ("3R") Reserve	Based on useful life of assets

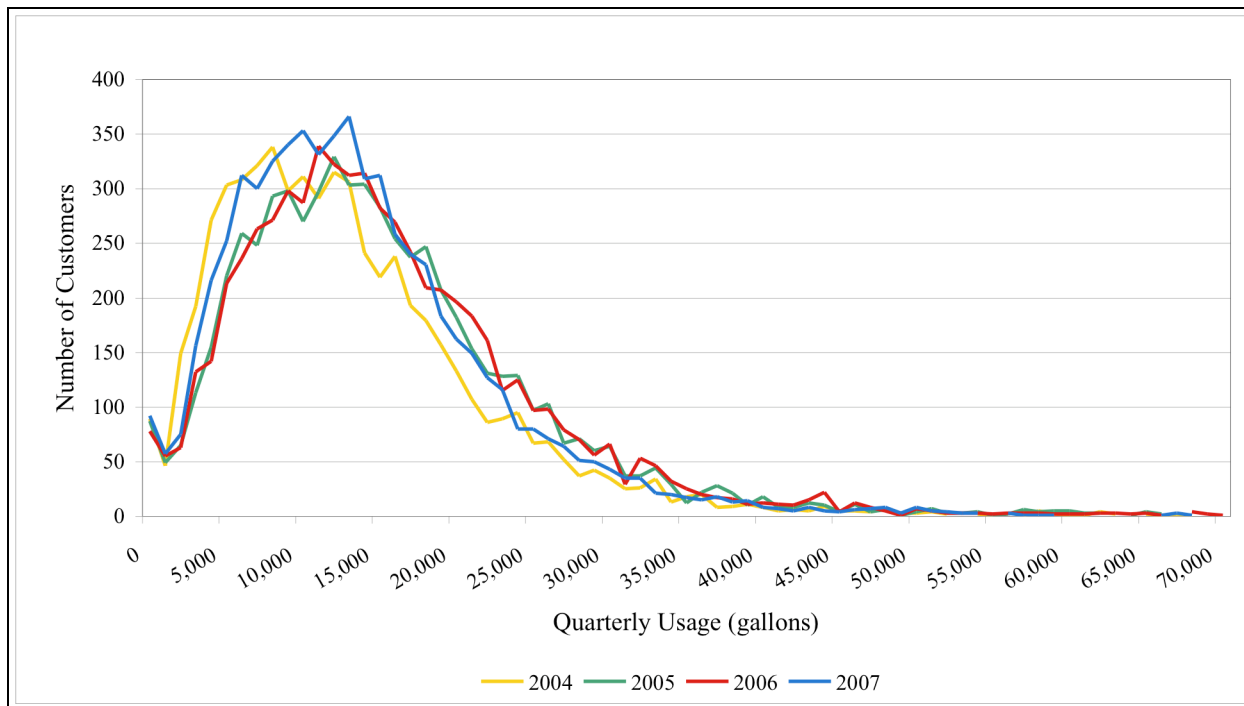
These assumptions were used after discussions with the City, utilizing our experience and the City's knowledge of its customer base and historical costs. The growth in customers and consumption is based upon historical growth and expectations over the next ten years based on current market conditions. The rationale behind the assumptions used to develop the reserves is discussed in the Reserves section of this report. A sensitivity analysis was conducted to determine the impacts of varying each assumption. The most significant drivers are the percentages used for inflation and the customer growth rate.

The study was conducted using Fiscal Year 2009 as the base year upon which forecasted figures were developed. The cost of service analysis considers what wastewater rates need to be for the entire planning period (FY 2009 – 2018).

4. Customer, Usage and System Characteristics

In Fiscal Year 2008, the City's wastewater system customer base included approximately 8,814 billed customers; 8,474 residential customers and 340 commercial customers. The City bills all customers on a quarterly basis. Approximately 496 of the customers are located outside the City with majority (482 customers) located in the Rock Creek District. The billed sewer usage during

Fiscal Year 2008 was 711 million gallons of which 535 million gallons was residential and 176 million gallons was commercial. To assess the usage patterns for residential customers within the City MFSG analyzed the last four years of consumption data by customer account. The following graph shows the actual usage patterns for residential customers over the last four years based on the number of customers using at certain quarterly amounts.

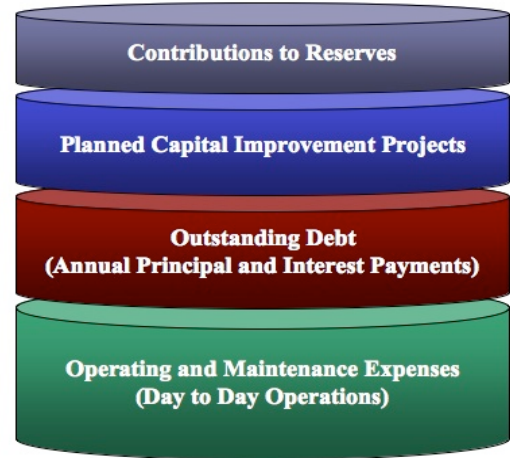


The graph shows that the largest number of customers use around 13,000 to 15,000 gallons per quarter, which equates to between 4,333 and 5,000 gallon per month. This is slightly below the national average usage for residential customers, which is 6,000 gallon per month.

In order to project the growth in customers and customer usage, the current number of customers was increased by an annual growth rate of 0.25% per year over the ten-year projection period. The customer and consumption projections are shown in detail on Schedule 10 in the Appendix to this report.

C. REVENUE REQUIREMENTS

One of the key tasks of the study was the identification of the cost of providing sewer service. Our approach includes a detailed review of each of the costs incurred by the City (both identified and unidentified) to ensure a true cost of service is developed. The cost analysis can be broken down into four main categories of costs including; operating and maintenance costs, capital improvements, existing debt service and any contributions to reserves. The following section of the report describes each of the categories of expenses incurred by the City as it provides sewer service. The costs are all based on official documents and data provided by the City. The costs are forecasted as described above in the assumptions.



1. Operating and Maintenance Costs

The day-to-day operating and maintenance (O&M) expenses for the City are broken down into three categories within the Sewer Fund Budget, which include personnel services, supplies and contractual services. Personnel Services, which makes up about 38% of total O&M expenses includes items such as salaries, FICA, and pensions. Supplies accounts for 6% of total O&M expenses and includes printing, postage, and general operating supplies. Contractual services makes up 56% of total O&M expenses and includes such items as data processing, uniforms, treatment charges, etc.

The actual Fiscal Year 2005, 2006, 2007, 2008 expenses and the 2009 budget were used as a basis to forecast future year expenditures. The Fiscal Year 2009 budget was inflated by a 3% inflation rate to forecast O&M expenses over the ten year period. The table below shows FY 2009-2013 with the subtotals of each category.

Table 1. O&M Expenses

	2009	2010	2011	2012	2013
Personnel Services	462,695	476,576	490,873	505,599	520,767
Supplies	109,000	112,270	115,638	119,107	122,680
Contractual Services	812,520	837,896	864,065	891,053	918,885
Total O&M Expenses	\$1,415,215	\$1,426,742	\$1,470,576	\$1,515,760	\$1,562,333

The primary reason that contractual services are such a large portion of the overall budget is because they include the MSD treatment charges. The treatment charges are budgeted to be approximately \$400,000 in Fiscal Year 2009. This equates to approximately 30% of the total O&M budget for the year. Future treatment charges were forecasted by inflating the 2009

budget by an annual inflation rate of 3% and by an assumed growth in wastewater generation of 0.25%. The City will need to continue to closely monitor the treatment charges from MSD since they comprise such a significant portion of the total operating budget. The forecasted treatment charges are shown in detail on Schedule 2B in the Appendix to this report.

The City provides sewer collection and conveyance to residential customers located in the Rock Creek District. These customers are currently billed at the current City of Arnold sewer rates. As part of the analysis of the operating and maintenance expenses, MFSG was requested to examine if there are costs incurred by the City that are not related to serving customer in the Rock Creek District. To facilitate this analysis each of the line items in the operating and maintenance budget was reviewed to determine which expenses are not related to serving these customers. The analysis revealed that approximately 17% or \$240,000 of the Fiscal Year 2009 budget is not applicable to Rock Creek customers. The detailed analysis is shown on Schedule 2C in the Appendix to this report.

2. Capital Costs

The annualized capital costs related to providing wastewater are generally comprised of existing debt service and any anticipated capital projects, which may be funded via the issuance of debt (typically bonds or similar financial instruments) or funded from cash (either on hand or cash derived from operations).

a. Existing Debt

The City wastewater fund currently has approximately \$44.5 million in outstanding debt. The existing debt consists of six separate issues. The following table provides the combined principal and interest for each issue over the next five years.

Table 2. Existing Debt

	2009	2010	2011	2012	2013
Meramec WWTP Construction	1,100,499	1,100,499	1,100,499	1,100,499	1,100,499
Infrastructure Facilities Revenue Bonds	195,157	195,757	194,541	194,446	195,406
Series 2005 Bonds	326,020	334,323	337,098	343,295	352,800
Series 2006 Bonds	244,210	243,430	238,739	233,972	229,877
Series 1992A/1993A Bonds	171,711	172,623	170,706	183,512	193,000
Series 1992A SRF Revenues Bonds	116,109	115,350	114,264	115,768	48,935
Total Annual Debt Service	\$2,153,706	\$2,161,983	\$2,155,848	\$2,171,492	\$2,120,517

b. Capital Projects

The City does not currently have any planned capital improvement projects for the wastewater system. However as mentioned previously, MSD has indicated to the City that City's portion of the phase II expansion at the Lower Meramec Treatment Facility will cost approximately \$9.0 million. At this point the City does not know when the phase II will take place. The MSD has indicated that the City can begin paying towards the phase II costs at any time. One possible

scenario that has been modeled in the study is to begin cash payments to MSD as the City debt payments decrease as debt is retired. The annual debt payments begin to decrease in Fiscal Year 2013 by approximately \$50,000. If the City cash funds its portion of the phase II expansion in this manner by Fiscal Year 2032 the City will have accumulated approximately \$9.4 million.

c. System Reinvestment

An important aspect of developing the true of providing sewer service is to determine what investments are required to maintain the sewer system. The City has invested a significant amount of capital over the past 60 years to construct the sewer collection systems. As the sewer system ages it is important that the City be actively managing the system assets to ensure that the useful life of the system is maximized. Based on information from the City, industry standard and pipe material it is assumed that sewer mains in the City have a useful life of approximately 60 to 80 years (varying based on pipe material). To assist the City in managing its capital assets MFSG completed a detailed review of the sewer system buried infrastructure. The goal of the review is to provide the City with an estimate of the annual investment required in the system to appropriately maintain the system and strive towards maximizing the assets useful life. As part of the capital improvements program review, the ages and costs of various portions of the sewer systems were stratified by decade. The age groupings of the collection system together with useful life information and unit replacement costs were used to estimate the required reinvestment in the sewer system.

The City sewer collection system currently consists of approximately 600,000 linear feet of pipe. The majority of the collection system was installed in the 1950's and 1970's. The sewer collection system was constructed with clay, concrete and PVC pipe. Applying a useful life of 60 years for clay pipe and 80 years for concrete and PVC pipe to the sewer collection system, reveals that the a significant portion of the City's clay pipe will reach its useful life by FY 2016. The City is not facing an immediate need for system replacement, assuming the pipes meet their useful lives, but it is important for the City to begin planning for replacing the system. By Fiscal Year 2020, approximately \$7.4 million (in current dollars) of collection system will require replacement. The next section of this report provides guidance on how the City can begin planning for these future investments.

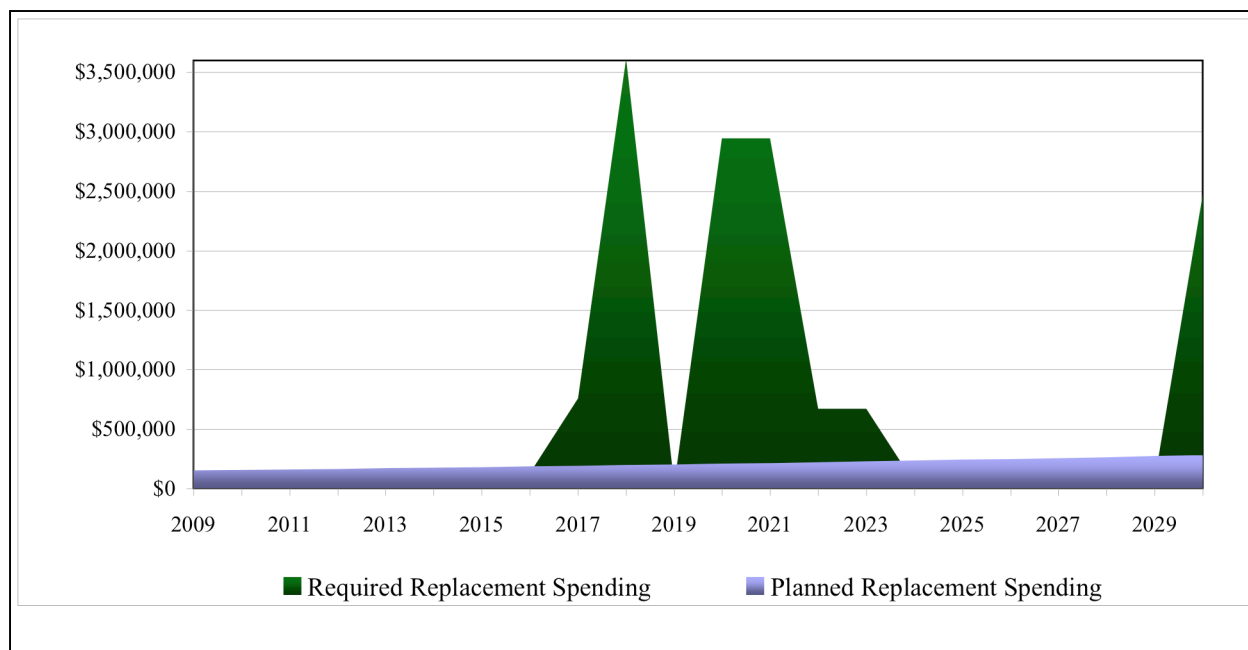
3. Reserves

Best management practices dictate that cash reserves be accumulated to provide for contingencies and unplanned major expenses. We recommend the establishment of two types of reserves for the City's wastewater system: an Operating and Maintenance ("O&M") Reserve and a Repair, Renewal, and Rehabilitation ("3R") Reserve. Each is discussed below.

An operating reserve is important to provide funds for unplanned minor repairs or fluctuations in the budget. This type of reserve is also valuable during unusually wet or dry years, which could result in reduced revenues due to lower than anticipated consumption levels. As these reserves are accumulated, they can be used in future years to offset, decrease or defer rate increases. Operating reserves are typically established as a percentage of a system's O&M budget. We recommend that the City formally establish and maintain a 90-day operating reserve target balance (one fourth of current annual O&M expenses). An annual contribution to the reserve

will need to be recovered through user fees each year to match the target reserve balance of 90 days annual operating expenses and replenishment. This annual contribution is the difference between the target balance (one fourth current annual O&M expenses) and the current balance (less any withdrawals from the reserve). This calculation of O&M reserve contributions assumes the City funds the reserve completely in Fiscal Year 2009 from available cash balances. Based on increasing operating expenses the City will need to start contributing to the O&M reserve in Fiscal Year 2018 in the amount of approximately \$8,000.

Many municipal utilities establish Repair, Replacement and Rehabilitation (“3R”) reserves to provide funds to pay for unexpected major repairs and planned replacement or rehabilitation of system assets, as mentioned in the previous section. These reserves can be used to pay for capital costs in order to avoid or minimize the amount that would otherwise be recovered through user fees (and possibly result in a significant rate increase). Typically, the annual “3R” reserve contribution is calculated based on the estimated useful life of each asset as described in the previous section of this report. The “3R” contribution is offset by the actual amount of investment planned by the City. The City has budgeted approximately \$100,000 per year for system repair and replacement. The following graph presents the City’s planned spending compared the required system investment based on useful life of the assets.



The graph demonstrates that over the next 30 years the City plans to spend approximately \$4.4 million in the collection system and that the required investment will be \$8.5 million. Based on this gap it is recommended that the City begin contributing to a 3R reserve in Fiscal Year 2012 in the amount of \$240,000 annually.

4. Revenue Requirements from User Rates

The total cost of operating the sewer system, the gross revenue requirements, includes the summation of the operating and maintenance costs, the capital costs and any contribution to

reserves. The total of these costs, less the amount of miscellaneous income, is the amount that needs to be recovered from user fees. The following table shows the revenue requirements, miscellaneous (non user charges) revenue and the net revenue requirement from user rates for the utility enterprise fund (wastewater operations). The table also shows the net surplus or shortfall in revenues using the current wastewater rates (assuming no rate increases).

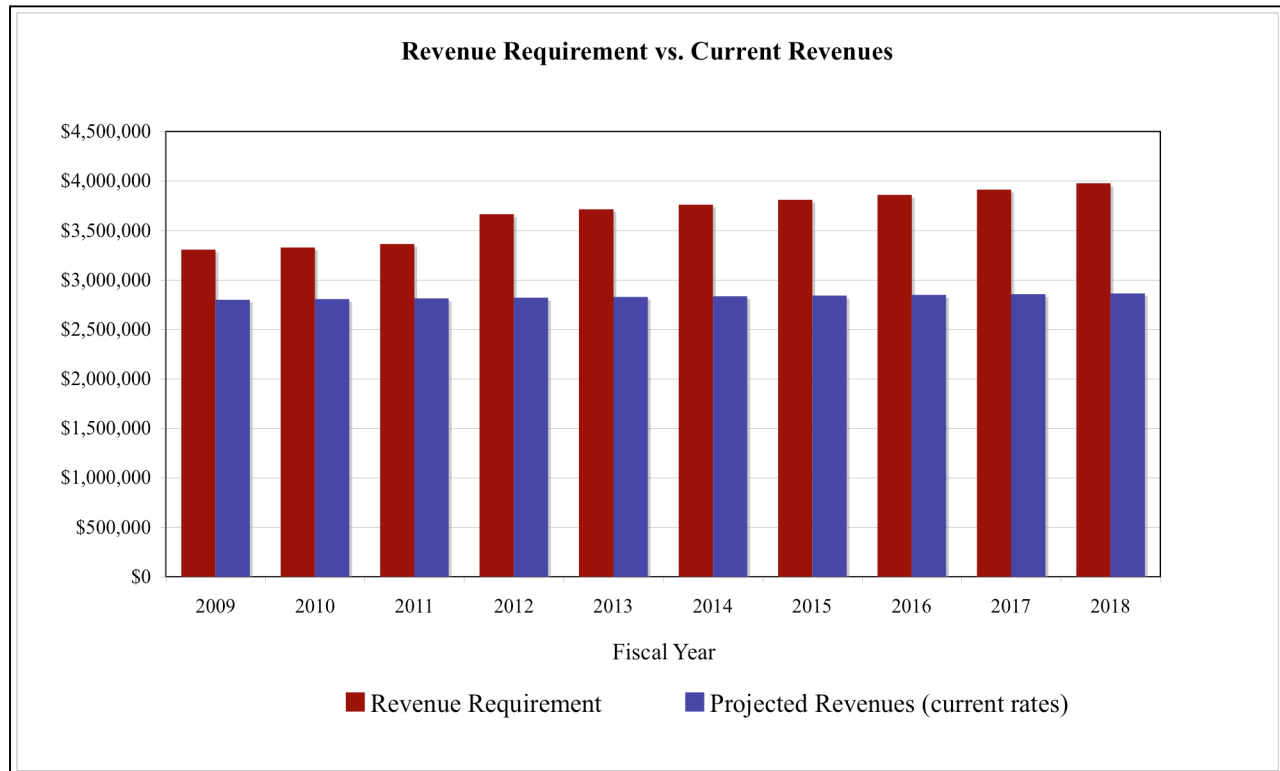
Table 3. Sewer Fund Revenue Requirements

(million)	2009	2010	2011	2012	2013
Operating Costs					
Operating Expenses	\$1.42	\$1.43	\$1.47	\$1.52	\$1.56
Operating Reserve Contribution	-	-	-	-	
Operating Expenses Subtotal	\$1.42	\$1.43	\$1.47	\$1.52	\$1.56
Capital Costs					
Existing Debt Service	\$2.15	\$2.16	\$2.16	\$2.17	\$2.12
Cash Funded Capital Projects	-	-	-	-	\$0.05
3R Reserve Contribution	-	-	-	\$0.24	\$0.24
Capital Expenses Subtotal	\$2.15	\$2.16	\$2.16	\$2.41	\$2.41
Total Revenue Requirement	\$3.57	\$3.59	\$3.63	\$3.93	\$3.98
Miscellaneous Other Revenues	\$0.22	\$0.22	\$0.22	\$0.22	\$0.22
Connection Fee Revenues	\$0.04	\$0.04	\$0.04	\$0.04	\$0.04
Net Revenue Requirements	\$3.31	\$3.33	\$3.34	\$3.67	\$3.71
Revenues Under Current Rates	\$2.80	\$2.81	\$2.81	\$2.82	\$2.83
Surplus / (Shortfall)	(\$0.51)	(\$0.52)	(\$0.55)	(\$0.85)	(\$0.88)

Table 3 demonstrates that the sewer enterprise fund is not self-supporting under the current rates for the period shown or the entire planning period. The next section of this report presents a financial plan for revenue adjustments based on rate increases that will ensure that the sewer fund is self-supporting over the projection period.

D. FINANCIAL PLAN

The revenue requirements identified for operating the sewer systems are projected to exceed the anticipated revenues within the sewer fund. The following graph shows the total annual revenue requirement compared to the current revenues over the ten-year projection period.



To address the annual shortfalls the current revenues need to be increased by raising sewer rates. Due to the significant shortfalls the City does not have the ability to gradually raise rates without obtaining funding from source outside the Sewer Fund. For this reason a fairly significant initial increase is required followed by more modest increases to ensure that revenues keep pace with expenses. The following table presents the recommended annual increases to sewer rates and the resulting revenues over the next five years.

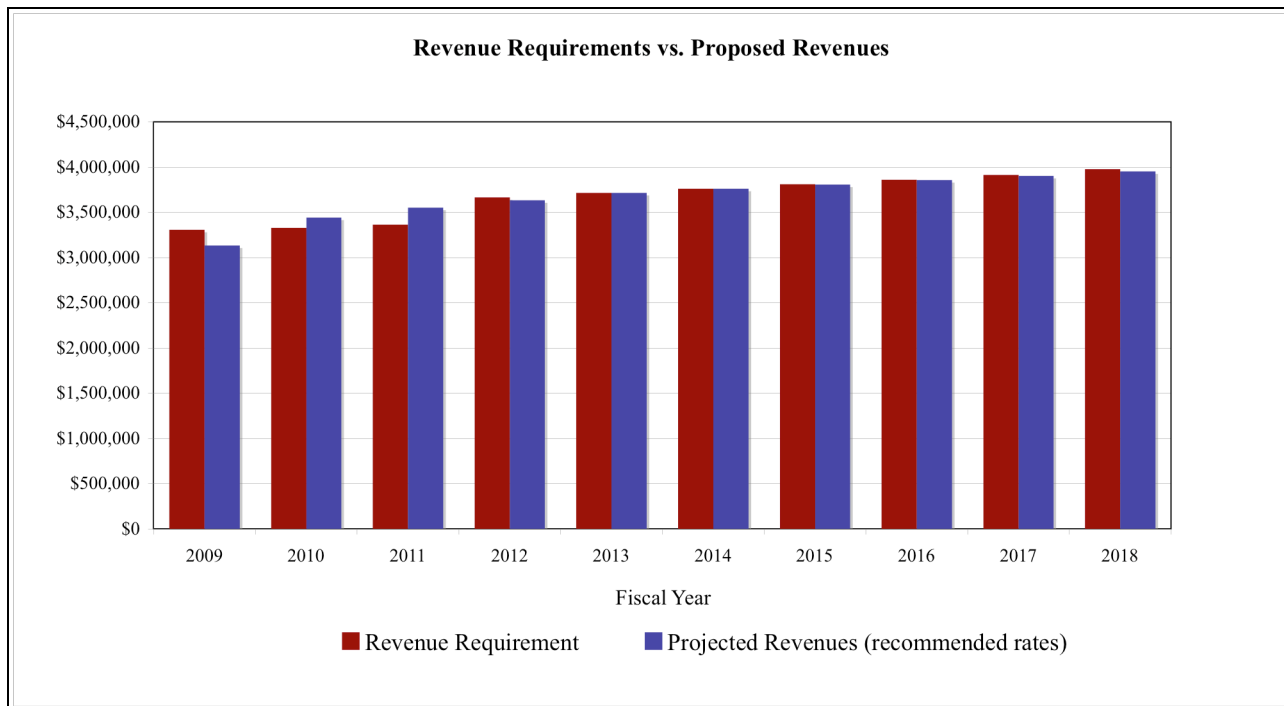
Table 4. Recommended Rate Increases

(million)	2009	2010	2011	2012	2013
Net Revenue Requirements	\$3.31	\$3.33	\$3.34	\$3.67	\$3.71
Revenues Under Current Rates	\$2.80	\$2.81	\$2.81	\$2.82	\$2.83
Surplus / (Shortfall)	(\$0.51)	(\$0.52)	(\$0.55)	(\$0.85)	(\$0.88)
Recommended Increases	20%	4%	3%	3%	2%
Revenues Under Proposed Rates	\$3.18*	\$3.44	\$3.55	\$3.63	\$3.72

*Assumes 9 months of Fiscal Year 2009 at the new rates.

It should be noted the recommended increases are based on current forecasts for expenses related to the sewer system and given the regulatory environment it is possible that unforeseen additional expenses will be required which would result in the need for more significant increases.

Following Fiscal Year 2013 the City will need to continue to consider annual rate increases of between 1% and 2% to ensure revenues keep pace with expenses. The following graph presents the sewer system revenue requirements compared with the revenues under the proposed rate increases.



**FY 2009 revenues assume 8 months at new rates for FY 2009*

The graph demonstrates that the proposed rate increases will generate revenues to cover the expenses related to operating and maintaining the City's sewer system. It should be noted that the revenues for Fiscal Year 2009 assume that the new rates are in place for 8 months of the year to reflect an assumed change in the rate by January 2009. It will be important for the City to monitor the actual system expenses on an annual basis to ensure that the revenues continue to remain inline with expenses.

E. RATE AND FEE DESIGN

The previous sections of this report have identified the total cost of operating the City's sewer system (the revenue requirements) and the necessary adjustments to rates to ensure that the fund is self-supporting. The next step is to identify the appropriate means of pricing the sewer service in the form of the rate design that will generate the required system revenues. The current rate design methodology and cost allocations were evaluated to determine if they reasonably reflect how costs are currently incurred by the City. Alternative rate designs were also developed and evaluated to determine a suitable rate design for the City.

1. Current Rate Design

The current sewer rate design consists of a quarterly charge of \$62.13. Residential customers are charged the quarterly fixed charge regardless of sewer generation. The fixed charge for residential is also applied to multi-unit residential accounts which pay the same fixed charge for each unit. Non-residential customers are charged the quarterly charge but are also charged a volume charge of \$3.45 per 1,000 gallons for usage over 18,000 gallons per quarter. The current rates are summarized below:

Current Customer Rates and Charges

Residential Quarterly Charge	\$ 62.13
Non-residential Quarterly Charge	\$ 62.13
Non-residential Usage Charge (per 1,000 gallons)	\$ 3.45 (usage over 18,000 gallons)

The current rate design is simple to understand and administer by the City. However, the structure does not address variations in residential customers sewer generation. A small residential customer pays the same quarterly amount as a residential customer that generates a significant amount of sewer.

The following section of the Report discusses potential changes to the current methodology, as well as individual rates and charges.

2. Rate Alternatives

Having evaluated the current rate design, the financial model was used to develop and consider various alternative rate designs. The alternative rate designs were developed using methodologies which allocate costs fairly among various user classifications while meeting the City's goals and objectives which include equitable distribution of expenses among customers and encouraging wise use of resources. Numerous alternative rate designs were discussed with the City staff. Based on the discussions four rate alternatives were fully developed for consideration. In addition to evaluating the current rate design (designated as Alternative A), three alternative rate designs were considered (designated as Alternatives B, C and D). Each of the alternatives are revenue neutral, meaning that they will all produce the same amount of revenue. Each of the alternatives are discussed below.

Alternative B - This rate design includes a quarterly fixed charge of \$19.00 and a volume charge of \$4.73 per 1,000 gallons. The volume charge would be applied to the winter quarter usage for all customers, so that each customer would pay the same amount each quarter during the year based on the winter quarter usage. The benefit of this structure is that it would charge residential customers based on their actual usage rather than treating each residential customer the same. The primary disadvantage of this structure is that the quarterly charge of \$19.00 which is substantially less than the current charge would not provide as much guaranteed revenue and the City may experience significant annual fluctuations in sewer revenues as a result. This rate structure also results in very dramatic changes in customer bills over current bills depending on winter quarter usage. Small users experience significant decreases in their bills and large users experience significant increases under this rate structure.

Alternative C - This rate design includes a quarterly fixed charge of \$38.00 and a volume charge of \$3.32 per 1,000 gallons. The volume charge would be applied to the winter quarter usage for residential customer and to all usage for non-residential customers. Similar to alternative B, this alternative charges customers based on usage but makes the assumption that the majority of non-residential water usage returns to the sewer system, unlike residential usage which increases due to outdoor usage during the summer months and does not return to the sewer system. This alternative may also result in increased revenue volatility since the fixed charge is less than the current fixed charge.

Alternative D - This rate design includes a quarterly fixed charge of \$67.00 and a volume charge of \$3.98 per 1,000 gallons. The fixed charge would include a usage allowance of 15,000 gallons per quarter. The volume charge would be applied to the winter quarter usage residential customers over 15,000 gallons per quarter and to all usage for non-residential customers over 15,000 gallons per quarter. This alternative will charge customers who generate a significant amount of sewerage but will also provide revenue stability due to the high fixed quarterly charge. This rate structure also minimizes the changes in bills among various customers, as demonstrated in Table 6.

The rates for each alternative are summarized in the following table.

Table 5. Rate Alternatives

	Current	Alternative			
		A	B	C	D
Residential					
Quarterly Fixed Charge	\$62.13	\$74.80	\$19.00	\$38.00	\$67.00
Usage Charge (per 1,000 gallons)	NA	NA	\$4.73	\$3.32	\$3.98
Non-Residential					
Quarterly Fixed Charge	\$62.13	\$74.80	\$19.00	\$38.00	\$67.00
Usage Charge (per 1,000 gallons)	\$3.45	\$4.15	\$4.73	\$3.32	\$3.98
Rock Creek Customers					
Quarterly Fixed Charge	\$62.13	\$74.80	\$15.31	\$31.65	\$55.77
Usage Charge (per 1,000 gallons)	NA	NA	\$3.94	\$2.76	\$3.31

3. Sample Bills

The following tables presents sample bills for various customers for Fiscal Year 2009 under the current and proposed sewer rate alternatives to demonstrate the impact of each alternative on various types of customers.

Table 6. Residential Sample Bills

Usage (gallons)	Current Bill	Alternative A		Alternative B		Alternative C		Alternative D	
		Bill	%	Bill	%	Bill	%	Bill	%
4,000	\$62	\$75	20%	\$38	-39%	\$51	-17%	\$67	8%
6,000	\$62	\$75	20%	\$47	-24%	\$58	-7%	\$67	8%
8,000	\$62	\$75	20%	\$57	-8%	\$65	4%	\$67	8%
12,000	\$62	\$75	20%	\$76	22%	\$78	25%	\$67	8%
14,000	\$62	\$75	20%	\$85	37%	\$84	36%	\$67	8%
16,000	\$62	\$75	20%	\$104	68%	\$98	57%	\$71	14%
20,000	\$62	\$75	20%	\$114	83%	\$104	68%	\$87	40%
30,000	\$62	\$75	20%	\$161	159%	\$138	121%	\$127	104%
40,000	\$62	\$75	20%	\$208	235%	\$171	175%	\$167	168%

Table 7. Non-Residential Sample Bills (Top Ten Users)

Top Users	Current Bill	Alternative A		Alternative B		Alternative C		Alternative D	
		Bill	%	Bill	%	Bill	%	Bill	%
#1	\$71,961	\$86,641	20%	\$101,672	41%	\$71,293	-1%	\$83,045	15%
#2	\$4,034	\$4,857	20%	\$5,718	42%	\$4,033	0%	\$4,662	16%
#3	\$1,873	\$2,256	20%	\$2,666	42%	\$1,894	1%	\$2,169	16%
#4	\$1,297	\$1,562	20%	\$1,852	43%	\$1,324	2%	\$1,504	16%
#5	\$1,287	\$1,549	20%	\$1,837	43%	\$1,313	2%	\$1,492	16%
#6	\$1,120	\$1,348	20%	\$1,601	43%	\$1,148	3%	\$1,299	16%
#7	\$1,072	\$1,291	20%	\$1,534	43%	\$1,101	3%	\$1,244	16%
#8	\$952	\$1,146	20%	\$1,365	43%	\$982	3%	\$1,106	16%
#9	\$893	\$1,075	20%	\$1,281	43%	\$923	3%	\$1,037	16%
#10	\$891	\$1,073	20%	\$1,278	43%	\$921	3%	\$1,035	16%

4. Recommended Rate Design

Based on discussions with the City and our experience designing sewer rates, we recommend that the City adopt the Alternative D sewer rate design. The rate design was selected because it will:

- Charge residential customers that generate a significant amount of sewage;
- Uses winter quarter usage as the basis for the residential volume charge and therefore captures water usage entering the sewer system (rather than outdoor summer water usage);
- Maintain a high fixed charge which will ensure revenue stability;

- Minimize the increase in customer bills for the majority of the City's customers; and
- Charge non-residential customers based on all usage over 15,000 gallons per quarter.

5. Connection Fees

The City currently charges connection fees to customers who join the wastewater system. In general connection fees are intended to recover the cost of providing wastewater capacity for new customers. The City currently charges all new customers the same fee amount of \$2,500.

There are a variety of methods for calculating connection fees to serve a customer in a wastewater system, most methods of calculating these fees fall into two broad categories:

- *Average cost of capacity*, tied to the historical cost of the system plus the known growth costs of the utility's Capital Improvement Program.
- *Most recent increment of capacity* calculations are often used in a utility which is has recently purchased or constructed new system capacity, reflecting the situation that new customers are being served by the latest additions to the utility's infrastructure.

It is unclear which methodology was utilized during the cost of service study completed for the City. However, since the City just purchased capacity in the newly constructed MSD treatment plant the most recent increment of capacity method is recommended.

The calculation of the connection fee is fairly straight-forward with the goal being to determine the cost of providing sewer system capacity on a per customer basis. The estimated cost of the City's portion (including financing expenses) of the capacity in the new MSD treatment plant is approximately \$39.0 million. The City has purchase an average day treatment capacity of 4.5 MGD. This equates to approximately \$8.86 per gallon of treatment capacity. Using an average residential connection as 270 gallons per day results in a per connection fee of approximately \$2,400. This is slightly less than the City currently charges. However, since the cost of capacity will continue to increase we recommend that the City maintain its current connection fee at \$2,500.

K. CONCLUSIONS AND RECOMMENDATIONS

The conclusions and recommendations that were developed during the course of this rate study are presented below.

1. Findings and Conclusions

- Current sewer rates do not produce sufficient cash revenue to cover cash revenue requirements within the Sewer Fund for Fiscal Year 2009 or the years following. Based on projected water sales, the current rates will produce cash revenues roughly 20% less than the required cash revenue in Fiscal Year 2009 with subsequent significant shortfalls annually over the planning period.
- The capital expenses, in the form of annual debt service, related to the new Lower Meramec Treatment Plant is the primary reason for the current and projected shortfall in the Sewer Fund.
- The City does not have any dedicated reserves within the Sewer Fund.
- The City incurs costs while operating and maintaining the sewer system that do not benefit customers in the Rock Creek District.
- A significant portion of the City's sewer collection system was installed in the 1950's and will reach its estimated useful life over the next 10 years.
- The current residential sewer rate structure which charges all customers the same fixed amount does not allocate costs proportionately among residential customers (i.e. large residential users pay the same amount as small users).
- The current connection fee of \$2,500 for connecting to the wastewater system is set at the appropriate level to recover the cost of providing capacity to new wastewater connections.

2. Recommendations

- We recommend that the City formally establish an O&M Reserve and a Repair, Renewal and Rehabilitation ("3R") Reserve for the sewer system. The O&M Reserve should be set at 90 days of operating expenses. The "3R" Reserve should be based on the value of the sewer system and its useful life. We recommend that the City begins contributing to the "3R" Reserve by Fiscal Year 2012 at the latest to allow the City to begin planning for the significant repairs and replacements that will be required within the collection system as it begins to reach its useful life. Both reserves should be designated as restricted reserves with policy clearly establishing uses for each reserve.
- We recommend that the City charge Rock Creek customers approximately 17% less than City of Arnold customers due to the fact that the City does not provide local maintenance to lines serving these customers and because the City incurs expenses not related to serving these customers.

- We recommend that the City increase sewer rate immediately due to the shortfall within the Sewer Fund. The recommended annual increases for the next five years are shown below. The increases for years following 2009 are based on current conditions and are subject to change based on regulatory mandates and/or unforeseen increases in sewer system expenses.

	2009	2010	2011	2012	2013
Recommended Rate Increases	20%	4%	3%	3%	2%

- We recommend that the City adopt a new rate structure that will more appropriately charge residential customers based on their contribution to the City's system and the costs they cause the City to incur. The rate structure consists of a fixed charge which includes 15,000 gallons of usage per quarter and a usage charge based on winter quarter usage for residential customers and actual usage for non-residential customers. The following table presents the current sewer rates and the recommended rates for Fiscal Year 2009.

	Current Rates	Proposed Sewer Rates
Residential Customers		
Quarterly Fixed Charge (per housing unit)	\$62.13	\$67.00
Usage Charge (per 1,000 gallons)	NA	\$3.98
Non-Residential Customers		
Quarterly Fixed Charge (per housing unit)	\$62.13	\$67.00
Usage Charge (per 1,000 gallons)	\$3.45	\$3.98
Rock Creek Customers		
Quarterly Fixed Charge (per housing unit)	\$62.13	\$55.77
Usage Charge (per 1,000 gallons)	NA	\$3.31

- We recommend that the City maintain its sewer connection fee set at \$2,500 per connection.

APPENDIX

CITY OF ARNOLD

SEWER COST OF SERVICE FINANCIAL MODEL

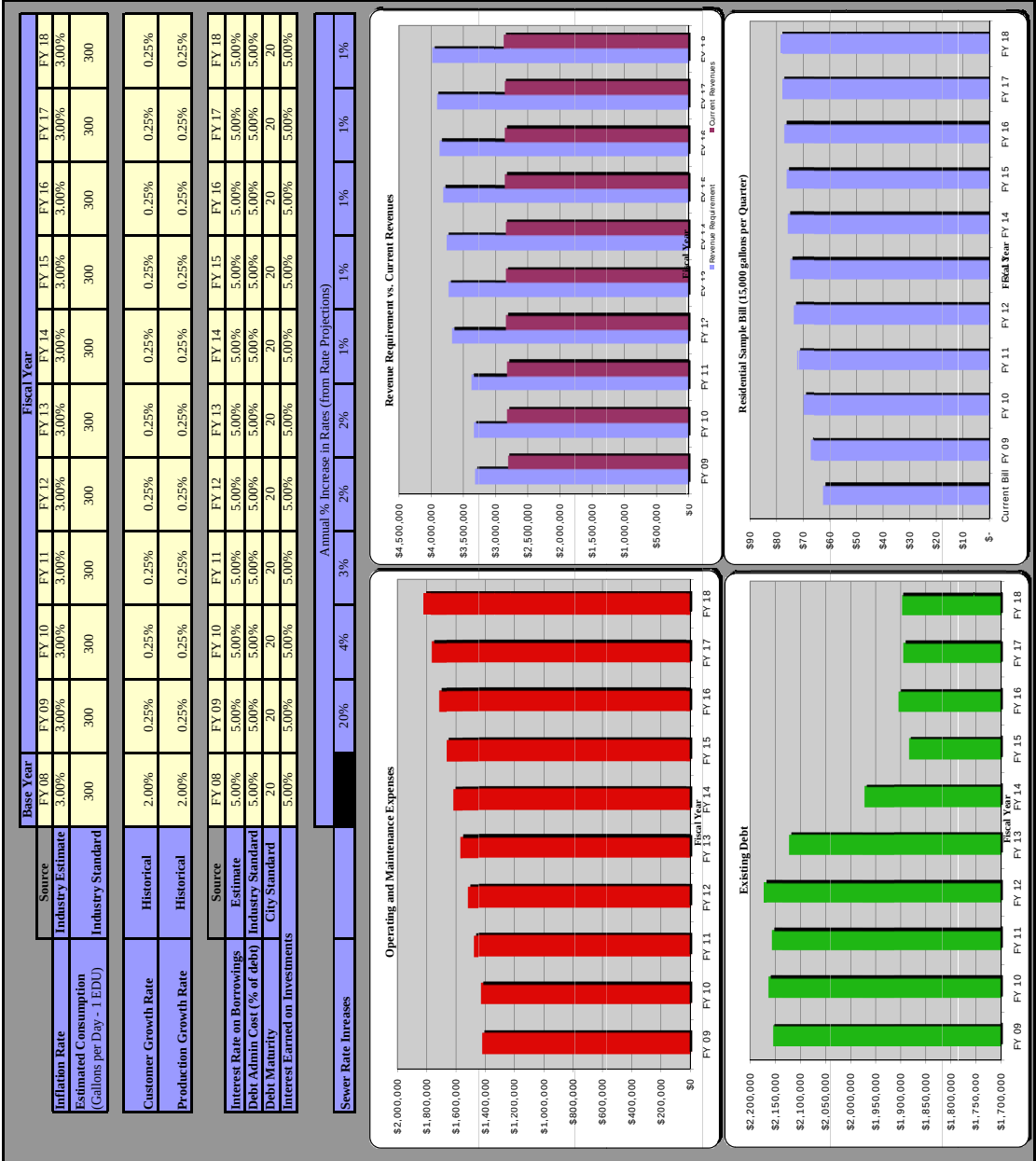


City of Arnold Sewer Cost of Service Model
Developed by: Municipal & Financial Services Group, LLC
Last Update: 12/4/08
By: DAH

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SCHEDULE 1 - CONTROL PANEL



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SCHEDULE 2 - OPERATING AND MAINTENANCE EXPENSES

Code	Description	FY 05 Actual	FY 06 Actual	FY 07 Actual	FY 08 Budget	FY 09 Budget	FY 10 Forecast	FY 11 Forecast	FY 12 Forecast	FY 13 Forecast	FY 14 Forecast	FY 15 Forecast	FY 16 Forecast	FY 17 Forecast	FY 18 Forecast
Personnel Services															
41501	Salaries & Wages	210,042	258,716	246,754	299,340	296,795	305,699	314,870	324,316	334,045	344,067	354,389	365,021	375,971	387,250
41505	Overtime	7,321	15,122	14,545	16,500	18,000	18,540	19,096	19,669	20,259	20,851	21,453	22,068	22,696	23,336
42110	FICA	16,420	20,773	18,420	24,162	24,082	24,804	25,548	26,315	27,104	27,917	28,755	29,618	30,506	31,421
42130	Pension-LAGERS	32,499	45,115	45,870	55,588	52,256	53,824	55,438	57,102	58,815	60,579	62,396	64,268	66,196	68,182
42210	Health & Life Insurance	42,899	56,132	52,106	70,872	70,138	72,242	74,409	76,641	78,940	81,309	83,748	86,260	88,848	91,514
42220	Short Term Disability	469	1,030	920	1,437	1,425	1,467	1,511	1,557	1,603	1,652	1,701	1,752	1,805	1,859
43270	Temporary Personnel	12,317	6,698	13,889	-	-	-	-	-	-	-	-	-	-	-
	Personnel Services Subtotal	321,967	402,586	392,504	467,899	462,695	476,576	490,873	505,599	520,767	536,390	552,482	569,057	586,128	603,712
Supplies															
45110	General Operating Supplies	45,008	67,810	63,815	80,000	90,000	92,700	95,481	98,345	101,296	104,335	107,465	110,689	114,009	117,430
45210	Printing	1,888	2,123	1,387	2,500	2,000	2,060	2,122	2,185	2,251	2,319	2,388	2,460	2,534	2,610
45220	Postage	5,679	5,890	2,626	3,500	4,500	4,635	4,774	4,917	5,065	5,217	5,374	5,534	5,700	5,871
45250	Expendable Equipment	-	6,485	6,216	6,282	5,000	5,150	5,305	5,464	5,628	5,796	5,970	6,149	6,334	6,524
45310	Gas & Oil	2,371	2,861	2,596	3,500	7,500	7,725	7,957	8,195	8,441	8,695	8,955	9,224	9,501	9,786
	Supplies Subtotal	54,946	85,169	76,640	95,782	109,000	112,270	115,638	119,107	122,680	126,361	130,152	134,056	138,078	142,220
Contractual Services															
43110	Legal	-	-	-	500	500	515	530	546	563	580	597	615	633	652
43240	Data Processing	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43250	MSD Treatment	198,219	184,680	213,551	808,800	400,000	413,000	426,423	440,281	454,590	469,365	484,619	500,369	516,631	533,422
43260	Grass Mowing	1,400	3,620	1,430	1,500	1,500	1,545	1,591	1,639	1,688	1,739	1,791	1,845	1,900	1,957
43285	Administration Costs	132,000	138,000	138,000	138,000	138,000	142,140	146,404	150,796	155,320	159,980	164,779	169,723	174,814	180,059
43290	Miscellaneous	132,000	-	-	-	5,000	5,150	5,305	5,464	5,628	5,796	5,970	6,149	6,334	6,524
44110	Travel & Lodging	859	859	347	515	600	618	637	656	675	696	716	738	760	783
44130	Mileage	295	338	368	320	500	515	530	546	563	580	597	615	633	652
44140	Seminars	50	1,030	110	250	300	309	318	328	338	348	358	369	380	391
44150	Memberships	104	-	157	200	200	206	212	219	225	232	239	246	253	261
44160	Education	-	85	198	198	500	515	530	546	563	580	597	615	633	652
45010	Advertising	161	642	713	750	1,000	1,030	1,061	1,093	1,126	1,159	1,194	1,230	1,267	1,305
45090	Equipment Rental	2,827	1,398	1,604	2,000	2,000	2,060	2,122	2,185	2,251	2,319	2,388	2,460	2,534	2,610
45150	Uniforms	2,102	2,704	2,729	4,200	4,000	4,738	4,880	5,027	5,177	5,333	5,493	5,657	5,827	6,002
45320	Vehicle Maintenance	6,031	13,839	10,740	16,130	16,000	16,480	16,974	17,484	18,008	18,548	19,105	19,678	20,268	20,876
46110	Telephone	1,280	1,552	1,321	1,200	1,200	1,236	1,273	1,311	1,351	1,391	1,433	1,476	1,520	1,566
46130	Long Distance	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46140	Cellular Phone	2,462	3,074	2,688	3,000	3,000	3,090	3,183	3,278	3,377	3,478	3,582	3,690	3,800	3,914
46150	Pagers	61	121	74	150	120	124	127	131	135	139	143	148	152	157
46210	Electric	47,877	51,404	95,046	35,000	23,000	23,690	24,401	25,133	25,887	26,663	27,463	28,287	29,136	30,010
46220	Gas	197	225	87	450	500	515	530	546	563	580	597	615	633	652
46230	Water	2,345	2,249	1,619	2,000	2,000	2,060	2,122	2,185	2,251	2,319	2,388	2,460	2,534	2,610
46420	Equipment Maintenance	10,367	-	8,024	12,300	12,000	12,360	12,731	13,113	13,506	13,911	14,329	14,758	15,201	15,657
46480	Contract Sewer Repairs	55,642	77,903	92,130	120,000	150,000	154,500	159,135	163,909	168,826	173,891	179,108	184,481	190,016	195,716
46530	Sewer Backup Insurance Deductible	13,476	22,316	9,976	50,000	50,000	51,500	53,045	54,636	56,275	57,964	59,703	61,494	63,339	65,239
	Contractual Services Subtotal	611,755	506,039	580,932	1,197,463	812,520	837,896	864,065	891,053	918,885	947,588	977,189	1,007,717	1,038,199	1,071,667
Capital Outlay															
	Land and Buildings	-	35,000	-	663,000	6,000	-	-	-	-	-	-	-	-	-
	Office Equipment	-	-	-	-	25,000	-	-	-	-	-	-	-	-	-
	Automotive Equipment	-	230,000	-	-	-	-	-	-	-	-	-	-	-	-
	Machinery & Equipment	472,214	114,500	-	-	-	-	-	-	-	-	-	-	-	-
	Capital Outlay Subtotal	472,214	379,500	-	663,000	31,000	-	-	-	-	-	-	-	-	-
Total Operation and Maintenance Expenses															
		1,460,882	1,374,294	1,050,076	2,424,144	1,415,215	1,426,742	1,470,576	1,515,760	1,562,333	1,610,340	1,659,823	1,710,829	1,763,405	1,817,599

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SCHEDULE 2A - MSD Treatment Costs

Growth Operating	Growth Percentage															
	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18						
	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%						
	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%						
						</										

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		FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Total Sewer O&M Expenses		\$ 1,415,215	\$ 1,426,742	\$ 1,470,576	\$ 1,515,760	\$ 1,562,333	\$ 1,610,340	\$ 1,659,823	\$ 1,710,829	\$ 1,763,405	\$ 1,817,599
	Reduction Percentage										
Code											
41501 Salaries & Wages	10%	\$ 29,680	\$ 30,570	\$ 31,487	\$ 32,432	\$ 33,405	\$ 34,407	\$ 35,439	\$ 36,502	\$ 37,597	\$ 38,725
45210 Printing	100%	\$ 2,000	\$ 2,060	\$ 2,122	\$ 2,185	\$ 2,251	\$ 2,319	\$ 2,388	\$ 2,460	\$ 2,534	\$ 2,610
45220 Postage	100%	\$ 4,500	\$ 4,635	\$ 4,774	\$ 4,917	\$ 5,065	\$ 5,217	\$ 5,373	\$ 5,534	\$ 5,700	\$ 5,871
43240 Data Processing	100%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
43260 Grass Mowing	100%	\$ 1,500	\$ 1,545	\$ 1,591	\$ 1,639	\$ 1,688	\$ 1,739	\$ 1,791	\$ 1,845	\$ 1,900	\$ 1,957
43285 Administrative Costs	80%	\$ 110,400	\$ 113,712	\$ 117,123	\$ 120,637	\$ 124,256	\$ 127,984	\$ 131,823	\$ 135,778	\$ 139,851	\$ 144,047
45090 Equipment Rental	100%	\$ 2,000	\$ 2,060	\$ 2,122	\$ 2,185	\$ 2,251	\$ 2,319	\$ 2,388	\$ 2,460	\$ 2,534	\$ 2,610
46480 Contractual Sewer Repair	25%	\$ 37,500	\$ 38,625	\$ 39,784	\$ 40,977	\$ 42,207	\$ 43,473	\$ 44,777	\$ 46,120	\$ 47,504	\$ 48,929
46530 Sewer Back-up Insurance Deductible	100%	\$ 50,000	\$ 51,500	\$ 53,045	\$ 54,636	\$ 56,275	\$ 57,964	\$ 59,703	\$ 61,494	\$ 63,339	\$ 65,239
TOTAL		\$ 237,580	\$ 244,707	\$ 252,048	\$ 259,610	\$ 267,398	\$ 275,420	\$ 283,682	\$ 292,193	\$ 300,959	\$ 309,987
Total O&M Expenses Applicable to All Customers		\$ 1,177,636	\$ 1,182,035	\$ 1,218,528	\$ 1,256,150	\$ 1,294,935	\$ 1,334,920	\$ 1,376,141	\$ 1,418,637	\$ 1,462,447	\$ 1,507,612
Expenses Not Applicable to Rock Creek Customers		\$ 237,580	\$ 244,707	\$ 252,048	\$ 259,610	\$ 267,398	\$ 275,420	\$ 283,682	\$ 292,193	\$ 300,959	\$ 309,987
Rock Creek Discount:		16.79%	17.15%	17.14%	17.13%	17.12%	17.10%	17.09%	17.08%	17.07%	17.05%

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SCHEDULE 3 -- EXISTING DEBT SERVICE

Debt Issue	Outstanding Principal	FY 08 Budget	FY 09 Forecast	FY 10 Forecast	FY 11 Forecast	FY 12 Forecast	FY 13 Forecast	FY 14 Forecast	FY 15 Forecast	FY 16 Forecast	FY 17 Forecast	FY 18 Forecast
Meramec WWTP Construction Costs	Principal	\$ 16,721,443	\$ 379,247	\$ 396,015	\$ 413,525	\$ 431,809	\$ 450,901	\$ 470,838	\$ 491,655	\$ 513,394	\$ 536,093	\$ 559,797
Meramec WWTP Construction Costs	Interest & Admin Fee	\$ 10,791,029	\$ 721,252	\$ 704,484	\$ 686,974	\$ 668,690	\$ 649,598	\$ 629,661	\$ 608,843	\$ 587,105	\$ 564,405	\$ 540,702
Infrastructure Facilities Revenue Bonds	Principal	\$ 2,475,000	-	\$ 76,169	\$ 80,042	\$ 82,624	\$ 86,497	\$ 91,661	\$ 95,534	\$ 99,407	\$ 104,571	\$ 109,735
Infrastructure Facilities Revenue Bonds	Interest & Admin Fee	\$ 1,474,175	\$ 53,844	\$ 118,988	\$ 115,715	\$ 111,917	\$ 107,949	\$ 103,745	\$ 99,299	\$ 94,645	\$ 89,764	\$ 84,621
Series 2005 Bonds	Principal	\$ 5,920,000	\$ 210,000	\$ 215,000	\$ 225,000	\$ 230,000	\$ 240,000	\$ 255,000	\$ 265,000	\$ 275,000	\$ 285,000	\$ 300,000
Series 2005 Bonds	Interest & Admin Fee	\$ 1,412,696	\$ 112,572	\$ 111,020	\$ 109,323	\$ 107,098	\$ 103,295	\$ 97,800	\$ 94,067	\$ 90,120	\$ 86,025	\$ 81,781
Series 2006 Bonds	Principal	\$ 2,742,167	\$ 125,000	\$ 125,833	\$ 130,000	\$ 130,000	\$ 130,000	\$ 130,833	\$ 135,000	\$ 135,833	\$ 140,000	\$ 145,833
Series 2006 Bonds	Interest & Admin Fee	\$ 1,346,683	\$ 123,377	\$ 118,377	\$ 113,430	\$ 108,739	\$ 103,973	\$ 99,043	\$ 93,810	\$ 88,185	\$ 81,638	\$ 75,800
Series 1992A/1993A Bonds	Principal	\$ 1,087,000	\$ 144,000	\$ 152,000	\$ 161,000	\$ 170,000	\$ 179,000	\$ 193,000	\$ 200,000	-	-	-
Series 1992A/1993A Bonds	Interest	\$ 57,902	\$ 21,350	\$ 19,711	\$ 11,623	\$ 706	\$ 4,512	-	-	-	-	-
Series 1992A SRF Revenue Bonds	Principal	\$ 513,433	\$ 82,917	\$ 87,917	\$ 92,917	\$ 97,917	\$ 105,833	\$ 45,933	-	-	-	-
Series 1992A SRF Revenue Bonds	Interest	\$ 113,500	\$ 33,590	\$ 28,192	\$ 22,434	\$ 16,348	\$ 9,934	\$ 3,002	-	-	-	-
Total Principal		\$ 29,459,043	\$ 941,163	\$ 1,052,934	\$ 1,102,483	\$ 1,142,349	\$ 1,192,231	\$ 1,242,231	\$ 1,292,231	\$ 1,342,231	\$ 1,392,231	\$ 1,442,231
Total Interest		\$ 15,195,985	\$ 1,065,985	\$ 1,100,772	\$ 1,059,499	\$ 1,013,498	\$ 979,260	\$ 933,252	\$ 896,019	\$ 860,055	\$ 841,832	\$ 811,571
Total Existing Debt		\$ 44,655,028	\$ 2,007,149	\$ 2,153,706	\$ 2,161,983	\$ 2,155,848	\$ 2,171,492	\$ 2,220,517	\$ 2,188,256	\$ 2,203,330	\$ 2,234,063	\$ 2,253,802

SEWER

Amount Non-Growth	Percent Growth	FY 08 Budget	FY 09 Forecast	FY 10 Forecast	FY 11 Forecast	FY 12 Forecast	FY 13 Forecast	FY 14 Forecast	FY 15 Forecast	FY 16 Forecast	FY 17 Forecast	FY 18 Forecast
Meramec WWTP Construction Costs	100%	\$ 379,247	\$ 396,015	\$ 413,525	\$ 431,809	\$ 450,901	\$ 470,838	\$ 491,655	\$ 513,394	\$ 536,093	\$ 559,797	\$ 584,548
Meramec WWTP Construction Costs	100%	\$ 721,252	\$ 704,484	\$ 686,974	\$ 668,690	\$ 649,598	\$ 629,661	\$ 608,843	\$ 587,105	\$ 564,405	\$ 540,702	\$ 515,951
Infrastructure Facilities Revenue Bonds	100%	-	\$ 76,169	\$ 80,042	\$ 82,624	\$ 86,497	\$ 91,661	\$ 95,534	\$ 99,407	\$ 104,571	\$ 109,735	\$ 116,190
Infrastructure Facilities Revenue Bonds	100%	\$ 53,844	\$ 118,988	\$ 115,715	\$ 111,917	\$ 107,949	\$ 103,745	\$ 99,299	\$ 94,645	\$ 89,764	\$ 84,621	\$ 79,176
Series 2005 Bonds	100%	\$ 210,000	\$ 215,000	\$ 225,000	\$ 230,000	\$ 240,000	\$ 255,000	\$ 265,000	\$ 275,000	\$ 285,000	\$ 300,000	\$ 310,000
Series 2006 Bonds	100%	\$ 112,572	\$ 111,020	\$ 109,323	\$ 107,098	\$ 103,295	\$ 97,800	\$ 94,067	\$ 90,120	\$ 86,025	\$ 81,781	\$ 76,939
Series 2006 Bonds	100%	\$ 125,000	\$ 125,833	\$ 130,000	\$ 130,000	\$ 130,000	\$ 130,833	\$ 135,000	\$ 135,833	\$ 140,000	\$ 145,833	\$ 150,833
Series 2006 Bonds	100%	\$ 123,377	\$ 118,377	\$ 113,430	\$ 108,739	\$ 103,973	\$ 99,043	\$ 93,810	\$ 88,185	\$ 81,638	\$ 75,800	\$ 68,406
Series 1992A/1993A Bonds	100%	\$ 144,000	\$ 152,000	\$ 161,000	\$ 170,000	\$ 179,000	\$ 193,000	\$ 200,000	-	-	-	-
Series 1992A/1993A Bonds	100%	\$ 21,350	\$ 19,711	\$ 11,623	\$ 706	\$ 4,512	\$ 45,933	-	-	-	-	-
Series 1992A SRF Revenue Bonds	100%	\$ 82,917	\$ 87,917	\$ 92,917	\$ 97,917	\$ 105,833	\$ 45,933	-	-	-	-	-
Series 1992A SRF Revenue Bonds	100%	\$ 33,590	\$ 28,192	\$ 22,434	\$ 16,348	\$ 9,934	\$ 3,002	-	-	-	-	-
Total Non-Growth	100%	\$ 2,007,149	\$ 2,153,706	\$ 2,161,983	\$ 2,155,848	\$ 2,171,492	\$ 2,220,517	\$ 2,188,256	\$ 2,203,330	\$ 2,234,063	\$ 2,264,802	\$ 2,295,541

Amount Growth

Amount Growth	Percent Growth	FY 08 Budget	FY 09 Forecast	FY 10 Forecast	FY 11 Forecast	FY 12 Forecast	FY 13 Forecast	FY 14 Forecast	FY 15 Forecast	FY 16 Forecast	FY 17 Forecast	FY 18 Forecast
Meramec WWTP Construction Costs	0%	-	-	-	-	-	-	-	-	-	-	-
Meramec WWTP Construction Costs	0%	-	-	-	-	-	-	-	-	-	-	-
Infrastructure Facilities Revenue Bonds	0%	-	-	-	-	-	-	-	-	-	-	-
Infrastructure Facilities Revenue Bonds	0%	-	-	-	-	-	-	-	-	-	-	-
Series 2005 Bonds	0%	-	-	-	-	-	-	-	-	-	-	-
Series 2005 Bonds	0%	-	-	-	-	-	-	-	-	-	-	-
Series 2006 Bonds	0%	-	-	-	-	-	-	-	-	-	-	-
Series 2006 Bonds	0%	-	-	-	-	-	-	-	-	-	-	-
Series 1992A/1993A Bonds	0%	-	-	-	-	-	-	-	-	-	-	-
Series 1992A/1993A Bonds	0%	-	-	-	-	-	-	-	-	-	-	-
Series 1992A SRF Revenue Bonds	0%	-	-	-	-	-	-	-	-	-	-	-
Series 1992A SRF Revenue Bonds	0%	-	-	-	-	-	-	-	-	-	-	-
Total Growth	0%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Total Principal Non-Growth

Total Interest & Admin Fee Non-Growth

Total Principal Growth

Total Interest & Admin Fee Growth

Total Existing Debt

Total Principal

Total Interest

Total Existing Debt

Total Principal

Total Interest

Total Existing Debt

Total Principal

Total Interest

Total Existing Debt

Total Principal

Total Interest

Total Existing Debt

SCHEDULE 4 - CAPITAL IMPROVEMENT PROJECTS

Sewer	Project	Code	Allocation (%)		Non-Growth Funding Source		Growth Funding Source		FY 09 Projected	FY 10 Projected	FY 11 Projected	FY 12 Projected	FY 13 Projected	FY 14 Projected	FY 15 Projected	FY 16 Projected	FY 17 Projected	FY 18 Projected	FY 19 Projected
			Non Growth:	Growth:	Cash:	Bond:	Cash:	Bond:											
MSD Treatment Plant - Phase II	Above		100%	0%	100%	0%	100%	0%	50,974				50,974	200,283	288,636	268,162	278,222	274,448	267,315
			100%	0%	100%	0%	100%	0%											
			100%	0%	100%	0%	100%	0%											
			100%	0%	100%	0%	100%	0%											
			100%	0%	100%	0%	100%	0%											
			100%	0%	100%	0%	100%	0%											
			100%	0%	100%	0%	100%	0%											
			100%	0%	100%	0%	100%	0%											
Total Sewer Capital Improvements																			
Capital Projects by Type																			
Buried Assets																			
Above Ground Assets																			
Total																			

SCHEDULE 5A - NON-GROWTH - CASH FUNDED CIP

Project	Code	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19
		Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
MSD Treatment Plant - Phase II	Above	-	-	-	-	50,974	200,283	288,636	268,162	278,222	274,448	267,315
	0	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-
Total Non-Growth Cash Funded Sewer Capital Projects												
		-	-	-	-	50,974	200,283	288,636	268,162	278,222	274,448	267,315
Capital Projects by Type												
Buried Assets	Buried	-	-	-	-	-	-	-	-	-	-	-
Above Ground Assets	Above	-	-	-	-	50,974	200,283	288,636	268,162	278,222	274,448	267,315
Total		-	-	-	-	50,974	200,283	288,636	268,162	278,222	274,448	267,315

SCHEDULE 5B - NON-GROWTH - BOND FUNDED CIP

Project	Code	FY 09 Projected	FY 10 Projected	FY 11 Projected	FY 12 Projected	FY 13 Projected	FY 14 Projected	FY 15 Projected	FY 16 Projected	FY 17 Projected	FY 18 Projected	FY 19 Projected
MSD Treatment Plant - Phase II												
	Above	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-
Total Non-Growth Bond Funded Sewer Capital Projects												
		-	-	-	-	-	-	-	-	-	-	-
Capital Projects by Type												
Buried Assets	Buried	-	-	-	-	-	-	-	-	-	-	-
Above Ground Assets	Above	-	-	-	-	-	-	-	-	-	-	-
Total		-	-	-	-	-	-	-	-	-	-	-

SCHEDULE 5C - GROWTH - CASH FUNDED CIP

Project	Code	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19
		Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
MSD Treatment Plant - Phase II	Above	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-
Total Growth Cash Funded Sewer Capital Projects		-	-	-	-	-	-	-	-	-	-	-

SCHEDULE 5D - GROWTH - BOND FUNDED CIP

Project	Code	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19
		Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
MSD Treatment Plant - Phase II	Above	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-
Total Growth Bond Funded Sewer Capital Projects		-	-	-	-	-	-	-	-	-	-	-

SCHEDULE 6 - PROJECTED DEBT SERVICE

[illegible]

SCHEDULE 7 - OPERATING AND MAINTENANCE RESERVE

O&M Reserve	FY 09 Forecast	FY 10 Forecast	FY 11 Forecast	FY 12 Forecast	FY 13 Forecast	FY 14 Forecast	FY 15 Forecast	FY 16 Forecast	FY 17 Forecast	FY 18 Forecast
Operating and Maintenance Expenses	1,415,215	1,426,742	1,470,576	1,515,760	1,562,333	1,610,340	1,659,823	1,710,829	1,763,405	1,817,599
Target Balance (90 days operating)	348,957	351,799	362,608	373,749	385,233	397,070	409,271	421,848	434,812	448,175
Less Reserve Withdrawal										
Current O&M Cash Balance*	439,943	439,943	439,943	439,943	439,943	439,943	439,943	439,943	439,943	439,943
Sewer O&M Reserve Contribution	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 8,232

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SCHEDULE 8A - ASSET DATA

Replacement Cost Index				Unit Replacement Cost
Material	Size	Lookup Value		
Clay	12	Clay12		
Clay	10	Clay10		
Clay	12	Clay12		
Clay	6	Clay6		
Clay	8	Clay8		
Concrete	10	Concrete10		
Concrete	12	Concrete12		
Concrete	15	Concrete15		
Concrete	18	Concrete18		
Concrete	21	Concrete21		
Concrete	24	Concrete24		
Concrete	27	Concrete27		
PVC	36	PVC36		
PVC	8	PVC8		

[INDEX](#)**SCHEDULE 8B - REPLACEMENT TABLE**

Sum of Total Cost Replacement Year	Material		Concrete	PVC	Grand Total	Replacement Running Total
	Clay					
2016	\$ 126,853.11				\$ 126,853.11	\$ 126,853.11
2017	\$ 755,545.11				\$ 755,545.11	\$ 882,398.21
2018	\$ 3,616,518.83				\$ 3,616,518.83	\$ 4,498,917.04
2019	\$ 34,089.55				\$ 34,089.55	\$ 4,533,006.60
2020	\$ 2,945,026.96				\$ 2,945,026.96	\$ 7,478,033.56
2022	\$ 671,737.18				\$ 671,737.18	\$ 8,149,770.74
2024	\$ 47,219.30				\$ 47,219.30	\$ 8,196,990.05
2028	\$ 245,550.81				\$ 245,550.81	\$ 8,442,540.86
2029	\$ 68,293.32				\$ 68,293.32	\$ 8,510,834.19
2030	\$ 2,467,313.81				\$ 2,467,313.81	\$ 10,978,148.00
2032	\$ 177,805.32				\$ 177,805.32	\$ 11,155,953.32
2037	\$ 966,597.15				\$ 966,597.15	\$ 12,122,550.46
2038	\$ 145,843.74				\$ 145,843.74	\$ 12,268,394.20
2040	\$ 3,129,209.06				\$ 3,129,209.06	\$ 15,397,603.26
2056		\$ 1,505,714.48			\$ 1,505,714.48	\$ 16,903,317.74
2058		\$ 1,906,506.59		\$ 618,869.45	\$ 2,525,376.03	\$ 19,428,693.77
2060		\$ 3,026,772.24		\$ 21,386.43	\$ 3,048,158.67	\$ 22,476,852.44
2064				\$ 143,569.79	\$ 143,569.79	\$ 22,620,422.23
2066				\$ 451,967.44	\$ 451,967.44	\$ 23,072,389.67
2067				\$ 645,564.07	\$ 645,564.07	\$ 23,717,953.75
2068				\$ 971,841.62	\$ 971,841.62	\$ 24,689,795.36
2069				\$ 39,580.73	\$ 39,580.73	\$ 24,729,376.10
2070				\$ 683,070.56	\$ 683,070.56	\$ 25,412,446.66
2071				\$ 147,567.41	\$ 147,567.41	\$ 25,560,014.07
2072				\$ 874,578.19	\$ 874,578.19	\$ 26,434,592.27
2073				\$ 278,547.87	\$ 278,547.87	\$ 26,713,140.13
2074				\$ 282,470.16	\$ 282,470.16	\$ 26,995,610.29
2075				\$ 157,283.93	\$ 157,283.93	\$ 27,152,894.23
2076				\$ 1,384,663.03	\$ 1,384,663.03	\$ 28,537,557.26
2077				\$ 115,433.13	\$ 115,433.13	\$ 28,652,990.39
2078				\$ 879,469.62	\$ 879,469.62	\$ 29,532,460.01
2080				\$ 356,125.62	\$ 356,125.62	\$ 29,888,585.62
2084				\$ 379,413.18	\$ 379,413.18	\$ 30,267,998.81
2085				\$ 77,710.31	\$ 77,710.31	\$ 30,345,709.12
2086				\$ 404,094.23	\$ 404,094.23	\$ 30,749,803.35
2087				\$ 1,585,174.09	\$ 1,585,174.09	\$ 32,334,977.44
2088				\$ 50,835.17	\$ 50,835.17	\$ 32,385,812.60
Grand Total	\$15,397,603.26	\$ 6,438,993.30	\$ 10,549,216.05	\$32,385,812.60		

SCHEDULE 8C - REPAIR, RENEWAL AND REPLACEMENT RESERVE (3R RESERVE) - Burried Assets

Required Annual Reinvestment

Current Year	2009	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Annual Inflation Rate	3%											
Total Cost of Replacement in Arrears (2008 Dollars)	\$ -	\$ -	-	-	-	-	-	-	\$ 126,853	\$ 755,545	\$ 3,616,519	
Number of Years to Pay Off	20											
Annual Cost for 20 Year Payoff	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Future Annual Replacement Cost (2008 Dollars)		\$ -	\$ -	-	-	-	-	-	-	\$ 126,853	\$ 755,545	\$ 3,616,519
Remaining Cost of Replacement		\$ -	\$ -	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Required Annual Reinvestment		-	-	-	-	-	-	-	-	126,853	755,545	3,616,519
O&M Planned Reinvestment - Buried Assets		120,000	150,000	154,500	159,135	163,909	168,826	173,891	179,108	184,481	190,016	195,716
CIP Planned Reinvestment - Buried Assets		-	-	-	-	-	-	-	-	-	-	-
Total Planned Reinvestment - Buried Assets		120,000	150,000	154,500	159,135	163,909	168,826	173,891	179,108	184,481	190,016	195,716
Planned Annual Reinvestment less Required Annual Reinvestment		120,000	150,000	154,500	159,135	163,909	168,826	173,891	179,108	57,628	(565,530)	(3,420,803)
Recommended 3R Investment		241,758	241,758	241,758	241,758	241,758	241,758	241,758	241,758	241,758	241,758	241,758
3R Cumulative Cash Balance		241,758	483,515	725,273	967,031	1,208,789	1,450,546	1,692,304	1,934,062	2,175,820	2,417,577	2,659,335
Fund 3R Reserve		No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Actual 3R Investment		-	-	-	-	241,758	241,758	241,758	241,758	241,758	241,758	241,758

SCHEDULE 9 - MISCELLANEOUS REVENUES

Account Description	FY05		FY06		FY07		FY08		FY09		FY10		FY11		FY12		FY13		FY14		FY15		FY16		FY17		FY18	
	Actual		Actual		Actual	Estimate	Budget	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast
Penalties-Sewer Service	14,424		23,607		44,877	33,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000
Returned Check Fees	(75)		394		225	350	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
Water Shut-Off Fees	-		-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Miscellaneous Revenue	14,349		24,001		45,102	33,350	25,300	25,300	25,300	25,300	25,300	25,300	25,300	25,300	25,300	25,300	25,300	25,300	25,300	25,300	25,300	25,300	25,300	25,300	25,300	25,300	25,300	25,300

	FY 04 Actual	FY 05 Actual	FY 06 Actual	FY 07 Actual	FY 08 Est/Actual	FY 09 Forecast	FY 10 Forecast	FY 11 Forecast	FY 12 Forecast	FY 13 Forecast	FY 14 Forecast	FY 15 Forecast	FY 16 Forecast	FY 17 Forecast	FY 18 Forecast
Residential															
Individual Residents															
Multi-Family Residents															
Rock Creek															
Other Sewer District															
Total Residential Service Units	5,870	6,136	6,216	6,378	6,474	6,495	6,234	6,250	6,265	6,281	6,297	6,312	6,328	6,344	6,360
Quarterly Usage (Dec. Jan and Feb)	86,949,470	128,237,630	103,194,000	103,194,000	105,257,880	105,321,025	105,789,827	106,949,289	106,314,413	106,580	106,846,649	107,113,766	107,381,350	107,650,004	107,918,129
Total Usage	434,075,640	550,496,930	501,574,000	524,669,000	535,141,980	536,479,635	537,831,035	539,165,387	540,513,591	541,864,785	543,219,447	544,577,495	545,939,939	547,303,987	548,672,046
Residential Accounts using 6,000 gallons or under WQ (not including Rock Creek)	1,358	948	926	1,160	1,163	1,166	1,169	1,172	1,175	1,178	1,180	1,183	1,186	1,189	1,192
Usage under 6,000 gallons WQ	32,493,790	34,947,140	35,510,000	36,051,000	36,772,020	36,863,950	36,936,110	37,040,300	37,141,121	37,233,974	37,327,039	37,420,377	37,513,928	37,607,713	37,701,732
Usage over 6,000 gallons WQ	54,490,680	93,250,450	73,852,000	67,143,000	68,465,860	68,657,075	68,826,171	69,008,080	69,173,291	69,346,224	69,519,358	69,693,589	69,867,862	70,042,291	70,217,593
Residential Accounts using 15,000 gallons or under WQ (not including Rock Creek)	3,988	3,573	3,614	4,144	4,154	4,165	4,175	4,186	4,196	4,207	4,217	4,228	4,238	4,248	4,258
Usage under 15,000 (gallons) per quarter	61,874,920	71,422,120	72,852,000	71,222,000	72,654,540	72,830,282	73,020,277	73,203,238	73,385,936	73,569,400	73,753,324	73,937,707	74,121,551	74,307,858	74,493,638
Usage over 15,000 (gallons) per quarter	25,074,540	56,815,500	38,510,000	31,962,000	32,601,240	32,682,743	32,764,450	32,846,361	32,928,477	33,010,798	33,093,325	33,176,058	33,258,999	33,342,146	33,425,501
Commercial															
Total Commercial Service Units	267	296	314	337	340	341	342	343	343	344	345	346	347	348	349
Quarterly Usage (Dec. Jan and Feb)	14,191,860	23,845,750	34,849,000	33,990,000	34,669,800	34,756,475	34,843,266	34,930,474	35,017,800	35,105,345	35,193,108	35,281,091	35,369,294	35,457,717	35,546,361
Total Usage	73,213,670	125,887,750	161,993,000	175,550,000	176,001,000	176,441,003	176,882,105	177,324,310	177,767,621	178,212,040	178,657,510	179,104,214	179,551,195	180,000,855	180,450,857
Usage over 6,000 (gallons) per month	60,333,000	111,764,000	147,020,000	156,944,000	160,082,880	160,483,087	160,894,295	161,296,506	161,689,722	162,083,946	162,499,181	162,905,429	163,313,693	163,720,974	164,130,277
Commercial Account using 6,000 gallons or under				139	140	141	141	141	142	142	142	143	143	144	144
Usage under 6,000 (gallons) per quarter				15,667,540	15,980,891	16,020,843	16,069,895	16,101,047	16,141,300	16,181,653	16,222,107	16,262,663	16,303,319	16,344,938	16,384,938
Usage over 6,000 (gallons) per quarter				156,882,460	160,020,109	160,420,159	160,821,210	161,223,263	161,626,321	162,030,387	162,435,463	162,841,551	163,246,577	163,652,777	164,065,919
Commercial Accounts using 15,000 gallons or under				198	200	200	201	201	202	202	203	203	204	204	205
Usage under 15,000 (gallons) per quarter				28,470,759	29,040,165	29,331,657	29,186,547	29,258,511	29,331,657	29,404,987	29,478,499	29,552,195	29,626,076	29,700,141	29,774,391
Usage over 15,000 (gallons) per quarter				144,079,250	146,960,835	147,328,237	147,696,558	148,065,799	148,435,964	148,807,053	149,179,071	149,552,189	149,925,899	150,300,714	150,676,465
Totals															
Customer Accounts	6,137	6,432	6,550	6,715	6,814	8,836	8,858	8,880	8,902	8,925	8,947	8,969	8,992	9,014	9,037
Quarterly Usage (Dec. Jan and Feb)	101,141,330	152,063,380	146,201,000	137,184,000	139,927,680	140,277,499	140,628,193	140,979,763	141,332,213	141,685,543	142,039,757	142,394,057	142,748,357	143,102,721	143,465,490
Total Usage	507,288,710	676,364,680	663,567,000	697,199,000	711,142,980	712,902,837	714,703,140	716,489,897	718,281,122	720,076,825	721,877,017	723,681,710	725,490,914	727,304,641	729,122,903

SCHEDULE 11 - INVESTMENTS

	FY 09 Forecast	FY 10 Forecast	FY 11 Forecast	FY 12 Forecast	FY 13 Forecast	FY 14 Forecast	FY 15 Forecast	FY 16 Forecast	FY 17 Forecast	FY 18 Forecast
Interest Rate	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Investments	\$ 3,885,566	\$ 3,885,566	\$ 3,885,566	\$ 3,885,566	\$ 3,885,566	\$ 3,885,566	\$ 3,885,566	\$ 3,885,566	\$ 3,885,566	\$ 3,885,566
Total Investments*	3,885,566	3,885,566	3,885,566	3,885,566	3,885,566	3,885,566	3,885,566	3,885,566	3,885,566	3,885,566
Interest Income	\$ 194,278	\$ 194,278	\$ 194,278	\$ 194,278	\$ 194,278	\$ 194,278	\$ 194,278	\$ 194,278	\$ 194,278	\$ 194,278

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SCHEDULE 12 - REVENUE REQUIREMENT

	FY 09 Forecast	FY 10 Forecast	FY 11 Forecast	FY 12 Forecast	FY 13 Forecast	FY 14 Forecast	FY 15 Forecast	FY 16 Forecast	FY 17 Forecast	FY 18 Forecast
<u>Operating Costs</u>										
Operating Expenses	1,415,215	1,426,742	1,470,576	1,515,760	1,562,333	1,610,340	1,659,823	1,710,829	1,763,405	1,817,599
Operating Reserve Contribution	-	-	-	-	-	-	-	-	-	8,232
Operating Expenses Subtotal	1,415,215	1,426,742	1,470,576	1,515,760	1,562,333	1,610,340	1,659,823	1,710,829	1,763,405	1,825,831
<u>Capital Costs</u>										
Non-Growth Existing Debt Service	2,153,706	2,161,983	2,155,848	2,171,492	2,120,517	1,971,208	1,882,856	1,903,330	1,893,269	1,897,043
Non-Growth Cash Funded Capital Projects	-	-	-	-	50,974	200,283	288,636	268,162	278,222	274,448
Non-Growth Projected Debt Service	-	-	-	-	-	-	-	-	-	-
3R Reserve Contribution	-	-	-	241,758	241,758	241,758	241,758	241,758	241,758	241,758
Capital Expenses Subtotal	2,153,706	2,161,983	2,155,848	2,413,249	2,413,249	2,413,249	2,413,249	2,413,249	2,413,249	2,413,249
Total Revenue Requirement	3,568,921	3,588,724	3,626,424	3,929,009	3,975,583	4,023,589	4,073,073	4,124,079	4,176,655	4,239,081
Miscellaneous Other Revenues (including interest income)	219,578	219,578	219,578	219,578	219,578	219,578	219,578	219,578	219,578	219,578
Connection Fee Revenues	40,894	40,996	41,098	41,201	41,304	41,407	41,511	41,615	41,719	41,823
Net Revenue Requirement	3,308,449	3,328,150	3,365,747	3,668,230	3,714,700	3,762,603	3,811,983	3,862,886	3,915,358	3,977,679
Current Revenues	2,800,000	2,807,000	2,814,018	2,821,053	2,828,105	2,835,175	2,842,263	2,849,369	2,856,492	2,863,634
Surplus / (Shortfall)	(508,449)	(521,150)	(551,730)	(847,177)	(886,595)	(927,428)	(969,720)	(1,013,517)	(1,058,865)	(1,114,045)
Cumulative Surplus / (Shortfall)	(508,449)	(1,029,599)	(1,581,329)	(2,428,506)	(3,315,101)	(4,242,529)	(5,212,249)	(6,225,765)	(7,284,631)	(8,398,676)
Required Increase	18.2%	19%	20%	30%	31%	33%	34%	36%	37%	39%
Required Annual Increase	18.2%	0.4%	1.0%	10.4%	1.3%	1.4%	1.4%	1.5%	1.5%	1.8%

SCHEDULE 13 – WASTEWATER USER RATES

	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18		
Net Required Revenue		\$	3,328,150	\$	3,365,747	\$	3,714,700	\$	3,811,983	\$	3,915,358	\$	3,977,679
Customer Accounts													
Arnold Residential	6,203	6,219	6,234	6,250	6,265	6,281	6,297	6,312	6,328	6,344	6,360		
Arnold Multi-Family	1,775	1,779	1,784	1,788	1,793	1,797	1,802	1,806	1,811	1,815	1,820		
Arnold Other Sewer District	14	14	14	14	14	14	14	14	14	14	14		
Arnold Commercial	340	341	342	343	343	344	345	346	347	348	349		
Rock Creek	482	482	483	484	486	487	488	489	490	492	493		
Total Accounts	8,814	8,835	8,857	8,879	8,901	8,923	8,946	8,968	8,991	9,013	9,036		
Assumed Minimum Multi-Family Usage per Unit	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000		
Arnold Residential Customers Using less than 6,000 gallons per Quarter	1,160	1,163	1,166	1,169	1,172	1,175	1,178	1,180	1,183	1,186	1,189		
% of Total Residential Customers	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%		
Arnold Residential Customers Using less than 15,000 gallons per Quarter	4,144	4,154	4,165	4,175	4,186	4,196	4,207	4,217	4,228	4,238	4,249		
% of Total Residential Customers	52%	52%	52%	52%	52%	52%	52%	52%	52%	52%	52%		
Customer Usage (Gallons)													
Residential Total Usage	504,703,175	505,964,933	507,229,845	508,497,920	509,769,165	511,043,588	512,321,196	513,601,999	514,886,004	516,173,219	517,463,653		
Residential Average Quarterly Usage	99,270,826	99,519,003	99,767,800	100,017,220	100,267,263	100,517,931	100,769,226	101,021,149	101,273,702	101,526,886	101,780,703		
Residential Average Winter Quarterly Usage 6,000 gallons and under	41,434,966	41,538,553	41,642,399	41,746,505	41,850,872	41,955,499	42,060,388	42,165,539	42,270,952	42,376,630	42,482,571		
Residential Average Winter Quarterly Usage over 6,000 gallons	57,835,860	57,980,450	58,125,401	58,270,714	58,416,391	58,562,432	58,708,838	58,855,610	59,002,749	59,150,256	59,298,132		
Residential Average Winter Quarterly Usage 15,000 gallons and under	77,319,586	35,974,332	36,064,267	36,154,428	36,244,814	36,335,426	36,426,265	36,517,330	36,608,624	36,700,145	36,791,896		
Residential Average Winter Quarterly Usage over 15,000 gallons	21,951,240	22,006,118	22,061,133	22,116,286	22,171,577	22,227,006	22,282,573	22,338,280	22,394,126	22,450,111	22,506,236		
Commercial Total Usage	176,001,000	176,441,003	176,882,105	177,324,310	177,767,621	178,212,040	178,657,570	179,104,214	179,551,975	180,000,855	180,450,857		
Commercial Average Quarterly Usage	34,669,800	34,736,475	34,843,366	34,930,474	35,017,800	35,105,345	35,193,108	35,281,091	35,369,294	35,457,717	35,546,361		
Commercial Usage over 6,000 gallons per month	160,082,880	160,483,087	160,884,295	161,286,506	161,689,722	162,093,946	162,499,181	162,905,429	163,312,693	163,720,974	164,130,277		
Commercial Usage under 6,000 gallons per quarter	36,772,020	36,863,950	36,956,110	37,048,500	37,141,121	37,233,974	37,327,059	37,420,377	37,513,928	37,607,713	37,701,732		
Commercial Usage over 6,000 gallons per quarter	68,483,860	68,657,075	68,828,717	69,000,789	69,173,291	69,346,224	69,519,590	69,693,389	69,867,622	70,042,291	70,217,397		
Commercial Usage under 15,000 gallons per quarter	29,040,165	29,112,765	29,185,547	29,258,511	29,331,657	29,404,987	29,478,499	29,552,195	29,626,076	29,700,141	29,774,391		
Commercial Usage over 15,000 gallons per quarter	146,960,835	147,328,237	147,696,558	148,065,799	148,435,964	148,807,053	149,179,071	149,552,019	149,925,899	150,300,714	150,676,465		
Rock Creek Total Usage	30,438,805	30,514,902	30,591,189	30,667,667	30,744,337	30,821,197	30,898,250	30,975,496	31,052,935	31,130,567	31,208,393		
Rock Creek Average Quarterly Usage	5,987,054	6,002,022	6,017,027	6,032,070	6,047,150	6,062,268	6,077,423	6,092,617	6,107,848	6,123,118	6,138,426		
Rock Creek Average Winter Quarterly Usage 6,000 gallons and under	41.74%	2,498,956	2,505,203	2,517,745	2,524,039	2,530,349	2,536,675	2,543,017	2,549,374	2,555,748	2,562,137		
Rock Creek Average Winter Quarterly Usage over 6,000 gallons	58.26%	3,488,099	3,496,819	3,514,325	3,523,111	3,531,918	3,540,748	3,549,600	3,558,474	3,567,370	3,576,289		
Rock Creek Average Winter Quarterly Usage 15,000 gallons and under	77.89%	4,663,168	4,674,826	4,698,229	4,709,975	4,721,750	4,733,554	4,745,388	4,757,252	4,769,145	4,781,068		
Rock Creek Average Winter Quarterly Usage over 15,000 gallons	22.11%	1,323,886	1,327,196	1,330,514	1,333,840	1,337,175	1,340,518	1,343,869	1,347,229	1,350,597	1,353,973		
Total Usage	711,142,980	712,920,837	714,703,140	716,489,897	718,281,122	720,076,825	721,877,017	723,681,710	725,490,914	727,304,641	729,122,903		
	711,142,980	712,920,837	714,703,140	716,489,897	718,281,122	720,076,825	721,877,017	723,681,710	725,490,914	727,304,641	729,122,903		

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ALTERNATIVE A: CURRENT RATE STRUCTURE		Allocation Percentages	Current Rates	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
BREAK-EVEN													
Residential		76.8%											
Wastewater Net Required Revenue - Residential													
Increase/Decrease													
Commercial		23.3%											
Wastewater Net Required Revenue													
Increase/Decrease													
Collected Revenue													
USER-DEFINED													
Residential													
Quarterly Fixed Charge (per customer)													
Commercial													
Quarterly Fixed Charge													
Variable Charge													
Collected Revenue													
Required Revenue													
Annual Surplus (Deficit)													
Total Cumulative Surplus/Deficit													

ALTERNATIVE B: WINTER QUARTER BILLING										FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
BREAKEVEN																			
Arnold	96%	Revenue Allocation	Expense Allocation	Required Revenue - Fixed Charge	634,802 \$	638,582 \$	645,796 \$	703,834 \$	712,750 \$	721,942 \$	731,416 \$	741,183 \$	751,251 \$	763,209 \$					
				Quarterly Fixed Charge	19,007 \$	19,223 \$	20,91 \$	21,12 \$	21,34 \$	21,57 \$	21,80 \$	22,04 \$	22,34 \$						
				Unit Charge (per 1,000 gallons)	4.73 \$	4.75 \$	4.79 \$	5.21 \$	5.26 \$	5.31 \$	5.37 \$	5.43 \$	5.49 \$	5.56 \$					
Rock Creek	4%	Revenue Allocation	Expense Allocation	Quarterly Fixed Charge	15.81 \$	15.80 \$	15.94 \$	17.33 \$	17.51 \$	17.69 \$	17.88 \$	18.08 \$	18.28 \$	18.53 \$					
				Unit Charge (per 1,000 gallons)	3.94 \$	3.93 \$	3.97 \$	4.32 \$	4.36 \$	4.41 \$	4.45 \$	4.50 \$	4.55 \$	4.61 \$					
				Collected Revenue - Fixed Fee	665,284 \$	669,111 \$	676,674 \$	737,492 \$	746,840 \$	756,476 \$	766,409 \$	776,649 \$	787,203 \$	798,739 \$					
Collected Revenue - Unit Rate	2,635,835 \$	2,651,114 \$	2,681,077 \$	2,922,043 \$	2,959,076 \$	2,997,250 \$	3,036,602 \$	3,077,166 \$	3,118,982 \$	3,168,644 \$									
Total Collected Revenue				3,301,118 \$	3,320,225 \$	3,357,752 \$	3,659,535 \$	3,705,916 \$	3,753,727 \$	3,803,011 \$	3,853,815 \$	3,906,185 \$	3,968,382 \$						
USER-DEFINED																			
Arnold				Quarterly Fixed Charge	19.00 \$	19.76 \$	20.35 \$	20.76 \$	21.17 \$	21.39 \$	21.60 \$	21.82 \$	22.03 \$	22.25 \$					
				Unit Charge	4.73 \$	4.92 \$	5.07 \$	5.17 \$	5.27 \$	5.33 \$	5.38 \$	5.43 \$	5.49 \$	5.54 \$					
				Quarterly Fixed Charge	15.81 \$	16.44 \$	16.94 \$	17.27 \$	17.62 \$	17.80 \$	17.97 \$	18.15 \$	18.34 \$	18.52 \$					
Rock Creek				Unit Charge	3.94 \$	4.09 \$	4.22 \$	4.30 \$	4.39 \$	4.43 \$	4.48 \$	4.52 \$	4.57 \$	4.61 \$					
				Collected Revenue	3,135,749 \$	3,441,746 \$	3,553,861 \$	3,634,000 \$	3,715,947 \$	3,762,489 \$	3,809,614 \$	3,857,330 \$	3,905,643 \$	3,954,561 \$					
				Required Revenue	3,308,449 \$	3,328,150 \$	3,365,747 \$	3,668,230 \$	3,714,700 \$	3,762,603 \$	3,811,983 \$	3,862,886 \$	3,915,958 \$	3,977,679 \$					
Annual Surplus (Deficit)				(172,700) \$	113,596 \$	188,113 \$	(34,229) \$	1,247 \$	(114) \$	(2,369) \$	(5,556) \$	(9,715) \$	(23,118) \$						
Cumulative Surplus/Deficit						(172,700) \$	(59,104) \$	129,009 \$	94,780 \$	96,026 \$	95,912 \$	93,543 \$	87,987 \$	78,272 \$	55,154 \$				

ALTERNATIVE C: RESIDENTIAL WINTER QUARTER BILLING,
COMMERCIAL ALL USAGE BILLED

BREAK-EVEN

		FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
	Allocation										
	Allocation										
Arnold	96%										
Required Revenue - Fixed Charge	40%	\$ 1,270,672	\$ 1,278,239	\$ 1,292,679	\$ 1,408,853	\$ 1,426,700	\$ 1,445,099	\$ 1,464,064	\$ 1,483,614	\$ 1,503,767	\$ 1,527,702
Quarterly Fixed Charge		\$ 38.03	\$ 38.16	\$ 38.50	\$ 41.85	\$ 42.28	\$ 42.72	\$ 43.17	\$ 43.64	\$ 44.12	\$ 44.71
Unit Charge (per 1,000 gallons)		\$ 3.32	\$ 3.33	\$ 3.36	\$ 3.65	\$ 3.69	\$ 3.73	\$ 3.76	\$ 3.81	\$ 3.85	\$ 3.90
Rock Creek	4%										
Quarterly Fixed Charge		\$ 31.65	\$ 31.62	\$ 31.90	\$ 34.68	\$ 35.04	\$ 35.41	\$ 35.79	\$ 36.18	\$ 36.59	\$ 37.08
Unit Charge (per 1,000 gallons)		\$ 2.76	\$ 2.76	\$ 2.78	\$ 3.02	\$ 3.06	\$ 3.09	\$ 3.12	\$ 3.16	\$ 3.19	\$ 3.23
Collected Revenue - Fixed Fee		\$ 1,331,687	\$ 1,339,348	\$ 1,354,488	\$ 1,476,227	\$ 1,494,938	\$ 1,514,226	\$ 1,534,109	\$ 1,554,605	\$ 1,575,732	\$ 1,600,824
Collected Revenue - Unit Rate		\$ 1,971,697	\$ 1,983,146	\$ 2,005,559	\$ 2,185,811	\$ 2,213,513	\$ 2,242,068	\$ 2,271,504	\$ 2,301,847	\$ 2,333,126	\$ 2,370,274
Total Collected Revenue		\$ 3,303,384	\$ 3,322,495	\$ 3,360,047	\$ 3,662,038	\$ 3,708,450	\$ 3,756,294	\$ 3,805,613	\$ 3,856,452	\$ 3,908,858	\$ 3,971,098
USER-DEFINED											
Arnold											
Quarterly Fixed Charge		\$ 38.03	\$ 39.55	\$ 40.74	\$ 41.55	\$ 42.39	\$ 42.81	\$ 43.24	\$ 43.67	\$ 44.11	\$ 44.55
Unit Charge		\$ 3.32	\$ 3.45	\$ 3.55	\$ 3.62	\$ 3.70	\$ 3.73	\$ 3.77	\$ 3.81	\$ 3.85	\$ 3.88
Rock Creek											
Quarterly Fixed Charge		\$ 31.65	\$ 32.91	\$ 33.90	\$ 34.58	\$ 35.27	\$ 35.62	\$ 35.98	\$ 36.34	\$ 36.70	\$ 37.07
Unit Charge		\$ 2.76	\$ 2.87	\$ 2.96	\$ 3.02	\$ 3.08	\$ 3.11	\$ 3.14	\$ 3.17	\$ 3.20	\$ 3.23
Collected Revenue		\$ 3,137,267	\$ 3,444,108	\$ 3,556,300	\$ 3,636,495	\$ 3,718,498	\$ 3,765,072	\$ 3,812,229	\$ 3,859,978	\$ 3,908,324	\$ 3,957,276
Required Revenue		\$ 3,508,449	\$ 3,328,150	\$ 3,365,747	\$ 3,668,230	\$ 3,714,700	\$ 3,762,603	\$ 3,811,983	\$ 3,862,886	\$ 3,915,358	\$ 3,977,679
Annual Surplus (Deficit)		\$ (171,182)	\$ 115,959	\$ 190,553	\$ (31,735)	\$ 3,798	\$ 2,469	\$ 246	\$ (2,908)	\$ (7,034)	\$ (20,404)
Cummulative Surplus/Deficit		\$ (171,182)	\$ (55,223)	\$ 135,330	\$ 103,595	\$ 107,393	\$ 109,861	\$ 110,107	\$ 107,199	\$ 100,165	\$ 79,762

ALTERNATIVE D: RESIDENTIAL WINTER QUARTER BILLING,
COMMERCIAL ALL USAGE BILLED (15,000 gallons in Fixed
Charge)

BREAKEVEN

	Allocation	Allocation	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Arnold	96%	71%	2,239,158 \$ 67.02 \$	2,252,492 \$ 67.25 \$	2,277,938 \$ 67.84 \$	2,482,658 \$ 73.75 \$	2,514,109 \$ 74.50 \$	2,546,530 \$ 75.27 \$	2,579,950 \$ 76.07 \$	2,614,401 \$ 76.89 \$	2,649,914 \$ 77.74 \$	2,692,093 \$ 78.78 \$
Required Revenue - Fixed Charge												
Quarterly Fixed Charge (includes 15,000 gallons)												
Unit Charge (per 1,000 gallons)			3.98 \$	3.50 \$	3.53 \$	3.84 \$	3.88 \$	3.92 \$	3.96 \$	4.00 \$	4.04 \$	4.10 \$
Rock Creek	4%		55.77 \$ 3.31 \$	55.71 \$ 2.90 \$	56.21 \$ 2.92 \$	61.12 \$ 3.18 \$	61.75 \$ 3.21 \$	62.40 \$ 3.25 \$	63.07 \$ 3.28 \$	63.76 \$ 3.32 \$	64.48 \$ 3.35 \$	65.35 \$ 3.40 \$
Quarterly Fixed Charge (includes 15,000 gallons)												
Unit Charge (per 1,000 gallons)												
Collected Revenue - Fixed Fee			2,346,678 \$	2,360,179 \$	2,386,857 \$	2,601,383 \$	2,634,356 \$	2,668,345 \$	2,703,382 \$	2,739,500 \$	2,776,730 \$	2,820,947 \$
Collected Revenue - Unit Rate			954,539 \$	840,718 \$	850,217 \$	926,630 \$	938,371 \$	950,474 \$	962,951 \$	975,812 \$	989,070 \$	1,004,816 \$
Total Collected Revenue			3,301,218 \$	3,200,897 \$	3,237,075 \$	3,528,013 \$	3,572,727 \$	3,618,820 \$	3,666,333 \$	3,715,312 \$	3,765,800 \$	3,825,763 \$
USER-DEFINED												
Arnold			67.02 \$	69.70 \$	71.79 \$	73.23 \$	74.69 \$	75.44 \$	76.19 \$	76.95 \$	77.72 \$	78.50 \$
Quarterly Fixed Charge												
Unit Charge			3.98 \$	4.14 \$	4.26 \$	4.35 \$	4.44 \$	4.48 \$	4.53 \$	4.57 \$	4.62 \$	4.66 \$
Rock Creek			55.77 \$	58.00 \$	59.74 \$	60.93 \$	62.15 \$	62.77 \$	63.40 \$	64.03 \$	64.68 \$	65.32 \$
Quarterly Fixed Charge												
Unit Charge			3.31 \$	3.45 \$	3.55 \$	3.62 \$	3.69 \$	3.73 \$	3.77 \$	3.80 \$	3.84 \$	3.88 \$
Collected Revenue			3,135,816 \$	3,441,849 \$	3,553,968 \$	3,634,110 \$	3,716,059 \$	3,762,602 \$	3,809,729 \$	3,857,446 \$	3,905,760 \$	3,954,680 \$
Required Revenue			3,308,449 \$	3,328,150 \$	3,365,747 \$	3,668,230 \$	3,714,700 \$	3,762,603 \$	3,811,983 \$	3,862,886 \$	3,915,358 \$	3,977,679 \$
Annual Surplus (Deficit)			(172,633) \$	113,700 \$	188,220 \$	(34,120) \$	1,359 \$	(1) \$	(2,254) \$	(5,440) \$	(9,597) \$	(22,999) \$
Cummulative Surplus/Deficit			(172,633) \$	(58,934) \$	129,287 \$	95,167 \$	96,525 \$	96,525 \$	94,270 \$	88,830 \$	79,233 \$	56,234 \$

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SCHEDULE 14A - SAMPLE BILLS

Quarterly Sewer Bill

Alternative A

Current Bill		FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 09
Residential												
4,000	\$ 62.13	\$ 74.80	\$ 77.80	\$ 80.13	\$ 81.73	\$ 83.37	\$ 84.20	\$ 85.04	\$ 85.89	\$ 86.75	\$ 87.62	17%
6,000	\$ 62.13	\$ 74.80	\$ 77.80	\$ 80.13	\$ 81.73	\$ 83.37	\$ 84.20	\$ 85.04	\$ 85.89	\$ 86.75	\$ 87.62	17%
8,000	\$ 62.13	\$ 74.80	\$ 77.80	\$ 80.13	\$ 81.73	\$ 83.37	\$ 84.20	\$ 85.04	\$ 85.89	\$ 86.75	\$ 87.62	17%
12,000	\$ 62.13	\$ 74.80	\$ 77.80	\$ 80.13	\$ 81.73	\$ 83.37	\$ 84.20	\$ 85.04	\$ 85.89	\$ 86.75	\$ 87.62	17%
14,000	\$ 62.13	\$ 74.80	\$ 77.80	\$ 80.13	\$ 81.73	\$ 83.37	\$ 84.20	\$ 85.04	\$ 85.89	\$ 86.75	\$ 87.62	17%
16,000	\$ 62.13	\$ 74.80	\$ 77.80	\$ 80.13	\$ 81.73	\$ 83.37	\$ 84.20	\$ 85.04	\$ 85.89	\$ 86.75	\$ 87.62	17%
20,000	\$ 62.13	\$ 74.80	\$ 77.80	\$ 80.13	\$ 81.73	\$ 83.37	\$ 84.20	\$ 85.04	\$ 85.89	\$ 86.75	\$ 87.62	17%
30,000	\$ 62.13	\$ 74.80	\$ 77.80	\$ 80.13	\$ 81.73	\$ 83.37	\$ 84.20	\$ 85.04	\$ 85.89	\$ 86.75	\$ 87.62	17%
40,000	\$ 62.13	\$ 74.80	\$ 77.80	\$ 80.13	\$ 81.73	\$ 83.37	\$ 84.20	\$ 85.04	\$ 85.89	\$ 86.75	\$ 87.62	17%
Commercial												
80,000	\$ 276.03	\$ 332.34	\$ 345.63	\$ 356.00	\$ 363.12	\$ 370.39	\$ 374.09	\$ 377.83	\$ 381.61	\$ 385.42	\$ 389.28	17%
120,000	\$ 414.03	\$ 498.49	\$ 518.43	\$ 533.98	\$ 544.66	\$ 555.56	\$ 561.11	\$ 566.72	\$ 572.39	\$ 578.12	\$ 583.90	17%
200,000	\$ 690.03	\$ 830.80	\$ 864.03	\$ 889.95	\$ 907.75	\$ 925.90	\$ 935.16	\$ 944.51	\$ 953.96	\$ 963.50	\$ 973.13	17%
300,000	\$ 1,035.03	\$ 1,246.18	\$ 1,296.02	\$ 1,334.90	\$ 1,361.60	\$ 1,388.83	\$ 1,402.72	\$ 1,416.75	\$ 1,430.92	\$ 1,445.23	\$ 1,459.68	17%
400,000	\$ 1,380.03	\$ 1,661.56	\$ 1,728.02	\$ 1,779.86	\$ 1,815.46	\$ 1,851.77	\$ 1,870.28	\$ 1,888.99	\$ 1,907.88	\$ 1,926.95	\$ 1,946.22	17%
500,000	\$ 1,725.03	\$ 2,076.94	\$ 2,160.01	\$ 2,224.81	\$ 2,269.31	\$ 2,314.70	\$ 2,337.84	\$ 2,361.22	\$ 2,384.83	\$ 2,408.68	\$ 2,432.77	17%
600,000	\$ 2,070.03	\$ 2,492.32	\$ 2,592.01	\$ 2,669.77	\$ 2,723.16	\$ 2,777.63	\$ 2,805.40	\$ 2,833.46	\$ 2,861.79	\$ 2,890.41	\$ 2,919.31	17%
800,000	\$ 2,760.03	\$ 3,323.08	\$ 3,456.00	\$ 3,559.68	\$ 3,630.87	\$ 3,703.49	\$ 3,740.53	\$ 3,777.93	\$ 3,815.71	\$ 3,853.87	\$ 3,892.41	17%

Quarterly Sewer Bill

Alternative B

Current Bill		FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 09
Residential												
4,000	\$ 62.13	\$ 37.93	\$ 39.44	\$ 40.63	\$ 41.44	\$ 42.27	\$ 42.69	\$ 43.12	\$ 43.55	\$ 43.98	\$ 44.42	-64%
6,000	\$ 62.13	\$ 47.39	\$ 49.28	\$ 50.76	\$ 51.78	\$ 52.81	\$ 53.34	\$ 53.88	\$ 54.41	\$ 54.96	\$ 55.51	-31%
8,000	\$ 62.13	\$ 56.85	\$ 59.13	\$ 60.90	\$ 62.12	\$ 63.36	\$ 63.99	\$ 64.63	\$ 65.28	\$ 65.93	\$ 66.59	-9%
12,000	\$ 62.13	\$ 75.78	\$ 78.81	\$ 81.17	\$ 82.80	\$ 84.45	\$ 85.30	\$ 86.15	\$ 87.01	\$ 87.88	\$ 88.76	18%
14,000	\$ 62.13	\$ 85.24	\$ 88.65	\$ 91.31	\$ 93.14	\$ 95.00	\$ 95.95	\$ 96.91	\$ 97.88	\$ 98.86	\$ 99.84	27%
16,000	\$ 62.13	\$ 94.70	\$ 98.49	\$ 101.45	\$ 103.48	\$ 105.55	\$ 106.60	\$ 107.67	\$ 108.74	\$ 109.83	\$ 110.93	34%
20,000	\$ 62.13	\$ 113.63	\$ 118.18	\$ 121.72	\$ 124.15	\$ 126.64	\$ 127.90	\$ 129.18	\$ 130.48	\$ 131.78	\$ 133.10	45%
30,000	\$ 62.13	\$ 160.95	\$ 167.38	\$ 172.40	\$ 175.85	\$ 179.37	\$ 181.16	\$ 182.98	\$ 184.80	\$ 186.65	\$ 188.52	61%
40,000	\$ 62.13	\$ 208.26	\$ 216.59	\$ 223.09	\$ 227.55	\$ 232.10	\$ 234.42	\$ 236.77	\$ 239.13	\$ 241.53	\$ 243.94	70%

Winter Qtr. Usage

Commercial												
80,000	\$ 276.03	\$ 397.52	\$ 413.42	\$ 425.82	\$ 434.34	\$ 443.03	\$ 447.46	\$ 451.93	\$ 456.45	\$ 461.02	\$ 465.63	31%
120,000	\$ 414.03	\$ 586.78	\$ 610.25	\$ 628.56	\$ 641.13	\$ 653.96	\$ 660.49	\$ 667.10	\$ 673.77	\$ 680.51	\$ 687.31	29%
200,000	\$ 690.03	\$ 965.30	\$ 1,003.92	\$ 1,034.03	\$ 1,054.71	\$ 1,075.81	\$ 1,086.57	\$ 1,097.43	\$ 1,108.41	\$ 1,119.49	\$ 1,130.69	29%
300,000	\$ 1,035.03	\$ 1,438.46	\$ 1,495.99	\$ 1,540.87	\$ 1,571.69	\$ 1,603.13	\$ 1,619.16	\$ 1,635.35	\$ 1,651.70	\$ 1,668.22	\$ 1,684.90	28%
400,000	\$ 1,380.03	\$ 1,911.61	\$ 1,988.07	\$ 2,047.71	\$ 2,088.67	\$ 2,130.44	\$ 2,151.75	\$ 2,173.26	\$ 2,195.00	\$ 2,216.95	\$ 2,239.12	28%
500,000	\$ 1,725.03	\$ 2,384.76	\$ 2,480.15	\$ 2,554.56	\$ 2,605.65	\$ 2,657.76	\$ 2,684.34	\$ 2,711.18	\$ 2,738.29	\$ 2,765.68	\$ 2,793.33	28%
600,000	\$ 2,070.03	\$ 2,857.91	\$ 2,972.23	\$ 3,061.40	\$ 3,122.62	\$ 3,185.08	\$ 3,216.93	\$ 3,249.10	\$ 3,281.59	\$ 3,314.40	\$ 3,347.55	28%
800,000	\$ 2,760.03	\$ 3,804.22	\$ 3,956.39	\$ 4,075.08	\$ 4,156.58	\$ 4,239.71	\$ 4,282.11	\$ 4,324.93	\$ 4,368.18	\$ 4,411.86	\$ 4,455.98	27%

Quarterly Sewer Bill
Winter Qtr. Usage

Alternative C

Current Bill	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 09
Residential											
4,000	\$ 62.13	\$ 51.30	\$ 53.35	\$ 54.95	\$ 56.05	\$ 57.17	\$ 57.74	\$ 58.32	\$ 58.90	\$ 59.49	\$ -21%
6,000	\$ 62.13	\$ 57.93	\$ 60.25	\$ 62.06	\$ 63.30	\$ 64.56	\$ 65.21	\$ 65.86	\$ 66.52	\$ 67.18	\$ -7%
8,000	\$ 62.13	\$ 64.56	\$ 67.15	\$ 69.16	\$ 70.54	\$ 71.96	\$ 72.67	\$ 73.40	\$ 74.14	\$ 74.88	4%
12,000	\$ 62.13	\$ 77.83	\$ 80.94	\$ 83.37	\$ 85.04	\$ 86.74	\$ 87.61	\$ 88.48	\$ 89.37	\$ 90.26	20%
14,000	\$ 62.13	\$ 84.46	\$ 87.84	\$ 90.48	\$ 92.29	\$ 94.13	\$ 95.07	\$ 96.02	\$ 96.99	\$ 97.95	26%
16,000	\$ 62.13	\$ 91.10	\$ 94.74	\$ 97.58	\$ 99.53	\$ 101.53	\$ 102.54	\$ 103.57	\$ 104.60	\$ 105.65	32%
20,000	\$ 62.13	\$ 104.36	\$ 108.54	\$ 111.79	\$ 114.03	\$ 116.31	\$ 117.47	\$ 118.65	\$ 119.83	\$ 121.03	40%
30,000	\$ 62.13	\$ 137.53	\$ 143.03	\$ 147.32	\$ 150.27	\$ 153.27	\$ 154.81	\$ 156.35	\$ 157.92	\$ 159.50	55%
40,000	\$ 62.13	\$ 170.70	\$ 177.52	\$ 182.85	\$ 186.51	\$ 190.24	\$ 192.14	\$ 194.06	\$ 196.00	\$ 197.96	64%

Total Qtr. Usage

Commercial

80,000	\$ 276.03	\$ 303.36	\$ 315.49	\$ 324.96	\$ 331.46	\$ 338.09	\$ 341.47	\$ 344.88	\$ 348.33	\$ 351.81	9%
120,000	\$ 414.03	\$ 436.02	\$ 453.46	\$ 467.07	\$ 476.41	\$ 485.94	\$ 490.80	\$ 495.70	\$ 500.66	\$ 505.67	5%
200,000	\$ 690.03	\$ 701.35	\$ 729.40	\$ 751.29	\$ 766.31	\$ 781.64	\$ 789.45	\$ 797.35	\$ 805.32	\$ 813.38	2%
300,000	\$ 1,035.03	\$ 1,033.01	\$ 1,074.33	\$ 1,106.56	\$ 1,128.69	\$ 1,151.26	\$ 1,162.78	\$ 1,174.40	\$ 1,186.15	\$ 1,198.01	0%
400,000	\$ 1,380.03	\$ 1,364.67	\$ 1,419.26	\$ 1,461.83	\$ 1,491.07	\$ 1,520.89	\$ 1,536.10	\$ 1,551.46	\$ 1,566.98	\$ 1,582.65	-1%
500,000	\$ 1,725.03	\$ 1,696.33	\$ 1,764.18	\$ 1,817.11	\$ 1,853.45	\$ 1,890.52	\$ 1,909.42	\$ 1,928.52	\$ 1,947.80	\$ 1,967.28	-2%
600,000	\$ 2,070.03	\$ 2,027.99	\$ 2,109.11	\$ 2,172.38	\$ 2,215.83	\$ 2,260.14	\$ 2,282.75	\$ 2,305.57	\$ 2,328.63	\$ 2,351.91	-2%
800,000	\$ 2,760.03	\$ 2,691.31	\$ 2,798.96	\$ 2,882.93	\$ 2,940.59	\$ 2,999.40	\$ 3,029.39	\$ 3,059.68	\$ 3,090.28	\$ 3,121.18	-3%

Quarterly Sewer Bill
Winter Qtr. Usage

Alternative D

Current Bill	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 09
Residential											
4,000	\$ 62.13	\$ 67.02	\$ 69.70	\$ 71.79	\$ 73.23	\$ 74.69	\$ 75.44	\$ 76.19	\$ 76.95	\$ 77.72	7.3%
6,000	\$ 62.13	\$ 67.02	\$ 69.70	\$ 71.79	\$ 73.23	\$ 74.69	\$ 75.44	\$ 76.19	\$ 76.95	\$ 77.72	7.3%
8,000	\$ 62.13	\$ 67.02	\$ 69.70	\$ 71.79	\$ 73.23	\$ 74.69	\$ 75.44	\$ 76.19	\$ 76.95	\$ 77.72	7.3%
12,000	\$ 62.13	\$ 67.02	\$ 69.70	\$ 71.79	\$ 73.23	\$ 74.69	\$ 75.44	\$ 76.19	\$ 76.95	\$ 77.72	7.3%
14,000	\$ 62.13	\$ 67.02	\$ 69.70	\$ 71.79	\$ 73.23	\$ 74.69	\$ 75.44	\$ 76.19	\$ 76.95	\$ 77.72	7.3%
16,000	\$ 62.13	\$ 71.00	\$ 73.84	\$ 76.05	\$ 77.58	\$ 79.13	\$ 79.92	\$ 80.72	\$ 81.52	\$ 82.34	12.5%
20,000	\$ 62.13	\$ 86.92	\$ 90.40	\$ 93.11	\$ 94.97	\$ 96.87	\$ 97.84	\$ 98.82	\$ 99.81	\$ 100.81	28.5%
30,000	\$ 62.13	\$ 126.73	\$ 131.80	\$ 135.76	\$ 138.47	\$ 141.24	\$ 142.65	\$ 144.08	\$ 145.52	\$ 146.98	51.0%
40,000	\$ 62.13	\$ 166.54	\$ 173.21	\$ 178.40	\$ 181.97	\$ 185.61	\$ 187.47	\$ 189.34	\$ 191.23	\$ 193.15	62.7%

Total Qtr. Usage

Commercial

80,000	\$ 276.03	\$ 325.79	\$ 338.82	\$ 348.98	\$ 355.96	\$ 363.08	\$ 366.71	\$ 370.38	\$ 374.08	\$ 377.82	15%
120,000	\$ 414.03	\$ 485.03	\$ 504.43	\$ 519.56	\$ 529.95	\$ 540.55	\$ 545.96	\$ 551.42	\$ 556.93	\$ 562.50	15%
200,000	\$ 690.03	\$ 803.51	\$ 835.65	\$ 860.72	\$ 877.94	\$ 895.50	\$ 904.45	\$ 913.50	\$ 922.63	\$ 931.86	14%
300,000	\$ 1,035.03	\$ 1,201.62	\$ 1,249.68	\$ 1,287.18	\$ 1,312.92	\$ 1,339.18	\$ 1,352.57	\$ 1,366.09	\$ 1,379.76	\$ 1,393.55	14%
400,000	\$ 1,380.03	\$ 1,599.73	\$ 1,663.71	\$ 1,713.63	\$ 1,747.90	\$ 1,782.86	\$ 1,800.69	\$ 1,818.69	\$ 1,836.88	\$ 1,855.25	14%
500,000	\$ 1,725.03	\$ 1,997.83	\$ 2,077.74	\$ 2,140.08	\$ 2,182.88	\$ 2,226.54	\$ 2,268.80	\$ 2,271.29	\$ 2,294.00	\$ 2,316.94	14%
600,000	\$ 2,070.03	\$ 2,395.94	\$ 2,491.77	\$ 2,566.53	\$ 2,617.86	\$ 2,670.22	\$ 2,696.92	\$ 2,723.89	\$ 2,751.13	\$ 2,778.64	14%
800,000	\$ 2,760.03	\$ 3,192.15	\$ 3,319.83	\$ 3,419.43	\$ 3,487.82	\$ 3,557.57	\$ 3,593.15	\$ 3,629.08	\$ 3,665.37	\$ 3,702.03	14%

User Defined Rates

Alternative A																						
Residential Fixed Charge per Account	\$	62.13	\$	74.80	\$	77.80	\$	80.13	\$	81.73	\$	83.37	\$	84.20	\$	85.04	\$	85.89	\$	86.75	\$	87.62
Commercial Fixed Charge per Account	\$	62.13	\$	74.80	\$	77.80	\$	80.13	\$	81.73	\$	83.37	\$	84.20	\$	85.04	\$	85.89	\$	86.75	\$	87.62
Commercial Usage Charge (per 1,000)	\$	3.45	\$	4.15	\$	4.32	\$	4.45	\$	4.54	\$	4.63	\$	4.68	\$	4.72	\$	4.77	\$	4.82	\$	4.87
Alternative B - Winter Quarterly Billing																						
Arnold																						
Fixed Charge per Account	\$		\$	19.00	\$	19.76	\$	20.35	\$	20.76	\$	21.17	\$	21.39	\$	21.60	\$	21.82	\$	22.03	\$	22.25
Usage Charge (per 1,000 gallons)	\$		\$	4.73	\$	4.92	\$	5.07	\$	5.17	\$	5.27	\$	5.33	\$	5.38	\$	5.43	\$	5.49	\$	5.54
Rock Creek																						
Fixed Charge per Account	\$		\$	15.81	\$	16.44	\$	16.94	\$	17.27	\$	17.62	\$	17.80	\$	17.97	\$	18.15	\$	18.34	\$	18.52
Usage Charge (per 1,000 gallons)	\$		\$	3.94	\$	4.09	\$	4.22	\$	4.30	\$	4.39	\$	4.43	\$	4.48	\$	4.52	\$	4.57	\$	4.61
Alternative C - Residential Winter Quarterly Billing, All Commercial Usage Billed																						
Arnold																						
Fixed Charge per Account	\$		\$	38.03	\$	39.55	\$	40.74	\$	41.55	\$	42.39	\$	42.81	\$	43.24	\$	43.67	\$	44.11	\$	44.55
Usage Charge (per 1,000 gallons)	\$		\$	3.32	\$	3.45	\$	3.55	\$	3.62	\$	3.70	\$	3.73	\$	3.77	\$	3.81	\$	3.85	\$	3.88
Rock Creek																						
Fixed Charge per Account	\$		\$	31.65	\$	32.91	\$	33.90	\$	34.58	\$	35.27	\$	35.62	\$	35.98	\$	36.34	\$	36.70	\$	37.07
Usage Charge (per 1,000 gallons)	\$		\$	2.76	\$	2.87	\$	2.96	\$	3.02	\$	3.08	\$	3.11	\$	3.14	\$	3.17	\$	3.20	\$	3.23
Alternative D - Residential Winter Quarterly Billing, All Commercial Usage Billed																						
Arnold																						
Fixed Charge per Account (includes 15,000 gallons)	\$		\$	67.02	\$	69.70	\$	71.79	\$	73.23	\$	74.69	\$	75.44	\$	76.19	\$	76.95	\$	77.72	\$	78.50
Usage Charge (per 1,000 gallons)	\$		\$	3.98	\$	4.14	\$	4.26	\$	4.35	\$	4.44	\$	4.48	\$	4.53	\$	4.57	\$	4.62	\$	4.66
Rock Creek																						
Fixed Charge per Account (includes 15,000 gallons)	\$		\$	55.77	\$	58.00	\$	59.74	\$	60.93	\$	62.15	\$	62.77	\$	63.40	\$	64.03	\$	64.68	\$	65.32
Usage Charge (per 1,000 gallons)	\$		\$	3.31	\$	3.45	\$	3.55	\$	3.62	\$	3.69	\$	3.73	\$	3.77	\$	3.80	\$	3.84	\$	3.88

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SCHEDULE 14B - BILL SUMMARY

Residential Bill Comparison

Quarterly Usage	Quarterly Sewer Bill											
	Alternative A			Alternative B			Alternative C			Alternative D		
	Current	Bill	%	Bill	%	Bill	Bill	%	\$	Bill	%	\$
Small User	4,000	\$ 62	75	20%	\$ 13	38	-39%	\$ (24)	\$ (11)	51	-17%	\$ (11)
Small User	6,000	\$ 62	75	20%	\$ 13	47	-24%	\$ (15)	\$ (4)	58	-7%	\$ (4)
Small User	8,000	\$ 62	75	20%	\$ 13	57	-8%	\$ (5)	\$ 2	65	4%	\$ 2
Average User	12,000	\$ 62	75	20%	\$ 13	76	22%	\$ 14	\$ 16	78	25%	\$ 16
Average User	14,000	\$ 62	75	20%	\$ 13	85	37%	\$ 23	\$ 22	84	36%	\$ 22
Average User	16,000	\$ 62	75	20%	\$ 13	95	52%	\$ 33	\$ 29	91	47%	\$ 29
High User	20,000	\$ 62	75	20%	\$ 13	114	83%	\$ 52	\$ 42	104	68%	\$ 42
High User	30,000	\$ 62	75	20%	\$ 13	161	159%	\$ 99	\$ 75	138	121%	\$ 75
High User	40,000	\$ 62	75	20%	\$ 13	208	235%	\$ 146	\$ 109	171	175%	\$ 109

Top Users

Actual Average Quarterly Usage	Quarterly Sewer Bill											
	Alternative A			Alternative B			Alternative C			Alternative D		
	Current	Bill	%	Bill	%	Bill	Bill	%	\$	Bill	%	\$
1	20,858,250	\$ 71,961	\$ 86,641	20%	\$ 14,680	\$ 102,659	43%	\$ 30,698	\$ 71,985	0%	\$ 24	\$ 83,045
2	1,169,253	\$ 4,034	\$ 4,857	20%	\$ 823	\$ 5,773	43%	\$ 1,739	\$ 4,073	1%	\$ 39	\$ 4,662
3	543,000	\$ 1,873	\$ 2,256	20%	\$ 382	\$ 2,692	44%	\$ 818	\$ 1,912	2%	\$ 39	\$ 2,169
4	376,000	\$ 1,297	\$ 1,562	20%	\$ 265	\$ 1,870	44%	\$ 573	\$ 1,336	3%	\$ 39	\$ 1,504
5	373,000	\$ 1,287	\$ 1,549	20%	\$ 263	\$ 1,855	44%	\$ 568	\$ 1,326	3%	\$ 39	\$ 1,492
6	324,500	\$ 1,120	\$ 1,348	20%	\$ 228	\$ 1,617	44%	\$ 497	\$ 1,159	4%	\$ 39	\$ 1,299
7	310,750	\$ 1,072	\$ 1,291	20%	\$ 219	\$ 1,549	44%	\$ 477	\$ 1,111	4%	\$ 39	\$ 1,244
8	276,000	\$ 952	\$ 1,146	20%	\$ 194	\$ 1,378	45%	\$ 426	\$ 992	4%	\$ 39	\$ 1,106
9	258,750	\$ 893	\$ 1,075	20%	\$ 182	\$ 1,293	45%	\$ 400	\$ 932	4%	\$ 39	\$ 1,037
10	258,250	\$ 891	\$ 1,073	20%	\$ 182	\$ 1,291	45%	\$ 400	\$ 930	4%	\$ 39	\$ 1,035
11	210,250	\$ 725	\$ 873	20%	\$ 148	\$ 1,054	45%	\$ 329	\$ 765	5%	\$ 39	\$ 844
12	179,500	\$ 619	\$ 746	20%	\$ 126	\$ 903	46%	\$ 284	\$ 659	6%	\$ 39	\$ 722
13	162,500	\$ 561	\$ 675	20%	\$ 114	\$ 819	46%	\$ 259	\$ 600	7%	\$ 39	\$ 654
14	147,750	\$ 510	\$ 614	20%	\$ 104	\$ 747	46%	\$ 237	\$ 549	8%	\$ 39	\$ 596
15	146,750	\$ 506	\$ 610	20%	\$ 103	\$ 742	47%	\$ 236	\$ 546	8%	\$ 39	\$ 592
16	142,000	\$ 490	\$ 590	20%	\$ 100	\$ 719	47%	\$ 229	\$ 529	8%	\$ 39	\$ 573
17	141,500	\$ 488	\$ 588	20%	\$ 100	\$ 716	47%	\$ 228	\$ 528	8%	\$ 39	\$ 571
18	135,250	\$ 467	\$ 562	20%	\$ 95	\$ 685	47%	\$ 219	\$ 506	8%	\$ 39	\$ 546
19	92,250	\$ 318	\$ 383	20%	\$ 65	\$ 474	49%	\$ 155	\$ 358	12%	\$ 39	\$ 375
20	85,000	\$ 293	\$ 353	20%	\$ 60	\$ 438	49%	\$ 145	\$ 333	13%	\$ 39	\$ 346
21	74,750	\$ 258	\$ 311	20%	\$ 53	\$ 388	50%	\$ 130	\$ 297	15%	\$ 39	\$ 305
22	71,750	\$ 248	\$ 298	20%	\$ 51	\$ 373	51%	\$ 125	\$ 287	16%	\$ 39	\$ 293
23	55,000	\$ 190	\$ 228	20%	\$ 39	\$ 290	53%	\$ 101	\$ 229	21%	\$ 39	\$ 226
24	46,250	\$ 160	\$ 192	20%	\$ 33	\$ 247	55%	\$ 88	\$ 199	25%	\$ 39	\$ 191
25	38,750	\$ 134	\$ 161	20%	\$ 27	\$ 210	57%	\$ 77	\$ 173	30%	\$ 39	\$ 162
26	19,250	\$ 66	\$ 80	20%	\$ 14	\$ 114	72%	\$ 48	\$ 106	59%	\$ 40	\$ 84
27	18,750	\$ 65	\$ 78	20%	\$ 13	\$ 112	73%	\$ 47	\$ 104	61%	\$ 40	\$ 82
28	16,500	\$ 62	\$ 75	20%	\$ 13	\$ 101	62%	\$ 39	\$ 96	55%	\$ 34	\$ 73
29	13,750	\$ 62	\$ 75	20%	\$ 13	\$ 87	41%	\$ 25	\$ 87	40%	\$ 25	\$ 67

Alternative Descriptions

Alternative A
Alternative B
Alternative C
Alternative D

Current Rate Structure
Quarterly Fixed Charge plus Consumption Charge based on Winter Quarter
Quarterly Fixed Charge plus Consumption Charge based on Winter Quarter for Residential, Commercial billed for all Consumption
Alternative C with 15,000 gallons included in Fixed Charge

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	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Revenues:										
Usage Charges (User Defined Rates)	\$ 3,135,816	\$ 3,441,849	\$ 3,553,968	\$ 3,634,110	\$ 3,716,059	\$ 3,762,602	\$ 3,809,729	\$ 3,857,446	\$ 3,905,760	\$ 3,954,680
Misc. Other Revenues	\$ 260,472	\$ 260,574	\$ 260,677	\$ 260,780	\$ 260,883	\$ 260,986	\$ 261,089	\$ 261,193	\$ 261,297	\$ 261,401
Total Revenues	\$ 3,396,288	\$ 3,702,424	\$ 3,814,644	\$ 3,894,889	\$ 3,976,941	\$ 4,023,588	\$ 4,070,818	\$ 4,118,639	\$ 4,167,058	\$ 4,216,082
Expenses:										
Total Operating Expenses	\$ 1,415,215	\$ 1,426,742	\$ 1,470,576	\$ 1,515,760	\$ 1,562,333	\$ 1,610,340	\$ 1,659,823	\$ 1,710,829	\$ 1,763,405	\$ 1,817,599
Existing Debt Service	\$ 2,153,706	\$ 2,161,983	\$ 2,155,848	\$ 2,171,492	\$ 2,120,517	\$ 1,971,208	\$ 1,882,856	\$ 1,903,330	\$ 1,893,269	\$ 1,897,043
Projected Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Cash Funded Capital Projects	\$ -	\$ -	\$ -	\$ -	\$ 50,974	\$ 200,283	\$ 288,636	\$ 268,162	\$ 278,222	\$ 274,448
Operating Reserve Contribution	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 8,232
3R Reserve Contribution	\$ -	\$ -	\$ -	\$ 241,758	\$ 241,758	\$ 241,758	\$ 241,758	\$ 241,758	\$ 241,758	\$ 241,758
Total Expenses	\$ 3,568,921	\$ 3,588,724	\$ 3,626,424	\$ 3,929,009	\$ 3,975,583	\$ 4,023,589	\$ 4,073,073	\$ 4,124,079	\$ 4,176,655	\$ 4,239,081
Annual Net Surplus / (Deficit)	\$ (172,633)	\$ 113,700	\$ 188,220	\$ (34,120)	\$ 1,359	\$ (1)	\$ (2,254)	\$ (5,440)	\$ (9,597)	\$ (22,999)
Cumulative Surplus / (Deficit)	\$ (172,633)	\$ (58,934)	\$ 129,287	\$ 95,167	\$ 96,525	\$ 96,525	\$ 94,270	\$ 88,830	\$ 79,233	\$ 56,234

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Annual FY 2009 Wastewater Treatment and Laboratory Expenses O&M Costs		423,000
Item		
Percentage Allocated	COD ₅	TSS
	25.0%	35.0%
(1) Allocated Costs		
	\$105,750	\$148,050
Projected Annual Plant Influent (FY 2009 gallons)		
	712,920,837	712,920,837
Average Pollutant Concentration (mg/L)		
	600	300
Average Pollutant Concentration (lb/gallon)		
	0.0050	0.0025
(2) Plant Influent Pollutant (pounds per year FY 2009)		
	3,569,379	1,784,690
Surcharge Unit Rate = (1) / (2) cost per pound		
	\$0.03	\$0.08
Current Rates		

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SCHEDULE 17 - SEWER CONNECTION FEE

SYSTEM CHARACTERISTICS

Current Sewer System Characteristics	
Wastewater Treatment Capacity	4.5 mgd
Persons per EDU	4
Usage per person	75.0 gpd
Wastewater Return Factor	90%
Usage per EDU	270

Sewer System Net Increment Cost of Capacity Method			
	Treatment	Collection	Total
Projected Growth Capital Expenses	\$ 20,269,043	\$ 5,452,400	\$ 25,721,443
Debt Service			
Interest Rate	5.0%		
Period (years)	20		
Total Cost to be Debt Funded (Principal)	\$ 20,269,043	5,452,400	\$ 25,721,443
Admin Fees (% of principal)	\$ 1,013,452	\$ 272,620	\$ 1,286,072
Debt Service:	\$ 34,155,249	\$ 5,725,020	\$ 39,880,269
Total Projected Debt Service	\$ 34,155,249	\$ 5,725,020	\$ 39,880,269
Cash Funded Capital Projects	\$ -	\$ -	\$ -
Cost of Water System Capacity	\$ 34,155,249	\$ 5,725,020	\$ 39,880,269
Capacity Added with Projects	4.5	4.5	
Total Capacity By Asset	4.5	4.5	
Unit Cost by Asset	\$ 7.59	\$ 1.27	
Sewer System Development Charge per EDU	\$ 2,049	\$ 344	\$ 2,393

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SCHEDULE 18 - CONNECTION FEE CASH FLOW

	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Annual Number of New Connections*	48	16	16	16	16	17	17	17	17	17	17
Connection Fee	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500
Sewer Connection Revenue	\$ 120,000	\$ 40,894	\$ 40,996	\$ 41,098	\$ 41,201	\$ 41,304	\$ 41,407	\$ 41,511	\$ 41,615	\$ 41,719	\$ 41,823
	\$ 120,000	\$ 25,000									

*Number of new connections based on residential single family and commercial (excludes multi-family units)

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SCHEDULE 19 - WASTEWATER FUND CASH BALANCE

	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Contribution to O&M Reserve	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 8,232
O&M Reserve Withdrawal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3R Reserve Contribution	\$ -	\$ -	\$ -	\$ -	\$ 241,758	\$ 241,758	\$ 241,758	\$ 241,758	\$ 241,758	\$ 241,758	\$ 241,758
Net Revenues (Expenses) in Operating	\$ (172,633)	\$ 113,700	\$ 188,220	\$ (34,120)	\$ 1,359	\$ (1)	\$ (2,254)	\$ (5,440)	\$ (9,597)	\$ (22,999)	
Total Sewer Fund Cash Balance - End of Year	\$ 2,592,715	\$ 2,420,082	\$ 2,533,781	\$ 2,722,002	\$ 2,929,639	\$ 3,172,756	\$ 3,414,513	\$ 3,654,016	\$ 3,890,334	\$ 4,122,495	\$ 4,349,485