

GOOCHLAND COUNTY

WATER AND WASTEWATER RATES

2019 - 2030



June 2018





TABLE OF CONTENTS

1.0 INTRODUCTION.....1-1

1.1 Current Water and Sewer Rates.....1-1

1.2 Approach and Assumptions1-2

1.3 *Ad Valorem Tax* – Tuckahoe Creek Service District.....1-5

2.0 THE WATER SYSTEM – PROJECTIONS AND RECOMMENDED RATES.....2-1

2.1 Preliminary Projections of Water Revenue with No Rate Increases2-1

2.2 Revised Projections of Water Revenue and Water Expenses.....2-2

3.0 THE SEWER SYSTEM – PROJECTIONS AND RECOMMENDED RATES.....3-1

3.1 Preliminary Projections of Sewer Revenue with No Rate Increases3-1

3.2 Revised Projections of Sewer Revenue and Sewer Expenses.....3-2

4.0 SUMMARY OF RECOMMENDATIONS.....4-1

4.1 Water and Sewer Rate Comparison.....4-1

TABLES

Table 1-1: Water and Sewer Rates and Fees – FY 2018.....1-1

Table 2-1: Revised Projections of Water Revenues and Expenses (5% increase each year).....2-3

Table 3-1: Revised Projections of Sewer Revenues and Expenses (6% increase each year).....3-3

FIGURES

Figure 4-1: Comparison of Water and Sewer Charges to Other Localities4-1

APPENDICES

Appendix A. Section 55-26 of the County Code of Ordinances

Appendix B. Budget – FY2016 – FY2018

Appendix C. Water System – Projected Revenues and Expenses – With NO Rate Increases

Appendix D. Water System – Revised Revenues and Expenses – With 5% Rate Increases

Appendix E. Sewer System – Projected Revenues and Expenses – With NO Rate Increases

Appendix F. Sewer System – Revised Revenues and Expenses – With 6% Rate Increases

Appendix G. The Capital Improvements Plan



1.0 INTRODUCTION

Goochland County provides water service to approximately 1,400 water customers and 1,350 wastewater customers. The customer base includes both residential and non-residential customers. The County has routinely reviewed the water and sewer rates and has adopted annual rate increases based on internal review of revenues and projected expenses.

The purpose of this study is to analyze the following:

- Current water and sewer expenses and projected future operating expenses (including the purchase of water and the purchase of wastewater treatment services);
- Funding of the capital improvements plan (CIP);
- Creation of a Renewal and Replacement (R&R) Funds for both the water and sewer;
- Creation and funding of a capital reserve fund, using the revenue from connection fees.
- Project rate increases needed over the upcoming 5-years to fund the projected operating expenses, the CIP and reserves.

1.1 Current Water and Sewer Rates

The County bills for water and sewer on a bi-monthly basis; the charges consist of a service charge and a volume charge. The minimum charge is based on a 4,000-gallon minimum for all users. There is a residential and non-residential rate. The current rates and fees (as of July 1, 2016) are shown below. Section 5.5-26 of the County Code of Ordinances is included in Appendix A. and includes connections fees and service charges for all meters.

Table 1-1: Water and Sewer Rates and Fees – FY 2018

Water Volume Charges (\$ per 1,000 Gallons)	
Residential (bi-monthly) 4,000 gallon minimum	\$5.78
Non-residential (bi-monthly) 4,000 gallon minimum	\$8.10
Sewer Volume Charges (\$ per 1,000 Gallons)	
Residential (bi-monthly) 4,000 gallon minimum	\$6.32
Non-residential (bi-monthly) 4,000 gallon minimum	\$12.15
Service Charges (5/8" Meter (Larger meters have larger charges))	
Residential water	\$10.50
Residential sewer	\$31.50
Non-residential water	\$26.27
Non-residential sewer	\$39.40



This report provides a 10-year forecast of revenues and expenses including not only operating expenses, but also capital expenses – both rehabilitation and replacement (R&R) projects and planned capital projects (CIP).

The 10-year forecast would enable the County to project the rate increases needed to pay for future expenses, to determine if capital projects can be funded with cash or borrowing, and to examine the scheduling of the CIP and R&R projects.

Even though a 10-year forecast was prepared, the reader of this report should recognize that the projections and assumptions made herein will need to be reviewed periodically and updated as needed – in particular, the actual revenues and expenses for the period after the first five years are likely to vary from the projections shown herein.

1.2 Approach and Assumptions

Goochland County's public utilities budget for FY2018 is the basis for the financial projections detailed in this report. The FY2018 budget includes the actual revenues and expenses for the water and sewer operations for FY2016, the adopted budgets for FY2017 and FY2018, and the projected revenues and expenses for FY2019. Excerpts from the budget are included in Appendix B.

1.2.1 Growth Projections

In order to project future growth and the estimated revenue related to growth, the County provided estimates of the number of homes that were likely to be constructed over the first 5-years of the study period (370 in FY2019 and FY2020; 280 – 290 in FY2021 – FY2023). These projections are for existing residential subdivisions or neighborhoods that are partially built-out and the projections are based on the expected rate of growth within those specific subdivisions. After the first five year period (after FY2023), the number of new connections is reduced (140 connections per year), in order to be conservative.

The number of new non-residential customers, and the projected usage attributed to those customers is more difficult to anticipate, therefore a conservative approach to the connections and revenue from non-residential connections was utilized. The projections include only three (3) new non-residential customers per year and assume a 5/8 inch meter and average bi-monthly usage of 9,500 gallons.

The growth assumptions outlined above are applied to both the water and sewer systems. Additionally, for each connection, revenue from the connection fees is based on the current schedule of connection fees.



1.2.2 Allocation of Water and Sewer Expenses

The County budget for Public Utilities does not segregate all water and sewer expenses from one another. For example, salaries and related benefits and FICA withholdings are not segregated between water and sewer – primarily because the employees perform work for both the water and sewer operations. In preparing projections for future expenses, allocations of cost were estimated in order to allocate expenses such as salaries and certain maintenance expenses to water or sewer operations. On the other hand, there are certain expenses, including purchase of sewer from Henrico County and purchase of water from the Department of Corrections, that are easily allocated to either water or sewer expenses. The assumptions regarding the allocations outlined below.

The FY2018 budget was used as the basis for projecting water and sewer expenses over the 10-year period from FY2018 – FY2028. “Shared” expenses, such as salaries, benefits, administrative expenses, and certain vehicle expenses were applied partially to the water system and the remainder to the sewer system. Based on the comparative number of water and sewer connections, 51% of “shared” expenses were allocated to the water fund and 49% of the sewer expenses were allocated to the sewer operations. Those expenses that are solely related to water (i.e. purchase of water from Henrico County, purchase of water from the Department of Corrections) were allocated to the water expenses and the costs related to wastewater treatment was allocated to the sewer fund.

The expenses of the water and sewer funds were projected for the 10-year planning period – with different increases applied to various line-items. The assumptions are discussed in Sections 2.0 and 3.0 of this report.

1.2.3 Allocation of Existing Debt

Goochland County had four outstanding debt obligations at the time this report was prepared:

- \$3.7 Million VRA 2006 and 2000 – with debt service continuing through the planning period;
- \$2.95 Million VRA 2007A VCCW – with the final debt service payment scheduled in FY2018;
- \$21.3 Million payable to the City of Richmond – payable at 0% interest over thirty years; debt service commenced in 2007. The debt service is paid through wastewater treatment rates paid by the County; and
- \$6.69 Million payable to the City of Richmond – payable at 0% interest over thirty years; debt service commenced in 2013. The debt is related to the County’s share of Nutrient Reduction infrastructure.



The proceeds from the two VRA loans were used to finance both water and wastewater projects, but the percentage of the bond proceeds allocated to either water or sewer was not readily available. As a result, a decision was made (by County representatives and Draper Aden) to split the debt service and apply 50% to the water and 50% to the sewer fund.

The two loans payable to the City of Richmond are related to wastewater treatment improvements and the debt service is allocated to the sewer fund.

1.2.4 Transfer of Connection Fees to the Capital Fund

Currently, revenues from connection fees are treated as operating income, and are used to pay a portion of operating expenses. The FY2018 budget includes \$360,000 in water connection fees and \$540,000 for sewer connection fees. However, due to the number of homes for which connection fees are expected to be paid over the next 5 years, the annual revenue for water and sewer connection fees total \$2 – 3 million each year.

In order to “set-aside” the future connection fees to create a reserve fund and to be used toward planned capital projects, the projections assume that connections fees are transferred to a capital reserve to fund capital projects. In addition, as shown on the Projected Revenue and Expenses tables in (see Appendix C. and D. for the water projections and Appendix E. and F. for sewer projections), it is assumed that debt service will be paid from the Capital Fund.

1.2.5 Renewal and Replacement (R&R) Fund

In order to calculate an estimated annual contribution to the R&R Funds, each asset, or group of assets was evaluated - the value of the asset, expected life, the year installed or built and the remaining life was used to calculate the funds that should be set-aside on an annual basis to fund the replacement of the assets at or near the end of the useful life.

The water system R&R projects require a set-aside of approximately \$1,035,100 per year and the R&R projects for the sewer system require an annual set-aside of approximately \$1,736,000 per year in order to fund the replacement of these assets.

For a listing of R&R projects, refer the Public Utility’s Beehive Asset Management Software. Goochland County provided a summary of the following Renewal and Replacement projects:

1.2.6 The Capital Improvements Plan

In early 2018, the County adopted a 25-year Capital Improvements Plan that includes \$11.9 million for sewer projects and \$21.7 million for water projects over the next 10 years. See Appendix G.



The assumptions listed above were used to develop a 10-year projection of water and sewer revenues and expenses and to determine the magnitude of rate increases that will be needed over the planning period.

1.3 *Ad Valorem Tax* – Tuckahoe Creek Service District

This report does not examine the *ad valorem* that the County implemented in the Tuckahoe Creek Service District to pay for a portion of the infrastructure that the County developed to serve that growth area.

-- End of Section --



2.0 THE WATER SYSTEM – PROJECTIONS AND RECOMMENDED RATES

2.1 Preliminary Projections of Water Revenue with No Rate Increases

Appendix C includes a spreadsheet showing the detailed projections of the water system and shows the annual deficits if *no rate increases are adopted*. Key assumptions are outlined below.

- Increases in the customer base include estimates of the number of homes that were likely to be constructed over the first 5-years of the study period (370 in FY2019 and FY2020; 280 – 290 in FY2021 – FY2023).
- After the first five-year period (after FY2023), the number of new connections is reduced (140 connections per year), in order to be conservative.
- The number of new non-residential customers, and the projected usage attributed to those customers is more difficult to anticipate, therefore a conservative approach to the connections and revenue from non-residential connections was utilized. The projections include only three (3) new non-residential customers per year and assume a 5/8 inch meter and average bi-monthly usage of 9,500 gallons.
- Connection fees for both residential and non-residential customers are based on the current schedule of connection fees.
- The spreadsheet in Appendix C details the revenue from water sales based on current water rates and assumes increase in revenue directly related to the new customer accounts.
- Expenses are increased at various rates as shown on the table in Appendix C.
- Henrico water purchases reflect current volume of water purchased as well as increases due to demands of the new customers. Annual estimates in capacity charges and volume charges assume increases of 4% and 2% each year.
- The cost of purchasing water from the Department of Corrections (DOC) is assumed to remain the same, with minor increases in volume due to growth.
- The table in Appendix C assumes that \$1,035,110 is transferred to the R&R fund each year and assumes that all connection fees are transferred to the Capital Fund.
- Existing debt service and capital projects are paid from the Capital Fund.
- As shown on Row 106 of the table in Appendix C, the operating shortfall in FY2019 is \$813,705 and is approximately \$500,000 - \$600,000 each subsequent year.
- An increase of approximately 35% would be needed to balance the FY2019 budget.



- A review of the Capital Fund shows that the projected connection fees would be adequate to pay existing debt service and the estimated cost of the capital plan through FY2023. After FY2023, deficits are projected, primarily because the projected growth in new connections is very conservatively forecast.

A rate increase of more than 30% is not realistic or feasible. In an attempt to keep the rate increase at 5%, or less, the proposed budget and transfers to the R&R and Capital Funds were reduced to develop a series of rate increases that were designed to be more palatable and feasible for County decision-makers and the water users.

2.2 Revised Projections of Water Revenue and Water Expenses

Appendix D provides revised projections and the annual contributions to the R&R Fund were adjusted to maintain a rate increase of 5% per year.

- The annual contributions to the R&R Fund were reduced from \$1,035,000 each year to the following: \$330,000 in FY2019, \$700,000 on FY2020, \$900,000 in FY2021, and \$950,000 in FY2022. After FY2022, \$1,035,000 is set-aside for R&R.

As shown on the table in Appendix D, the operating revenues meet or exceed the projected operating expenses each year. The R&R Fund grows to approximately \$9 million over the 10-year planning period. The Capital Fund is adequate to pay the existing debt service payments and the scheduled capital projects through FY2024. There is a projected deficit in FY2025 which may indicate the need to borrow money for some of the capital projects, may require a re-scheduling of some of the capital projects, or additional rate increases may be needed. However, in the 5-year timeframe leading up to FY2025, it is recommended that the County regularly review the actual revenues and expenses against the projections and make additional adjustments as needed.

The table on the following page summarizes the revised revenues and expenses of the water system – and assumes a 5% increase each year for 5 years.



Table 2-1: Revised Projections of Water Revenues and Expenses (5% increase each year)

	Budget FY 2018	Projected FY 2019	Projected FY 2020	Projected FY 2021	Projected FY 2022	Projected FY 2023
Revenue:						
Revenue from Water Sales	\$2,100,000	\$2,433,524	\$2,794,508	\$3,136,896	\$3,495,905	\$3,872,863
Connection Fees	\$360,000	\$1,489,000	\$1,485,000	\$1,197,000	\$1,137,000	\$1,137,000
Penalty and Interest	\$3,825	\$4,867	\$5,589	\$6,274	\$6,992	\$7,746
Lease Payments Water Tank	\$48,000	\$48,000	\$48,000	\$48,000	\$48,000	\$48,000
Total Revenue	\$2,511,825	\$3,975,391	\$4,333,097	\$4,388,170	\$4,687,896	\$5,065,609
Expenditures:						
Operating Expenses	\$789,367	\$802,648	\$848,643	\$862,627	\$876,862	\$891,353
Henrico Water Purchases	\$900,000	\$1,133,954	\$1,255,462	\$1,362,718	\$1,469,874	\$1,580,871
DOC Water Purchases	\$40,000	\$40,270	\$40,540	\$40,810	\$41,080	\$41,350
Total	\$1,729,367	\$1,976,872	\$2,144,645	\$2,266,155	\$2,387,816	\$2,513,574
Transfer to F56-Utility Capital	\$172,000		\$-	\$-	\$-	\$-
Transfer of Connection Fees to Capital Fund		\$1,489,000	\$1,485,000	\$1,197,000	\$1,137,000	\$1,137,000
Transfer to R&R Fund (Goal \$1.04 M/yr.)	\$-	\$330,000	\$700,000	\$900,000	\$950,000	\$1,035,110
Total Expenses	\$1,901,367	\$3,795,872	\$4,329,645	\$4,363,155	\$4,474,816	\$4,685,684
Operating Revenue Less Expenses	\$610,458	\$7,519	\$3,451	\$25,015	\$213,081	\$379,925
Renewal and Replacement Fund						
Beginning Balance	\$-	\$-	\$330,000	\$1,030,000	\$1,930,000	\$2,880,000
Additions	\$-	\$330,000	\$700,000	\$900,000	\$950,000	\$1,035,110
Uses	\$-	\$-	\$-	\$-	\$-	\$-
Ending Balance	\$-	\$330,000	\$1,030,000	\$1,930,000	\$2,880,000	\$3,915,110
Capital Fund:						
Beginning Capital Balance		\$158,420	\$1,456,201	\$2,238,198	\$41,078	\$753,941
Transfer of Connection Fees		\$1,489,000	\$1,485,000	\$1,197,000	\$1,137,000	\$1,137,000
Use of Funds:						
Transfer of Any "Excess" Operating Funds	\$610,458	\$7,519	\$3,451	\$25,015	\$213,081	\$379,925
Debt Service	\$(201,580)	\$(198,738)	\$(198,034)	\$(199,136)	\$(197,217)	\$(195,042)
Capital Projects	\$-	\$-	\$(350,000)	\$(3,220,000)	\$(440,000)	\$(1,420,000)
Ending Balance		\$1,456,201	\$2,396,618	\$41,078	\$753,941	\$655,824

-- End of Section --



3.0 THE SEWER SYSTEM – PROJECTIONS AND RECOMMENDED RATES

3.1 Preliminary Projections of Sewer Revenue with No Rate Increases

Appendix E includes a spreadsheet showing the detailed projections of the sewer system and shows the annual deficits if *no rate increases are adopted*. Key assumptions are outlined below.

- Increases in the customer base include estimates of the number of homes that were likely to be constructed over the first 5-years of the study period (370 in FY2019 and FY2020; 280 – 290 in FY2021 – FY2023).
- After the first five year period (after FY2023), the number of new connections is reduced (140 connections per year), in order to be conservative.
- The number of new non-residential customers, and the projected usage attributed to those customers is more difficult to anticipate, therefore a conservative approach to the connections and revenue from non-residential connections was utilized. The projections include only three (3) new non-residential customers per year and assume a 5/8 inch meter and average bi-monthly usage of 9,500 gallons.
- Connection fees for both residential and non-residential customers are based on the current schedule of connection fees.
- Revenue from the Henrico Cost Sharing agreement is based on approximately 78% of the cost of repairs and maintenance of the sewer pump station and 95% of the chemicals utilized at that station.
- The spreadsheet in Appendix E details the revenue from sewer sales based on current user charges and assumes an increase in revenue directly related to the new customer accounts.
- Expenses are increased at various rates as shown on the spreadsheet.
- The cost of wastewater treatment (paid to Henrico County, the City of Richmond and DOC) reflect current volume of wastewater treated and the related cost as well as increases due to demands of the new customers. Assumed increases in the cost of treatment are 3% in Richmond and Henrico, and, 1% for the DOC.
- The table in Appendix E. assumes that \$1,736,000 is transferred to the R&R Fund each year and assumes that all connection fees are transferred to the Capital Fund.
- Existing debt service and capital projects are paid from the Capital Fund.
- As shown on Row 114 of the table in Appendix E, the operating *shortfall* in FY2019 is more than \$2 million. Much of that deficit is related to the funding of the R&R Fund.



- The existing sewer rates would need to double to fund the shortfall.
- A review of the Capital Fund shows that the projected connection fees would be adequate to pay existing debt service and the estimated cost of the capital plan through FY2024. After FY2024, deficits are projected.
- A rate increase of 100% is not realistic or feasible. In an attempt to keep the rate increase at 6%, or less, the proposed budget and transfers to the R&R Fund and Capital Fund were adjusted to develop a series of rate increases that were designed to more palatable and feasible for County decision-makers and the wastewater customers.

3.2 Revised Projections of Sewer Revenue and Sewer Expenses

Appendix F provides revised projections and the following items were adjusted to maintain a rate increase of 6% per year.

- The annual contributions to the R&R Fund were reduced from \$1.7 million per year to the following: \$200,000 in FY2019, \$650,000 in FY2020, \$840,000 in FY2021, and \$675,000 in FY2022. After FY2022, the amount increases to \$950,000 and \$1,000,000 – but does not reach the targeted \$1.7 million during the planning period.
- In FY2019 – FY2021, only 75% of the connection fees are transferred to the Capital Fund – this is another attempt to reduce the rate increases.

As shown in Appendix F, and assuming a 6% rate increase each year, the operating revenues meet or exceed the projected operating expenses (through FY2023). The R&R Fund grows to approximately \$8.2 million over the 10-year planning period. The Capital Fund is adequate to pay the existing debt service payments and the scheduled capital projects through FY2025. There is a deficit in FY2026 which may indicate the need to borrow money for some of the capital projects, may require a re-scheduling of some of the projects, or additional rate increases may be needed.

The table on the following page summarizes the revised revenues and expenses of the sewer system – and assumes a 6% increase each year for 5 years.



Table 3-1: Revised Projections of Sewer Revenues and Expenses (6% increase each year)

	Budget FY 2018	Projected FY 2019	Projected FY 2020	Projected FY 2021	Projected FY 2022	Projected FY 2023
Revenue:						
Revenue from Sewer Sales	\$1,325,000	\$1,704,496	\$2,189,306	\$2,591,509	\$3,019,577	\$3,417,238
Henrico Cost Sharing	\$1,425,000	\$1,338,797	\$1,365,573	\$1,392,884	\$1,420,742	\$1,449,157
Connection Fees	\$ 540,000	\$2,232,000	\$2,688,000	\$1,794,000	\$1,704,000	\$1,704,000
Penalty and Interest	\$ 3,675	\$ 5,113	\$ 6,568	\$ 7,775	\$ 9,059	\$ 10,252
Total Revenue	\$3,293,675	\$5,280,406	\$6,249,446	\$5,786,167	\$6,153,377	\$6,580,646
Total Revenue less 75% of Connection Fees / Operating Revenue (after 2018)	\$3,293,675	\$3,606,406	\$4,233,446	\$4,440,667	\$4,449,377	\$4,876,646
Expenditures:						
Operating Expenses	\$ 672,018	\$ 684,101	\$ 728,798	\$ 741,452	\$ 754,340	\$ 767,466
Purchase of Sewer - Henrico	\$ 234,000	\$ 315,208	\$ 424,474	\$ 505,813	\$ 588,104	\$ 674,877
Purchase of Sewer-Corrections	\$ 35,000	\$ 35,350	\$ 35,704	\$ 36,061	\$ 36,421	\$ 36,785
Purchase of Sewer-Richmond	\$ 650,000	\$ 669,500	\$ 689,585	\$ 710,273	\$ 731,581	\$ 753,528
Henrico True-up	\$1,402,579	\$1,414,547	\$1,442,838	\$1,471,695	\$1,501,129	\$1,531,151
Total	\$2,993,597	\$3,118,706	\$3,321,398	\$3,465,292	\$3,611,574	\$3,763,808
Transfer to F56-Utility Capital	\$ 196,000	\$ 196,000	\$-	\$-	\$-	\$-
Transfer to R&R Fund (Goal\$1.736 M/year)	\$-	\$ 200,000	\$ 650,000	\$ 840,000	\$ 675,000	\$ 960,000
Total Expenses	\$3,189,597	\$3,594,880	\$4,052,374	\$4,387,078	\$4,369,177	\$4,807,237
Operating Revenue Less Expenses	\$ 104,078	\$11,526	\$181,073	\$53,590	\$80,200	\$69,409
Renewal and Replacement Fund						
Beginning Balance	\$-	\$	\$ 200,000	\$ 850,000	\$ 1,690,000	\$ 2,365,000
Additions	\$-	\$ 200,000	\$ 650,000	\$ 840,000	\$ 675,000	\$ 960,000
Ending Balance	\$-	\$ 200,000	\$ 850,000	\$1,690,000	\$2,365,000	\$3,1325,000
Capital Fund:						
Beginning Capital Balance			\$-	\$ 1,729,039	\$ 463,992	\$ 1,840,976
Transfer of Connection Fees		\$1,674,000	\$2,016,000	\$1,345,500	\$1,704,000	\$1,704,000
Transfer of any "Excess" Funds		\$ 11,526	\$ 181,073	\$ 53,590	\$ 80,200	\$ 69,409
Use of Funds:						
Debt Service	\$(201,580)	\$(198,738)	\$(198,034)	\$(199,136)	\$(197,217)	\$(195,042)
Capital Projects	\$-	\$ (2,400,000)	\$ (270,000)	\$ (2,465,000)	\$ (210,000)	\$ (1,200,000)
Ending Balance		\$ (913,212)	\$1,729,039	\$463,992	\$1,840,976	\$2,219,343

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4.0 SUMMARY OF RECOMMENDATIONS

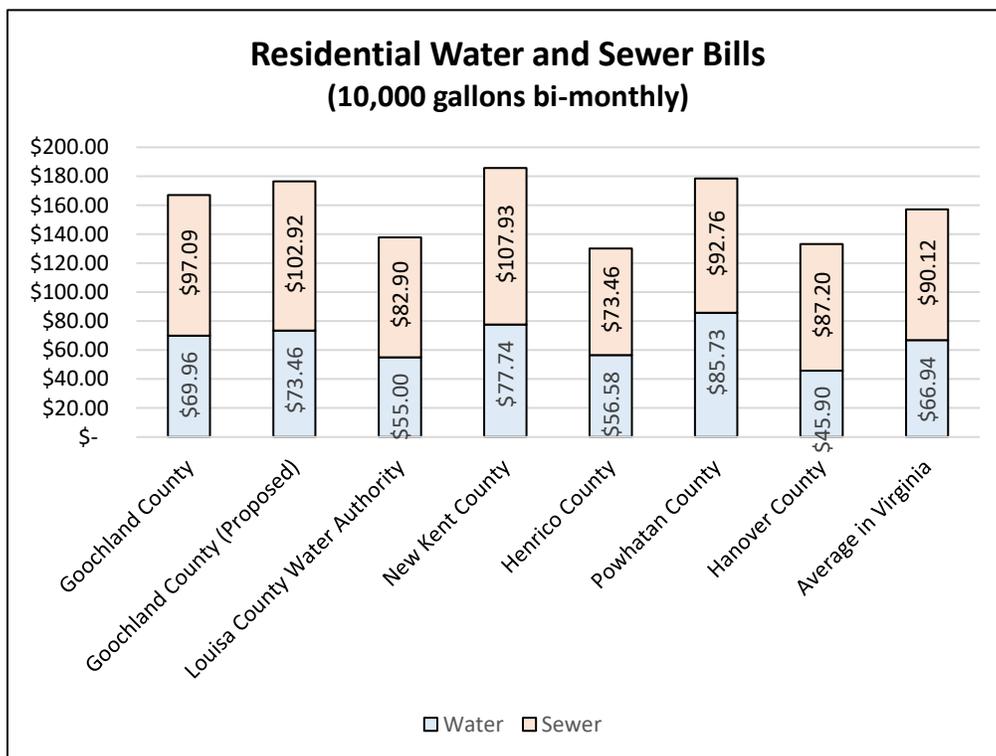
The proposed rate increases (5% per year for water and 6% per year for sewer) over the next 5 years will enable the County to pay projected operating expenses, begin to fund a Renewal and Replacement Fund, and begin to set-aside connection fees to pay debt service and to fund capital projects – thus ceasing to rely on the connection fees to support operating expenses.

The projections are based on a number of assumptions of growth, customer usage, increases in a wide variety of expenses and assumed cost and timing of capital projects. It is likely that the actual growth, expenses and capital costs will vary from these projections – and it will be incumbent on Goochland County to monitor actual results and make adjustments to rates or expenses as needed.

4.1 Water and Sewer Rate Comparison

The figure below provides a comparison of the proposed water to those in select utilities.

Figure 4-1: Comparison of Water and Sewer Charges to Other Localities



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APPENDIX

APPENDIX

- Appendix A. Section 55-26 of the County Code of Ordinances
 - Appendix B. Budget – FY2016 – FY2018
 - Appendix C. Water System – Projected Revenues and Expenses – With NO Rate Increases
 - Appendix D. Water System – Revised Revenues and Expenses – With 5% Rate Increases
 - Appendix E. Sewer System – Projected Revenues and Expenses – With NO Rate Increases
 - Appendix F. Sewer System – Revised Revenues and Expenses – With 6% Rate Increases
 - Appendix G. The Capital Improvements Plan
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APPENDIX A.

Appendix A.

Section 55-26 of the County Code of Ordinances

- **Sec. 5.5-26. - Water and sewer charges.**

(a)

Water volume charges.

Residential* (bi-monthly) 4,000 gal. minimum	\$5.78 per 1,000 gal.
Non-residential (bi-monthly) 4,000 gal. minimum	\$8.10 per 1,000 gal.
*Residential rate is for a single-family residential unit (as defined in chapter 14, article I, section 14-1 of the Goochland County Code) and any master meter for the purpose of irrigation to a whole section of a residential subdivision, but not to include common areas. Meters for apartments or condominiums will not be classified as residential.	

(b)

Sewer volume charges.

Residential (bi-monthly) 4,000 gal. minimum	\$6.32 per 1,000 gal.
Non-residential (bi-monthly) 4,000 gal. minimum	\$12.15 per 1,000 gal.

(c)

Connection fees.

<i>Water Connection Fees</i>	
Single-family dwellings, including semi-detached dwellings	\$4,000.00/dwelling unit
Multifamily dwellings; apartments; townhomes; condominiums; cluster homes; duplexes	\$2,750.00/dwelling unit
Motel and hotel	\$1,500.00/room
Nursing homes	\$2,500.00/bed
Facilities providing permanent housing for elderly or handicapped persons and operated by charitable, nonstock, nonprofit organizations which are exempted by section 501(c)(3) of the Internal Revenue Code	\$1,515.00/dwelling unit

The water connection fee for all other business, industrial and public buildings will be based on meter size as follows:

Meter Size (inches)	Basic Connection Fee
5/8	\$3,000.00
1	7,998.00
1 1/2	15,959.00
2	31,678.00
3	63,367.00
4	110,394.00
6	237,130.00
8	592,829.00

10	950,554.00
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<i>Sanitary Sewer Connection Fees</i>	
Single-family dwellings, including semi-detached dwellings	\$6,000.00/dwelling unit
Multifamily dwellings; apartments; townhomes; condominiums; cluster homes; duplexes	\$3,750.00/dwelling unit
Motel and hotel	\$2,000.00/room
Nursing homes	\$2,800.00/bed
Facilities providing permanent housing for elderly or handicapped persons and operated by charitable, nonstock, nonprofit organizations which are exempted by section 501(c)(3) of the Internal Revenue Code	\$1,855.00/dwelling unit

The sanitary sewer connection fee for all other business, industrial and public buildings will be based on meter size as follows:

Meter Size (inches)	Basic Connection Fee
5/8	\$4,000.00
1	14,308.00
1½	28,549.00
2	56,668.00
3	113,357.00
4	197,485.00
6	424,205.00
8	1,060,517.00
10	1,700,455.00

(d)

Water service charges.

Residential	
Meter Size (inches)	Bi-monthly Service Charge
5/8	\$10.50
1	20.50

Commercial	
Meter Size (inches)	Bi-monthly Service Charge
5/8	\$26.27
1	52.53
1½	105.06
2	141.84
3	231.14
4	420.25
6	761.71
8	1,392.08
10	1,392.08

(e)

Sewer service charges.

Residential	
Meter Size (inches)	Bi-monthly Service Charge
5/8	\$31.50
1	46.25

Commercial	
Meter Size (inches)	Bi-monthly Service Charge
5/8	\$39.40
1	57.78
1½	91.40
2	132.38
3	231.14
4	378.23
6	735.44
8	1,287.02
10	1,413.09

(f)

Hydrant meter leasing.

(1)	Deposit:	
	1 in. or smaller meter	\$300.00
	2 in. and larger meter	\$400.00
(2)	Administrative fee	\$10.00 per month
(3)	Water volume charge	\$4.66 per 1,000 gal.

(Ord. of 6-5-07(1), § 1; Ord. of 12-4-07(3), § 1; Ord. of 6-3-08(1), § 1; Ord. of 4-6-10(1), § 1; Ord. of 4-6-10(2), § 1; Ord. of 4-5-11(1), § 1; Ord. of 4-17-12(1), § 1, eff. 7-1-12; Ord. of 4-16-13(2), § 1, eff. 7-1-13; Ord. of 12-3-13(1), § 1; Ord. No. 1494, § 1, 4-20-15, eff. 7-1-15; Ord. No 1840, § 1, 4-18-16, eff. 7-1-16; Ord. No. 1893, § 1, 6-7-16, eff. 7-1-16)



APPENDIX B.

Appendix B.

Budget – FY2016 – FY2018



**FY2018 ADOPTED
BUDGET**

**FY2019 PROJECTED
BUDGET**



Public Utilities

GOOCHLAND PUBLIC UTILITIES

Goochland County Department of Public Utilities (DPU) has three primary funds, with the Board of Supervisors adopting a budget for each fund in April that considers the needs of the water and sewer system, potential changes in water and sewer user fees and connection fees, and the ad valorem tax rate which applies to properties in the Tuckahoe Creek Service District (TCSD).

The funds summarized in the following pages include:

- Countywide Utility Operating Fund (57)
- Tuckahoe Creek Service District Debt Fund (53)
- Countywide Utility Capital Fund (56)

The FY18 Utility Enterprise Fund budget includes the recommendation for a utilities superintendent position to augment regular inspection, operations, and preventative maintenance of the water and wastewater systems as well as provide supervisory level support. Also recommended in the budget is a 2.5% increase in the water and sewer consumption charges and service charges. No increase for connection fees or the TCSD ad valorem rate are recommended.



Goochland County, Virginia - Adopted Revenues For Fund: 57 - County Utility

	ACTUAL FY2016	ADOPTED FY2017	ADOPTED FY2018	PROJECTED FY2019
COUNTYWIDE UTILITIES				
WATER/SEWER CONNECTION FEES	1,156,394	450,000	900,000	900,000
WATER/SEWER SERVICE FEES	1,745,927	1,675,000	2,100,000	2,100,000
PENALTY/INTEREST	11,660	7,500	7,500	7,750
HENRICO COST SHARING	1,882,410	1,625,000	1,425,000	1,350,000
SEWER SERVICE FEES	1,381,897	1,425,000	1,325,000	1,350,000
LEASE PAYMENT OF WATER TANK	1,227	0	0	0
COUNTYWIDE UTILITIES - TOTAL	6,179,515	5,182,500	5,757,500	5,707,750
COUNTYWIDE UTILITIES				
LEASE PYM OF WATER TANK	55,496	48,000	48,000	48,000
COUNTYWIDE UTILITIES - TOTAL	55,496	48,000	48,000	48,000
TRANSFERS				
FROM GENERAL FUND BALANCE	250,000	200,000	0	0
TRANSFER FROM TCSD FUND 53	0	69,390	0	0
TRANSFER FROM PRIOR YEAR BALANCE	0	0	0	0
TRANSFERS - TOTAL	250,000	269,390	0	0
Total	6,485,011	5,499,890	5,805,500	5,755,750



Goochland County, Virginia - Adopted Expenses For Fund: 57 - County Utility

	ACTUAL FY2016	ADOPTED FY2017	ADOPTED FY2018	PROJECTED FY2019
COUNTYWIDE UTILITIES				
SALARY	398,820	440,000	465,872	465,872
OVERTIME	0	3,000	3,000	3,000
FICA	29,238	33,660	35,869	35,869
VRS	40,977	39,600	41,369	41,369
HEALTH	62,156	63,101	88,628	88,628
LIFE INSURANCE	4,513	5,236	6,103	6,103
WORKMAN'S COMP	5,808	6,900	7,973	7,973
PROFESSIONAL SERVICES	101,189	170,000	160,000	100,000
<p>Potential CIP as listed in the Utility Master Plan: \$50K Construction Project Inspections: \$30K Engineering Plans/study for installing offices in the Centerville Water Tank: \$40K IT intends to assist Comcast with the installation of a more reliable connection for our SCADA system: \$20K Miscellaneous Items (i.e. water and sewer model updates, SUE's, surveys, etc.): \$20K</p> <p>This budget item is being reduced due to fact that all of the initial capital upgrades listed in the Utility Master Plan and all of the ongoing CIP's are complete.</p>				
LABOR CHARGES-VEHICLE	91	1,000	0	0
<p>This line item will be deleted and paired with account 5408.</p>				
REPAIRS AND MAINTENANCE	109,074	175,000	115,000	115,000
<p>Based on approximating historical repair and maintenance trends. This cost item could include items such as water main breaks, sanitary sewer overflows, valve rehabilitation, pump repair, and other maintenance items.</p>				
CONTRACTED SERVICES	219,020	150,000	150,000	150,000
<p>This cost item is based on the following existing contracts: Meter Replacements, Sydnor Hydro: \$2,830/meter, with approx. 20 meters/year = \$56,600 ARV Maintenance, Sydnor Hydro: \$23,596/year Oncall SCADA, Emerge and Hermitage: approx. \$30,000/year Wet Well Cleaning, Lyttle: \$11,400/year Generator Maintenance, Standby Systems: \$8,690/year Univar (chloramine booster station chemicals): per our contract with Univar, Ammonium Sulfate is \$3.6864/gallon with an estimated usage of 800 gallons/year (\$3,000+/-) and Sodium Hypochlorite is \$2.21/gallon with an estimated usage of 3,000 gallons/year (\$6,600+/-).</p> <p>A \$10K contingency was added.</p>				
PRINTING	2,639	2,700	2,700	2,700
<p>This cost item includes the printing and distribution of CCR reports as required by VDH and other miscellaneous letters we send to our customers. SI Solutions is the third party printer.</p>				
ADVERTISING	30	1,000	50	50
<p>This cost item is typically used to advertise open positions in The Virginia Engineer magazine. The budget has also been reduced to be more in-line with spending trends.</p>				



Goochland County, Virginia - Adopted Expenses For Fund: 57 - County Utility

SOFTWARE MAINTENANCE CONTRACTS	3,438	33,000	20,000	20,400
<p>This cost items is for: Cityworks, \$8,000/year Blue Review, \$5,000/year Autocad, \$1,000/year Allen Bradley (TechConnect, SCADA), \$3,000/year High Tide (SCADA), \$2,400/year Win911, \$500/year</p> <p>A 2% escalator has been added to FY19.</p>				
ELECTRICAL SERVICES	29,744	160,000	163,200	166,464
<p>This cost item is based on historical costs for both 44010 and 44040. A 2% escalator has been added to FY19.</p>				
PROPANE GAS	0	0	0	0
POSTAGE	6,241	4,500	6,000	6,000
<p>This cost item is based on historical spending with our third party billing company. Our typical fee per year is \$5,000 for postage. This cost item also includes other miscellaneous postage items that we use throughout the year.</p>				
TELECOMMUNICATION	11,351	33,000	16,000	16,000
<p>This cost item is based on historical expenses for the use of department iPads, iPhones, and laptops as well as T-1/ISDN data lines that the department uses for SCADA communication.</p> <p>This item is being raised from FY16's actual of \$11K to \$16K to account for a potential installation of a more reliable Comcast connection at the East Goochland Pump Station which would increase the Comcast bill approx. \$400/month.</p>				
SOFTWARE/LICENSE NON-CAPITAL	4,750	7,000	15,000	15,300
<p>DPU plans on purchasing another Rockwell HMI license to have monitoring capabilities of the water and sewer scada systems at the administration building. Estimated at \$15,000.</p> <p>A 2% escalator has been added to FY19.</p>				
OFFICE SUPPLIES	6,812	3,000	4,500	4,500
<p>This cost item has a spending trend of about \$3K/year. It is being reduced from the \$7K spent in FY16 because FY16 had a few one off purchases.</p>				
REPAIR & MAINTENANCE SUPPLIES	54,346	145,000	55,000	55,000
<p>This cost item sees spending on many different products that the O&M team need to keep the water and sewer systems functioning. Some of the items are: piping, tools, repair flanges and other packing, fire hydrant parts, gaskets, sewer frame and covers, valve covers, meter boxes, repair couplings, spool pieces, nuts/bolts/screws, etc.</p>				
VEHICLE-POWERED EQUIP SUPPLIES	12,491	4,000	12,000	12,000



Goochland County, Virginia - Adopted Expenses For Fund: 57 - County Utility

This cost item needs "fuel" changed to "supplies".				
The new intention is to place all 'labor' and 'parts' items in this line item as there is another account specifically for fuel and another account for purchasing of vehicles. This means that the budget for account 3003 will be coupled into this account.				
This cost item sees charges for all labor and parts for vehicle maintenance. Some of the items could be new tires, batteries, windshields, oil changes, inspections, windshield wipers and any other vehicle maintenance items. DPU plans on purchasing a new vehicle in FY18 so there will be items that will need to be purchased for the vehicle (i.e. safety lights).				
FY16 saw approximately \$12K in spending and account 3003 saw \$100 in spending so this item will be budgeted for \$12K.				
CHEMICALS	0	1,375,000	0	0
This cost item is for Bioxide purchases with Evoqua.				
Evoqua: per our contract with Evoqua, bioxide is \$2.37/gallon and we estimate approximately 580,000 gallons of usage per year. Another \$10K was added for contingency.				
UNIFORMS/SAFETY EQUIPMENT	2,249	4,000	3,000	3,000
This cost item sees spending on Personal Protective Equipment (PPE), county shirts/hats/jackets, safety shoes, tripods and harnesses, etc.				
BOOKS & SUBSCRIPTIONS	50	1,000	200	200
DPU plans on purchasing AWWA training manuals in FY18.				
PURCHASE OF WATER-HENRICO	760,225	900,000	900,000	900,000
FY16 saw spending at \$760K/year and FY17 spending is projected to be at \$850K/year, and given the approximate customer growth experienced over those 2 years, FY18 spending is projected to be approximately \$900K (6% increase).				
PURCHASE OF WATER-CORRECTIONS	31,883	48,000	40,000	40,000
The DOC is not raising their rates and the Courthouse Water system has very few new users, therefore, the budget was for FY18 was made to be inline with the FY16 spending with an additional \$8K contingency.				
PURCHASE OF SEWER-HENRICO	266,852	205,000	234,000	234,000
FY16 saw spending at \$267K/year and FY17 spending is projected to be at \$220K/year, and given the approximate customer growth experienced over those 2 years, FY18 spending is projected to be approximately \$234K (6% increase).				
PURCHASE OF SEWER	26,996	38,000	35,000	35,000
The DOC is not raising their rates and the Courthouse Sewer system has very few new users, therefore, the budget was for FY18 was made to be inline with the FY16 spending with an additional \$8K contingency.				
PURCHASE OF SEWER-RICHMOND	600,000	650,000	850,000	850,000
This cost item is for both the treatment of wastewater and debt obligation. In discussions with the Director of Financial Services, it was determined that an additional \$200K/year could be paid to Richmond to reduce the debt obligation.				
COMPUTER RQUIPMENT-NON CAPITAL	877	4,000	3,500	3,500
DPU plans on purchasing a new computer, monitors, and other appurtenances for a pending Superintendent position.				
FURNITURE & FIXTURES	0	3,000	3,000	3,000



Goochland County, Virginia - Adopted Expenses For Fund: 57 - County Utility

DPU plans on purchasing a desk and appurtenances for a pending Superintendent position.				
EQUIPMENT-MACHINERY-NON-CAPITAL	71,522	50,000	70,000	70,000
This cost item sees spending on many different products that DPU staff need to keep the water and sewer systems functioning. Some of the items are: fire hydrant flushing apparatus, tools, fire hydrant meters, sump pumps, jockey pumps, valve wrenches, carbon filters, smokers, compressors, sewer augers, etc.				
The FY18 budget was made to be inline with FY16 spending.				
TRAVEL/EDUCATION	796	2,500	3,500	3,500
This cost items sees spending on: 2 VRWA conferences per year at \$750/each = \$1,500 2 AWWA conferences per year at \$850/each = \$1,700				
EDUCATION/TRAINING-TUITION,REG	5,563	2,500	5,000	5,000
DPU has 5 DPOR certified water operators and each is required to obtain 16 continuing education hours every 2 years. It is estimated that each license needs approximately \$1,000 in classes and training each year in order to be maintained.				
DUES & MEMBERSHIP	1,888	1,000	2,000	2,000
This cost item budget was made to be more in line with FY16 spending.				
WATERWORKS OPERATION FEE	11,005	6,500	7,300	7,300
The Courthouse water system operation fee to VDH is approximately \$800/year. The East End water system operation fee to VDH is approximately \$3,000/year. The cost to VDH to maintain the 5 waterworks operator licenses is approximately \$100/person. DEQ's Oilville permit: approximately \$3,000/year				
WASTEWATER OPERATIONS FEE	0	0	0	0
VEHICLE-FUEL	8,654	14,000	9,000	9,000
This cost item is based on historical trends and is therefore being lowered from the FY17 budget.				
MACHINERY & EQUIPMENT	29,975	35,000	30,000	30,000
This cost item is based on FY16 spending. Potential items that could be purchased are line stops (cost varies with size), new pump(s) (variable costs), new variable frequency drives, etc.				
MOTOR VEHICLES AND EQUIPMENT	26,413	26,000	30,000	30,000
This cost item shows the potential spending for a new vehicle should we receive a new Superintendent position.				
LEASE/RENT OF EQUIPMENT	2,564	2,000	6,000	6,000
This cost item saw spending from the rental of a KIP plotter and a Sharp Xerox machine, neither of which are being rented now that there is a fully functioning customer service center in Community Development.				
DPU requires new office space on the north-east end of the county. Office space can be rented for \$500/month (\$6K/year). This is not projected to be a long term item as we have also budgeted for engineering plans to remodel the Centerville Water Tank to have 2 offices.				
LEASE-POSTAGE METER	269	200	0	0
COUNTYWIDE UTILITIES - TOTAL	2,950,507	4,848,397	3,599,764	3,543,728
Henrico Tru-Up				
PROFESSIONAL SERVICES	4,882	0		
REPAIRS & MAINTENANCE	16,483	0	17,579	29,547



Goochland County, Virginia - Adopted Expenses For Fund: 57 - County Utility

CONTRACTED SERVICES	71,489	0		
TEST LINE ITEM	0	0		
ELECTRICAL SERVICES	110,254	0		
TELECOMMUNICATION	13,342	0		
REPAIR/MAINTENANCE SUPPLIES	45,067	0		
VEHICLE-POWERED EQUIP SUPPLIES	0	0	0	0
CHEMICALS	1,374,567	0	1,385,000	1,385,000
UNIFORMS/SAFETY EQUIP	0	0		
COMPUTER EQUIP/NON CAPITAL	0	0		
EQUIP-MACHINERY-NON CAPITAL	4,749	0		
VEHICLE-FUEL	1,158	0		
Henrico Tru-Up - TOTAL	1,641,991	0	1,402,579	1,414,547
DEBT SERVICE-COUNTYWIDE UTILITIES				
3.7 VRA 2006 & 2000 PRINCIPAL	0	140,000	110,000	240,000
3.7 VRA 2006 & 2000 INTEREST	273,336	115,950	165,344	157,475
2.59M VRA 2007A VCCW PRINCIPAL	0	115,000	125,000	0
2.59M VRA 2007A VCCW INTEREST	85,430	80,543	2,813	0
DEBT SERVICE-NEW	0	0	0	0
DEBT SERVICE-COUNTYWIDE UTILITIES - TOTAL	358,766	451,493	403,157	397,475
DEBT SERVICE-COUNTYWIDE UTILITIES				
TRANSFER TO F56-UTILITY CAPITAL	1,067,649	200,000	400,000	400,000
DEBT SERVICE-COUNTYWIDE UTILITIES - TOTAL	1,067,649	200,000	400,000	400,000
Total	6,018,913	5,499,890	5,805,500	5,755,750



Goochland County, Virginia - Adopted Revenues For Fund: 53 - Tuckahoe Service District-Debt

	ACTUAL FY2016	ADOPTED FY2017	ADOPTED FY2018	PROJECTED FY2019
TCSD- ADVALOREM				
ADVALOREM TAXES CURRENT	2,748,752	2,985,000	3,000,000	3,100,000
ADVALOREM TAXES DELINQUENT	40,448	5,000	40,000	40,000
REVENUE SHARING (55%)	1,248,633	1,250,000	1,450,000	1,500,000
TCSD- ADVALOREM - TOTAL	4,037,833	4,240,000	4,490,000	4,640,000
TCSD- ADVALOREM				
ADVALOREM TAX PENALTY	5,647	6,000	6,000	6,000
ADVALOREM TAX INTEREST	3,025	3,000	3,000	3,000
TCSD- ADVALOREM - TOTAL	8,673	9,000	9,000	9,000
TCSD- ADVALOREM				
DEBT SERVICERESERVE INT.(6001)	497,269	496,000	500,000	500,000
TCSD- ADVALOREM - TOTAL	497,269	496,000	500,000	500,000
Total	4,543,775	4,745,000	4,999,000	5,149,000



Goochland County, Virginia - Adopted Expenses For Fund: 53 - Tuckahoe Service District-Debt

	ACTUAL FY2016	ADOPTED FY2017	ADOPTED FY2018	PROJECTED FY2019
TCSD- GENERAL				
BOND ISSUANCE FEES	1,625	81,153	0	0
ARBITRAGE FEES	0	0	1,625	1,625
RECORD DEPRECIATION	1,735,315	0	0	0
TCSD- GENERAL - TOTAL	1,736,940	81,153	1,625	1,625
TCSD- GENERAL				
DEBT SERVICE-PRINCIPAL	1,120,007	1,217,128	1,321,569	1,413,689
DEBT SERVICE-INTEREST-2002&2012	1,408,764	2,580,758	2,836,317	3,124,197
DEBT-RICHMOND WASTEWATER	-1,120,007	200,000	0	0
DEBT SERVICE-NEW	2,448,247	0	0	0
CONTRIBUTION TO FUND BALANCE	0	396,571	259,489	29,489
ADMINISTRATIVE FEES	0	0	80,000	80,000
TCSD- GENERAL - TOTAL	3,857,011	4,394,457	4,497,375	4,647,375
TCSD- GENERAL				
TRANSFER TO GF FOR REIMBURSEMENT	0	200,000	500,000	500,000
2 VDOT 250 WATER LINES	0	69,390	0	0
TCSD- GENERAL - TOTAL	0	269,390	500,000	500,000
Total	5,593,951	4,745,000	4,999,000	5,149,000





APPENDIX C.

Appendix C.

Water System – Projected Revenues and Expenses – With NO Rate
Increases



Appendix C. Water System – Projected Revenues and Expenses – With NO Rate Increases

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Goochland County															
2	Water System															
3	Projected Revenues and Expenses															
4	With NO RATE INCREASES															
5																
6		Actual	Budget	Budget	Projected											
7		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
8																
9	Revenue:															
10	Revenue from Water Sales	\$ 1,745,927	\$ 1,675,000	\$ 2,100,000	\$ 2,317,642	\$ 2,534,701	\$ 2,709,769	\$ 2,876,089	\$ 3,042,410	\$ 3,125,916	\$ 3,209,422	\$ 3,292,928	\$ 3,376,434	\$ 3,459,940		
11																
12	New Connections (# per year)															
13	Residential Connections															
14	288 area (1,400 homes over 5 years)				280	280	280	280	280							
15	Parkside (75 homes over 2 years)				38	37	-	-	-							
16	Kinloch (70 homes over 2-3 years)				35	35	-	-	-							
17	Tuckahoe Creek Subdivision (45 homes over 2-3 years)				15	15	15	-	-							
18	Courthouse Area (2 homes per year)				2	2	2	2	2	2	2	2	2	2		
19	Total Residential				370	369	297	282	282	140	140	140	140	140		
20	Non-Residential Connections (5/8 in meter)				3											
21																
22	Projected Increases:															
23	Bi-Monthly Rates and Revenue from Rates															
24	Residential (Average Usage 15,000 Bi-Monthly)			\$ 97.20	\$ 97.20	\$ 97.20	\$ 97.20	\$ 97.20	\$ 97.20	\$ 97.20	\$ 97.20	\$ 97.20	\$ 97.20	\$ 97.20		
25	Non-Residential (Average Usage 9,500 Bi-Monthly)			\$ 103.22	\$ 103.22	\$ 103.22	\$ 103.22	\$ 103.22	\$ 103.22	\$ 103.22	\$ 103.22	\$ 103.22	\$ 103.22	\$ 103.22		
26	Annual Revenue from New Customers				\$ 217,642	\$ 217,059	\$ 175,068	\$ 166,320	\$ 166,320	\$ 83,506						
27																
28	Increase in Gallons Sold				33,471,000	33,381,000	26,901,000	25,551,000	25,551,000	12,771,000	12,771,000	12,771,000	12,771,000	12,771,000		
29																
30	Revenue from Connection Fees															
31	Residential Connection Fee			\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000		
32	New Non-Residential (5/8 inch meter)			\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000		
33	Revenue from Connection Fees			\$ 1,489,000	\$ 1,485,000	\$ 1,197,000	\$ 1,137,000	\$ 1,137,000	\$ 569,000							
34																
35																
36	Connection Fees	\$ 462,558	\$ 180,000	\$ 360,000	\$ 1,489,000	\$ 1,485,000	\$ 1,197,000	\$ 1,137,000	\$ 1,137,000	\$ 569,000	\$ 569,000	\$ 569,000	\$ 569,000	\$ 569,000		
37	Penalty and Interest	\$ 5,947	\$ 3,825	\$ 3,825	\$ 4,635	\$ 5,069	\$ 5,420	\$ 5,752	\$ 6,085	\$ 6,252	\$ 6,419	\$ 6,586	\$ 6,753	\$ 6,920	0.2%	of water sales
38	Lease Payments Water Tank	\$ 56,723	\$ 48,000	\$ 48,000	\$ 48,000	\$ 48,000	\$ 48,000	\$ 48,000	\$ 48,000	\$ 48,000	\$ 48,000	\$ 48,000	\$ 48,000	\$ 48,000		
39	Total Revenue	\$ 2,271,154	\$ 1,906,825	\$ 2,511,825	\$ 3,859,277	\$ 4,072,770	\$ 3,960,189	\$ 4,066,842	\$ 4,233,495	\$ 3,749,168	\$ 3,832,841	\$ 3,916,514	\$ 4,000,187	\$ 4,083,859		
40																
41	Total Revenue less Connection Fees = Operating Revenue (after 2018)	\$ 2,271,154	\$ 1,906,825	\$ 2,511,825	\$ 2,370,277	\$ 2,587,770	\$ 2,763,189	\$ 2,929,842	\$ 3,096,495	\$ 3,180,168	\$ 3,263,841	\$ 3,347,514	\$ 3,431,187	\$ 3,514,859		
42																
43	Expenses:															
44	Salary	\$ 203,398	\$ 224,400	\$ 237,595	\$ 242,347	\$ 274,694	\$ 280,187	\$ 285,791	\$ 291,507	\$ 297,337	\$ 303,284	\$ 309,350	\$ 315,537	\$ 321,847	2.0%	each year after 2018 / add 50% of \$55,000 salary in FY20
45	Overtime	\$ -	\$ 1,530	\$ 1,530	\$ 1,561	\$ 1,592	\$ 1,624	\$ 1,656	\$ 1,689	\$ 1,723	\$ 1,757	\$ 1,793	\$ 1,828	\$ 1,865	2.0%	each year after 2018
46	Salary-Part Time	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
47	Bonus	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
48	FICA	\$ 14,911	\$ 17,167	\$ 18,293	\$ 18,903	\$ 21,412	\$ 21,840	\$ 22,277	\$ 22,723	\$ 23,177	\$ 23,641	\$ 24,114	\$ 24,596	\$ 25,088	7.8%	of salary and overtime
49	VRS	\$ 20,898	\$ 20,196	\$ 21,098	\$ 21,708	\$ 24,589	\$ 25,081	\$ 25,583	\$ 26,094	\$ 26,616	\$ 27,149	\$ 27,692	\$ 28,245	\$ 28,810	8.9%	of salary and overtime
50	Health	\$ 31,700	\$ 32,182	\$ 45,201	\$ 46,331	\$ 47,489	\$ 48,676	\$ 49,893	\$ 51,141	\$ 52,419	\$ 53,730	\$ 55,073	\$ 56,450	\$ 57,861	2.5%	each year after 2018
51	Life Insurance	\$ 2,302	\$ 2,670	\$ 3,113	\$ 3,171	\$ 3,592	\$ 3,664	\$ 3,737	\$ 3,812	\$ 3,888	\$ 3,966	\$ 4,045	\$ 4,126	\$ 4,208	1.3%	of salary and overtime
52	Workman's Comp	\$ 2,962	\$ 3,519	\$ 4,066	\$ 4,146	\$ 4,697	\$ 4,791	\$ 4,887	\$ 4,984	\$ 5,084	\$ 5,186	\$ 5,289	\$ 5,395	\$ 5,503	1.7%	of salary and overtime
53	Professional Services	\$ 51,606	\$ 86,700	\$ 81,600	\$ 83,232	\$ 84,897	\$ 86,595	\$ 88,326	\$ 90,093	\$ 91,895	\$ 93,733	\$ 95,607	\$ 97,520	\$ 99,470	2.0%	each year after 2018
54	Labor Charges-Vehicle	\$ 46	\$ 510	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
55	Repairs & Maintenance	\$ 55,628	\$ 89,250	\$ 58,650	\$ 59,530	\$ 60,423	\$ 61,329	\$ 62,249	\$ 63,183	\$ 64,130	\$ 65,092	\$ 66,069	\$ 67,060	\$ 68,066	1.5%	each year after 2018
56	Contracted Services	\$ 111,700	\$ 76,500	\$ 76,500	\$ 77,648	\$ 78,812	\$ 79,994	\$ 81,194	\$ 82,412	\$ 83,648	\$ 84,903	\$ 86,177	\$ 87,469	\$ 88,781	1.5%	each year after 2018
57	Printing	\$ 1,346	\$ 1,377	\$ 1,377	\$ 1,398	\$ 1,419	\$ 1,440	\$ 1,461	\$ 1,483	\$ 1,506	\$ 1,528	\$ 1,551	\$ 1,574	\$ 1,598	1.5%	each year after 2018
58	Advertising	\$ 15	\$ 510	\$ 26	\$ 26	\$ 26	\$ 26	\$ 27	\$ 27	\$ 27	\$ 27	\$ 28	\$ 28	\$ 28	1.0%	each year after 2018
59	Software Maintenance Contracts	\$ 1,753	\$ 16,830	\$ 10,200	\$ 10,302	\$ 10,405	\$ 10,509	\$ 10,614	\$ 10,720	\$ 10,828	\$ 10,936	\$ 11,045	\$ 11,156	\$ 11,267	1.0%	each year after 2018
60	Electrical Services	\$ 15,169	\$ 81,600	\$ 83,232	\$ 84,064	\$ 84,905	\$ 85,754	\$ 86,612	\$ 87,478	\$ 88,352	\$ 89,236	\$ 90,128	\$ 91,030	\$ 91,940	1.0%	each year after 2018
61	Postage	\$ 3,183	\$ 2,295	\$ 3,060	\$ 3,091	\$ 3,122	\$ 3,153	\$ 3,184	\$ 3,216	\$ 3,248	\$ 3,281	\$ 3,314	\$ 3,347	\$ 3,380	1.0%	each year after 2018
62	Telecommunication	\$ 5,789	\$ 16,830	\$ 8,160	\$ 8,242	\$ 8,324	\$ 8,407	\$ 8,491	\$ 8,576	\$ 8,662	\$ 8,749	\$ 8,836	\$ 8,924	\$ 9,014	1.0%	each year after 2018
63	Software/License-Non Capital	\$ 2,423	\$ 3,570	\$ 7,650	\$ 7,727	\$ 7,804	\$ 7,882	\$ 7,961	\$ 8,040	\$ 8,121	\$ 8,202	\$ 8,284	\$ 8,367	\$ 8,450	1.0%	each year after 2018
64	Office Supplies	\$ 3,474	\$ 1,530	\$ 2,295	\$ 2,318	\$ 2,341	\$ 2,365	\$ 2,388	\$ 2,412	\$ 2,436	\$ 2,461	\$ 2,485	\$ 2,510	\$ 2,535	1.0%	each year after 2018
65	Repair & Maintenance Supplies	\$ 27,716	\$ 73,950	\$ 28,050	\$ 28,331	\$ 28,614	\$ 28,900	\$ 29,189	\$ 29,481	\$ 29,776	\$ 30,073	\$ 30,374	\$ 30,678	\$ 30,985	1.0%	each year after 2018
66	Vehicle-Powered Equipment Supplies	\$ 6,370	\$ 2,040	\$ 6,120	\$ 6,181	\$ 6,243	\$ 6,305	\$ 6,368	\$ 6,432	\$ 6,497	\$ 6,561	\$ 6,627	\$ 6,693	\$ 6,760	1.0%	each year after 2018
67	Uniforms/Safety Equipment	\$ 1,147	\$ 2,040	\$ 1,530	\$ 1,545	\$ 1,561	\$ 1,576	\$ 1,592	\$ 1,608	\$ 1,624	\$ 1,640	\$ 1,657	\$ 1,673	\$ 1,690	1.0%	each year after 2018

Appendix C. Water System – Projected Revenues and Expenses – With NO Rate Increases

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Goochland County															
2	Water System															
3	Projected Revenues and Expenses															
4	With NO RATE INCREASES															
5																
6		Actual	Budget	Budget	Projected											
7		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
68	Books & Subscriptions	\$ 26	\$ 510	\$ 102	\$ 103	\$ 104	\$ 105	\$ 106	\$ 107	\$ 108	\$ 109	\$ 110	\$ 112	\$ 113	1.0%	each year after 2018
69	Subtotal	\$ 563,564	\$ 757,705	\$ 699,447	\$ 711,901	\$ 757,063	\$ 770,204	\$ 783,587	\$ 797,219	\$ 811,103	\$ 825,243	\$ 839,647	\$ 854,317	\$ 869,260		
70																
71	Henrico Water Purchases															
72	Capacity Rate (\$ per month)	\$15,600 / \$16,292	\$16,292 / \$21,791													
73	Water Capacity Charges	\$ 191,352	\$ 222,999		\$ 231,919	\$ 241,196	\$ 250,844	\$ 260,877	\$ 271,312	\$ 282,165	\$ 293,451	\$ 305,190	\$ 317,397	\$ 330,093	4.0%	
74	Water Charge:															
75	CCF	280,919	366,986	389,005.16	433,504	477,883	513,600	547,513	581,425	598,255	615,085	631,915	648,517	665,118		
76	Annual Increase			6%	10%	9%	7%	6%	6%	3%	3%	3%	3%	2%		
77	Rate	1.91 / 1.86	1.86 / 2.04	\$ 2.04	\$ 2.08	\$ 2.12	\$ 2.16	\$ 2.21	\$ 2.25	\$ 2.30	\$ 2.34	\$ 2.39	\$ 2.44	\$ 2.49	2.0%	
78	CCF X Rate	\$ 529,532	\$ 708,471	\$ 793,571	\$ 902,035	\$ 1,014,266	\$ 1,111,874	\$ 1,208,996	\$ 1,309,558	\$ 1,374,414	\$ 1,441,341	\$ 1,510,394	\$ 1,581,076	\$ 1,653,981		
79	Total (Capacity Charge plus Water Charge)	\$ 720,884	\$ 931,470	\$ 793,571	\$ 1,133,954	\$ 1,255,462	\$ 1,362,718	\$ 1,469,874	\$ 1,580,871	\$ 1,656,579	\$ 1,734,792	\$ 1,815,584	\$ 1,898,473	\$ 1,984,074		
80																
81	DOC															
82	Rate (\$ per 1,000 gallons)	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50		
83	Gallons	21,255,333	32,000,000	26,666,667	26,846,667	27,026,667	27,206,667	27,386,667	27,566,667	27,746,667	27,926,667	28,106,667	28,286,667	28,466,667		
84	Gallons X Rate (/1000)	\$ 31,883	\$ 48,000	\$ 40,000	\$ 40,270	\$ 40,540	\$ 40,810	\$ 41,080	\$ 41,350	\$ 41,620	\$ 41,890	\$ 42,160	\$ 42,430	\$ 42,700		
85																
86	Henrico Water Purchases	\$ 760,225	\$ 900,000	\$ 900,000	\$ 1,133,954	\$ 1,255,462	\$ 1,362,718	\$ 1,469,874	\$ 1,580,871	\$ 1,656,579	\$ 1,734,792	\$ 1,815,584	\$ 1,898,473	\$ 1,984,074		
87	DOC Water Purchases	\$ 31,883	\$ 48,000	\$ 40,000	\$ 40,270	\$ 40,540	\$ 40,810	\$ 41,080	\$ 41,350	\$ 41,620	\$ 41,890	\$ 42,160	\$ 42,430	\$ 42,700		
88	Computer Equipment-Non Capital	\$ 447	\$ 2,040	\$ 1,785	\$ 1,803	\$ 1,821	\$ 1,839	\$ 1,857	\$ 1,876	\$ 1,895	\$ 1,914	\$ 1,933	\$ 1,952	\$ 1,972	1.0%	each year after 2018
89	Furniture & Fixtures	\$ -	\$ 1,530	\$ 1,530	\$ 1,545	\$ 1,561	\$ 1,576	\$ 1,592	\$ 1,608	\$ 1,624	\$ 1,640	\$ 1,657	\$ 1,673	\$ 1,690	1.0%	each year after 2018
90	Equipment-Machinery-Non Capital	\$ 36,476	\$ 25,500	\$ 35,700	\$ 36,057	\$ 36,418	\$ 36,782	\$ 37,150	\$ 37,521	\$ 37,896	\$ 38,275	\$ 38,658	\$ 39,045	\$ 39,435	1.0%	each year after 2018
91	Travel Expenses- Education/Training	\$ 406	\$ 1,275	\$ 1,785	\$ 1,803	\$ 1,821	\$ 1,839	\$ 1,857	\$ 1,876	\$ 1,895	\$ 1,914	\$ 1,933	\$ 1,952	\$ 1,972	1.0%	each year after 2018
92	Education/Training-Tuition, Reg	\$ 2,837	\$ 1,275	\$ 2,550	\$ 2,576	\$ 2,601	\$ 2,627	\$ 2,654	\$ 2,680	\$ 2,707	\$ 2,734	\$ 2,761	\$ 2,789	\$ 2,817	1.0%	each year after 2018
93	Dues & Membership	\$ 963	\$ 510	\$ 1,020	\$ 1,030	\$ 1,041	\$ 1,051	\$ 1,061	\$ 1,072	\$ 1,083	\$ 1,094	\$ 1,105	\$ 1,116	\$ 1,127	1.0%	each year after 2018
94	Waterworks Operation Fee	\$ 11,005	\$ 6,500	\$ 7,300	\$ 7,300	\$ 7,300	\$ 7,300	\$ 7,300	\$ 7,300	\$ 7,300	\$ 7,300	\$ 7,300	\$ 7,300	\$ 7,300	0.0%	each year after 2018
95	Vehicle-Fuel	\$ 4,414	\$ 7,140	\$ 4,590	\$ 4,636	\$ 4,682	\$ 4,729	\$ 4,776	\$ 4,824	\$ 4,872	\$ 4,921	\$ 4,970	\$ 5,020	\$ 5,070	1.0%	each year after 2018
96	Machinery & Equipment	\$ 15,287	\$ 17,850	\$ 15,300	\$ 15,453	\$ 15,608	\$ 15,764	\$ 15,921	\$ 16,080	\$ 16,241	\$ 16,404	\$ 16,568	\$ 16,733	\$ 16,901	1.0%	each year after 2018
97	Motor Vehicles And Equipment	\$ 13,471	\$ 13,260	\$ 15,300	\$ 15,453	\$ 15,608	\$ 15,764	\$ 15,921	\$ 16,080	\$ 16,241	\$ 16,404	\$ 16,568	\$ 16,733	\$ 16,901	1.0%	each year after 2018
98	Lease/Rent of Equipment	\$ 1,308	\$ 1,020	\$ 3,060	\$ 3,091	\$ 3,122	\$ 3,153	\$ 3,184	\$ 3,216	\$ 3,248	\$ 3,281	\$ 3,314	\$ 3,347	\$ 3,380	1.0%	each year after 2018
99	Lease- Postage Meter	\$ 137	\$ 102	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	1.0%	each year after 2018
100	Total	\$ 1,442,422	\$ 1,783,707	\$ 1,729,367	\$ 1,976,872	\$ 2,144,645	\$ 2,266,155	\$ 2,387,816	\$ 2,513,574	\$ 2,604,304	\$ 2,697,805	\$ 2,794,156	\$ 2,892,881	\$ 2,994,598		
101																
102	Transfer to F56-Utility Capital	\$ 459,089	\$ 86,000	\$ 172,000	\$ 172,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
103	Transfer to R&R Fund (Goal \$1.04 M/yr.)	\$ -	\$ -	\$ -	\$ 1,035,110	\$ 1,035,110	\$ 1,035,110	\$ 1,035,110	\$ 1,035,110	\$ 1,035,110	\$ 1,035,110	\$ 1,035,110	\$ 1,035,110	\$ 1,035,110		
104	Total Expenses	\$ 1,901,512	\$ 1,869,707	\$ 1,901,367	\$ 3,183,982	\$ 3,179,755	\$ 3,301,265	\$ 3,422,926	\$ 3,548,684	\$ 3,639,414	\$ 3,732,915	\$ 3,829,266	\$ 3,927,991	\$ 4,029,708		
105																
106	Operating Revenue Less Expenses	\$ 369,643	\$ 37,118	\$ 610,458	\$ (813,705)	\$ (591,985)	\$ (538,076)	\$ (493,084)	\$ (452,189)	\$ (459,247)	\$ (469,075)	\$ (481,752)	\$ (496,804)	\$ (514,849)		
107					-35%											
108	Renewal and Replacement Fund															
109	Beginning Balance			\$ -	\$ -	\$ 1,035,110	\$ 2,070,220	\$ 3,105,330	\$ 4,140,440	\$ 5,175,550	\$ 6,210,660	\$ 7,245,770	\$ 8,280,880	\$ 9,315,990		
110	Additions			\$ -	\$ 1,035,110	\$ 1,035,110	\$ 1,035,110	\$ 1,035,110	\$ 1,035,110	\$ 1,035,110	\$ 1,035,110	\$ 1,035,110	\$ 1,035,110	\$ 1,035,110		
111	Uses			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
112	Ending Balance			\$ -	\$ 1,035,110	\$ 2,070,220	\$ 3,105,330	\$ 4,140,440	\$ 5,175,550	\$ 6,210,660	\$ 7,245,770	\$ 8,280,880	\$ 9,315,990	\$ 10,351,100		
113																
114	Capital Fund:															
115	Beginning Capital Balance					\$ 1,290,262	\$ 2,227,228	\$ 5,092	\$ 504,875	\$ 26,833	\$ (484,086)	\$ (4,651,933)	\$ (6,699,150)	\$ (10,038,064)		
116	Transfer of Connection Fees				\$ 1,489,000	\$ 1,485,000	\$ 1,197,000	\$ 1,137,000	\$ 1,137,000	\$ 569,000	\$ 569,000	\$ 569,000	\$ 569,000	\$ 569,000		
117	Use of Funds:															
118	Debt Service															
119	Transfer of Any "Excess" Operating Funds	\$ 369,643	\$ 37,118	\$ 610,458												
120	\$3.7 M VRA 2006 and 2000 (P&I)	\$ (136,668)	\$ (127,975)	\$ (137,672)	\$ (198,738)	\$ (198,034)	\$ (199,136)	\$ (197,217)	\$ (195,042)	\$ (199,919)	\$ (196,847)	\$ (196,217)	\$ (197,914)	\$ (194,539)		
121	\$2.59 M VRA 2007A VCCW (P&I)	\$ (42,715)	\$ (97,772)	\$ (63,908)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
122	Capital Projects:															
123	Huguenot Hills Water	\$ -	\$ -	\$ -	\$ -	\$ (250,000)	\$ (2,270,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
124	Rivergate Watermain Loop					\$ (40,000)	\$ (10,000)									
125	West Creek-River Road Flow Control Valve	\$ -	\$ -	\$ -	\$ -	\$ (30,000)	\$ (100,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
126	Lanier Ind. Park Improvement	\$ -	\$ -	\$ -	\$ -	\$ (30,000)	\$ (260,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
127	Parke at Saddlecreek Water Main Loop	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (530,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
128	J. S. Reynolds Water Main Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (50,000)	\$ (270,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		

Appendix C. Water System – Projected Revenues and Expenses – With NO Rate Increases

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Goochland County															
2	Water System															
3	Projected Revenues and Expenses															
4	With NO RATE INCREASES															
5																
6		Actual	Budget	Budget	Projected	Projected	Projected	Projected								
7		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
129	Richmond Country Club Water Main	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (100,000)	\$ (940,000)	\$ -	\$ -	\$ -	\$ -	\$ -		
130	Water Installation - Plaza Drive	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (70,000)	\$ (400,000)	\$ -	\$ -	\$ -	\$ -	\$ -		
131	Water Installation - Lanier Park	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (80,000)	\$ (800,000)	\$ -	\$ -	\$ -	\$ -		
132	Courthouse - Fireflow	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (80,000)	\$ (700,000)	\$ -	\$ -	\$ -		
133	River Road Booster Station Upgrade	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (1,240,000)	\$ -	\$ -	\$ -		
134	Western River Rd. Communities Water Main Loop	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (800,000)	\$ -	\$ -	\$ -	\$	(15,500,000.00)
135	River Road High Pressure Zone Water Main Upgrade	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (680,000)	\$ -	\$ -	\$ -		
136	West Oak Water Main Loop	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (640,000)	\$ -	\$ -	\$ -		
137	River Road Low Pressure Zone Water Main Upgrade	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (200,000)	\$ (1,020,000)	\$ -	\$ -		
138	CH Elevated Storage Tank Mixer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (110,000)	\$ -	\$ -	\$ -		
139	Water Installation - St Matthews Lane (No. Area)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (90,000)	\$ (900,000)	\$ -	\$ -		
140	Water Installation - Hermitage Country Club	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (80,000)	\$ (500,000)	\$ -	\$ -		
141	Hockett Road Water Main	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (3,470,000)	\$ -	\$ -		
142	River Road Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (240,000)	\$ (2,000,000)	\$ -		
143	Lanier Industrial Park Elevated Water Storage Tank	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (2,830,000)		
144	Ending Balance	\$ 190,260	\$ (188,629)	408,878	1,290,262	2,227,228	5,092	504,875	26,833	(484,086)	(4,651,933)	(6,699,150)	(10,038,064)	(14,493,603)		
145																
163																



APPENDIX D.

Appendix D.

Water System – Revised Revenues and Expenses – With 5% Rate Increases



Appendix D. Water System - Revised Revenues and Expenses with 5% Increases

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Gochland County															
2	Water System															
3	Projected Revenues and Expenses															
4	With Projected Rate Increases 2019 - 2023															
5	Revised Jan 2018															
6		Actual	Budget	Budget	Projected											
7		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
8																
9	Revenue:															
10	Revenue from Water Sales	\$ 1,745,927	\$ 1,675,000	\$ 2,100,000	\$ 2,433,524	\$ 2,794,508	\$ 3,136,896	\$ 3,495,905	\$ 3,872,863	\$ 3,974,365	\$ 4,075,867	\$ 4,177,369	\$ 4,278,871	\$ 4,380,373		
11																
12	New Connections (# per year)															
13	Residential Connections															
14	288 area (1,400 homes over 5 years)				280	280	280	280	280							
15	Parkside (75 homes over 2 years)				38	37	-	-	-							
16	Kinloch (70 homes over 2-3 years)				35	35	-	-	-							
17	Tuckahoe Creek Subdivision (45 homes over 2-3 years)				15	15	15	-	-							
18	Courthouse Area (2 homes per year)				2	2	2	2	2	2	2	2	2	2		
19	Total Residential				370	369	297	282	282	140	140	140	140	140		
20	Non-Residential Connections (5/8 in meter)				3											
21																
22	Projected Increases:															
23	Bi-Monthly Rates and Revenue from Rates				5.0%	5.0%	5.0%	5.0%	5.0%							
24	Residential (Average Usage 15,000 Bi-Monthly)			\$ 97.20	\$ 102.06	\$ 107.16	\$ 112.52	\$ 118.15	\$ 118.15	\$ 118.15	\$ 118.15	\$ 118.15	\$ 118.15	\$ 118.15		
25	Non-Residential (Average Usage 9,500 Bi-Monthly)			\$ 103.22	\$ 108.38	\$ 113.80	\$ 119.49	\$ 125.46	\$ 125.46	\$ 125.46	\$ 125.46	\$ 125.46	\$ 125.46	\$ 125.46		
26	Annual Revenue from New Customers				\$ 228,524	\$ 239,307	\$ 202,664	\$ 202,163	\$ 202,163	\$ 101,502						
27																
28	Increase in Gallons Sold				33,471,000	33,381,000	26,901,000	25,551,000	25,551,000	12,771,000	12,771,000	12,771,000	12,771,000	12,771,000		
29																
30	Revenue from Connection Fees															
31	Residential Connection Fee				\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000		
32	New Non-Residential (5/8 inch meter)				\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000		
33	Revenue from Connection Fees				\$ 1,489,000	\$ 1,485,000	\$ 1,197,000	\$ 1,137,000	\$ 1,137,000	\$ 569,000						
34																
35																
36	Connection Fees	\$ 462,558	\$ 180,000	\$ 360,000	\$ 1,489,000	\$ 1,485,000	\$ 1,197,000	\$ 1,137,000	\$ 1,137,000	\$ 569,000	\$ 569,000	\$ 569,000	\$ 569,000	\$ 569,000		
37	Penalty and Interest	\$ 5,947	\$ 3,825	\$ 3,825	\$ 4,867	\$ 5,589	\$ 6,274	\$ 6,992	\$ 7,746	\$ 7,949	\$ 8,152	\$ 8,355	\$ 8,558	\$ 8,761	0.2%	of water sales
38	Lease Payments Water Tank	\$ 56,723	\$ 48,000	\$ 48,000	\$ 48,000	\$ 48,000	\$ 48,000	\$ 48,000	\$ 48,000	\$ 48,000	\$ 48,000	\$ 48,000	\$ 48,000	\$ 48,000		
39	Total Revenue	\$ 2,271,154	\$ 1,906,825	\$ 2,511,825	\$ 3,975,391	\$ 4,333,097	\$ 4,388,170	\$ 4,687,896	\$ 5,065,609	\$ 4,599,314	\$ 4,701,019	\$ 4,802,724	\$ 4,904,429	\$ 5,006,134		
40																
41	Total Revenue less Connection Fees = Operating Revenue (after 2018)	\$ 2,271,154	\$ 1,906,825	\$ 2,511,825	\$ 2,486,391	\$ 2,848,097	\$ 3,191,170	\$ 3,550,896	\$ 3,928,609	\$ 4,030,314	\$ 4,132,019	\$ 4,233,724	\$ 4,335,429	\$ 4,437,134		
42																
43	Expenses:															
44	Salary	\$ 203,398	\$ 224,400	\$ 237,595	\$ 242,347	\$ 274,694	\$ 280,187	\$ 285,791	\$ 291,507	\$ 297,337	\$ 303,284	\$ 309,350	\$ 315,537	\$ 321,847	2.0%	each year after 2018 / add 50% of \$55,000 salary in FY20
45	Overtime	\$ -	\$ 1,530	\$ 1,530	\$ 1,561	\$ 1,592	\$ 1,624	\$ 1,656	\$ 1,689	\$ 1,723	\$ 1,757	\$ 1,793	\$ 1,828	\$ 1,865	2.0%	each year after 2018
46	Salary-Part Time	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
47	Bonus	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
48	FICA	\$ 14,911	\$ 17,167	\$ 18,293	\$ 18,903	\$ 21,412	\$ 21,840	\$ 22,277	\$ 22,723	\$ 23,177	\$ 23,641	\$ 24,114	\$ 24,596	\$ 25,088	7.8%	of salary and overtime
49	VRS	\$ 20,898	\$ 20,196	\$ 21,098	\$ 21,708	\$ 24,589	\$ 25,081	\$ 25,583	\$ 26,094	\$ 26,616	\$ 27,149	\$ 27,692	\$ 28,245	\$ 28,810	8.9%	of salary and overtime
50	Health	\$ 31,700	\$ 32,182	\$ 45,201	\$ 46,331	\$ 47,489	\$ 48,676	\$ 49,893	\$ 51,141	\$ 52,419	\$ 53,730	\$ 55,073	\$ 56,450	\$ 57,861	2.5%	each year after 2018
51	Life Insurance	\$ 2,302	\$ 2,670	\$ 3,113	\$ 3,171	\$ 3,592	\$ 3,664	\$ 3,737	\$ 3,812	\$ 3,888	\$ 3,966	\$ 4,045	\$ 4,126	\$ 4,208	1.3%	of salary and overtime
52	Workman's Comp	\$ 2,962	\$ 3,519	\$ 4,066	\$ 4,146	\$ 4,697	\$ 4,791	\$ 4,887	\$ 4,984	\$ 5,084	\$ 5,186	\$ 5,289	\$ 5,395	\$ 5,503	1.7%	of salary and overtime
53	Professional Services	\$ 51,606	\$ 86,700	\$ 81,600	\$ 83,232	\$ 84,897	\$ 86,595	\$ 88,326	\$ 90,093	\$ 91,895	\$ 93,733	\$ 95,607	\$ 97,520	\$ 99,470	2.0%	each year after 2018
54	Labor Charges-Vehicle	\$ 46	\$ 510	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
55	Repairs & Maintenance	\$ 55,628	\$ 89,250	\$ 58,650	\$ 59,530	\$ 60,423	\$ 61,329	\$ 62,249	\$ 63,183	\$ 64,130	\$ 65,092	\$ 66,069	\$ 67,060	\$ 68,066	1.5%	each year after 2018
56	Contracted Services	\$ 111,700	\$ 76,500	\$ 76,500	\$ 77,648	\$ 78,812	\$ 79,994	\$ 81,194	\$ 82,412	\$ 83,648	\$ 84,903	\$ 86,177	\$ 87,469	\$ 88,781	1.5%	each year after 2018
57	Printing	\$ 1,346	\$ 1,377	\$ 1,377	\$ 1,398	\$ 1,419	\$ 1,440	\$ 1,461	\$ 1,483	\$ 1,506	\$ 1,528	\$ 1,551	\$ 1,574	\$ 1,598	1.5%	each year after 2018
58	Advertising	\$ 15	\$ 510	\$ 26	\$ 26	\$ 26	\$ 26	\$ 27	\$ 27	\$ 27	\$ 27	\$ 28	\$ 28	\$ 28	1.0%	each year after 2018
59	Software Maintenance Contracts	\$ 1,753	\$ 16,830	\$ 10,200	\$ 10,302	\$ 10,405	\$ 10,509	\$ 10,614	\$ 10,720	\$ 10,828	\$ 10,936	\$ 11,045	\$ 11,156	\$ 11,267	1.0%	each year after 2018
60	Electrical Services	\$ 15,169	\$ 81,600	\$ 83,232	\$ 84,064	\$ 84,905	\$ 85,754	\$ 86,612	\$ 87,478	\$ 88,352	\$ 89,236	\$ 90,128	\$ 91,030	\$ 91,940	1.0%	each year after 2018
61	Postage	\$ 3,183	\$ 2,295	\$ 3,060	\$ 3,091	\$ 3,122	\$ 3,153	\$ 3,184	\$ 3,216	\$ 3,248	\$ 3,281	\$ 3,314	\$ 3,347	\$ 3,380	1.0%	each year after 2018
62	Telecommunication	\$ 5,789	\$ 16,830	\$ 8,160	\$ 8,242	\$ 8,324	\$ 8,407	\$ 8,491	\$ 8,576	\$ 8,662	\$ 8,749	\$ 8,836	\$ 8,924	\$ 9,014	1.0%	each year after 2018
63	Software/License-Non Capital	\$ 2,423	\$ 3,570	\$ 7,650	\$ 7,727	\$ 7,804	\$ 7,882	\$ 7,961	\$ 8,040	\$ 8,121	\$ 8,202	\$ 8,284	\$ 8,367	\$ 8,450	1.0%	each year after 2018
64	Office Supplies	\$ 3,474	\$ 1,530	\$ 2,295	\$ 2,318	\$ 2,341	\$ 2,365	\$ 2,388	\$ 2,412	\$ 2,436	\$ 2,461	\$ 2,485	\$ 2,510	\$ 2,535	1.0%	each year after 2018
65	Repair & Maintenance Supplies	\$ 27,716	\$ 73,950	\$ 28,050	\$ 28,331	\$ 28,614	\$ 28,900	\$ 29,189	\$ 29,481	\$ 29,776	\$ 30,073	\$ 30,374	\$ 30,678	\$ 30,985	1.0%	each year after 2018
66	Vehicle-Powered Equipment Supplies	\$ 6,370	\$ 2,040	\$ 6,120	\$ 6,181	\$ 6,243	\$ 6,305	\$ 6,368	\$ 6,432	\$ 6,497	\$ 6,561	\$ 6,627	\$ 6,693	\$ 6,760	1.0%	each year after 2018
67	Uniforms/Safety Equipment	\$ 1,147	\$ 2,040	\$ 1,530	\$ 1,545	\$ 1,561	\$ 1,576	\$ 1,592	\$ 1,608	\$ 1,624	\$ 1,640	\$ 1,657	\$ 1,673	\$ 1,690	1.0%	each year after 2018

Appendix D. Water System - Revised Revenues and Expenses with 5% Increases

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Goochland County															
2	Water System															
3	Projected Revenues and Expenses															
4	With Projected Rate Increases 2019 - 2023															
5	Revised Jan 2018															
6		Actual	Budget	Budget	Projected											
7		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
68	Books & Subscriptions	\$ 26	\$ 510	\$ 102	\$ 103	\$ 104	\$ 105	\$ 106	\$ 107	\$ 108	\$ 109	\$ 110	\$ 112	\$ 113	1.0%	each year after 2018
69	Subtotal	\$ 563,564	\$ 757,705	\$ 699,447	\$ 711,901	\$ 757,063	\$ 770,204	\$ 783,587	\$ 797,219	\$ 811,103	\$ 825,243	\$ 839,647	\$ 854,317	\$ 869,260		
70																
71	Henrico Water Purchases															
72	Capacity Rate (\$ per month)	\$15,600 / \$16,292	\$16,292 / \$21,791													
73	Water Capacity Charges	\$ 191,352	\$ 222,999		\$ 231,919	\$ 241,196	\$ 250,844	\$ 260,877	\$ 271,312	\$ 282,165	\$ 293,451	\$ 305,190	\$ 317,397	\$ 330,093	4.0%	
74	Water Charge:															
75	CCF	280,919	366,986	389,005.16	433,504	477,883	513,600	547,513	581,425	598,255	615,085	631,915	648,517	665,118		
76	Annual Increase			6%	10%	9%	7%	6%	6%	3%	3%	3%	3%	2%		
77	Rate	1.91 / 1.86	1.86 / 2.04	\$ 2.04	\$ 2.08	\$ 2.12	\$ 2.16	\$ 2.21	\$ 2.25	\$ 2.30	\$ 2.34	\$ 2.39	\$ 2.44	\$ 2.49	2.0%	
78	CCF X Rate	\$ 529,532	\$ 708,471	\$ 793,571	\$ 902,035	\$ 1,014,266	\$ 1,111,874	\$ 1,208,996	\$ 1,309,558	\$ 1,374,414	\$ 1,441,341	\$ 1,510,394	\$ 1,581,076	\$ 1,653,981		
79	Total (Capacity Charge plus Water Charge)	\$ 720,884	\$ 931,470	\$ 793,571	\$ 1,133,954	\$ 1,255,462	\$ 1,362,718	\$ 1,469,874	\$ 1,580,871	\$ 1,656,579	\$ 1,734,792	\$ 1,815,584	\$ 1,898,473	\$ 1,984,074		
80																
81	DOC															
82	Rate (\$ per 1,000 gallons)	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50		
83	Gallons	21,255,333	32,000,000	26,666,667	26,846,667	27,026,667	27,206,667	27,386,667	27,566,667	27,746,667	27,926,667	28,106,667	28,286,667	28,466,667		
84	Gallons X Rate (/1000)	\$ 31,883	\$ 48,000	\$ 40,000	\$ 40,270	\$ 40,540	\$ 40,810	\$ 41,080	\$ 41,350	\$ 41,620	\$ 41,890	\$ 42,160	\$ 42,430	\$ 42,700		
85																
86	Henrico Water Purchases	\$ 760,225	\$ 900,000	\$ 900,000	\$ 1,133,954	\$ 1,255,462	\$ 1,362,718	\$ 1,469,874	\$ 1,580,871	\$ 1,656,579	\$ 1,734,792	\$ 1,815,584	\$ 1,898,473	\$ 1,984,074		
87	DOC Water Purchases	\$ 31,883	\$ 48,000	\$ 40,000	\$ 40,270	\$ 40,540	\$ 40,810	\$ 41,080	\$ 41,350	\$ 41,620	\$ 41,890	\$ 42,160	\$ 42,430	\$ 42,700		
88	Computer Equipment-Non Capital	\$ 447	\$ 2,040	\$ 1,785	\$ 1,803	\$ 1,821	\$ 1,839	\$ 1,857	\$ 1,876	\$ 1,895	\$ 1,914	\$ 1,933	\$ 1,952	\$ 1,972	1.0%	each year after 2018
89	Furniture & Fixtures	\$ -	\$ 1,530	\$ 1,530	\$ 1,545	\$ 1,561	\$ 1,576	\$ 1,592	\$ 1,608	\$ 1,624	\$ 1,640	\$ 1,657	\$ 1,673	\$ 1,690	1.0%	each year after 2018
90	Equipment-Machinery-Non Capital	\$ 36,476	\$ 25,500	\$ 35,700	\$ 36,057	\$ 36,418	\$ 36,782	\$ 37,150	\$ 37,521	\$ 37,896	\$ 38,275	\$ 38,658	\$ 39,045	\$ 39,435	1.0%	each year after 2018
91	Travel Expenses- Education/Training	\$ 406	\$ 1,275	\$ 1,785	\$ 1,803	\$ 1,821	\$ 1,839	\$ 1,857	\$ 1,876	\$ 1,895	\$ 1,914	\$ 1,933	\$ 1,952	\$ 1,972	1.0%	each year after 2018
92	Education/Training-Tuition, Reg	\$ 2,837	\$ 1,275	\$ 2,550	\$ 2,576	\$ 2,601	\$ 2,627	\$ 2,654	\$ 2,680	\$ 2,707	\$ 2,734	\$ 2,761	\$ 2,789	\$ 2,817	1.0%	each year after 2018
93	Dues & Membership	\$ 963	\$ 510	\$ 1,020	\$ 1,030	\$ 1,041	\$ 1,051	\$ 1,061	\$ 1,072	\$ 1,083	\$ 1,094	\$ 1,105	\$ 1,116	\$ 1,127	1.0%	each year after 2018
94	Waterworks Operation Fee	\$ 11,005	\$ 6,500	\$ 7,300	\$ 7,300	\$ 7,300	\$ 7,300	\$ 7,300	\$ 7,300	\$ 7,300	\$ 7,300	\$ 7,300	\$ 7,300	\$ 7,300	0.0%	each year after 2018
95	Vehicle-Fuel	\$ 4,414	\$ 7,140	\$ 4,590	\$ 4,636	\$ 4,682	\$ 4,729	\$ 4,776	\$ 4,824	\$ 4,872	\$ 4,921	\$ 4,970	\$ 5,020	\$ 5,070	1.0%	each year after 2018
96	Machinery & Equipment	\$ 15,287	\$ 17,850	\$ 15,300	\$ 15,453	\$ 15,608	\$ 15,764	\$ 15,921	\$ 16,080	\$ 16,241	\$ 16,404	\$ 16,568	\$ 16,733	\$ 16,901	1.0%	each year after 2018
97	Motor Vehicles And Equipment	\$ 13,471	\$ 13,260	\$ 15,300	\$ 15,453	\$ 15,608	\$ 15,764	\$ 15,921	\$ 16,080	\$ 16,241	\$ 16,404	\$ 16,568	\$ 16,733	\$ 16,901	1.0%	each year after 2018
98	Lease/Rent of Equipment	\$ 1,308	\$ 1,020	\$ 3,060	\$ 3,091	\$ 3,122	\$ 3,153	\$ 3,184	\$ 3,216	\$ 3,248	\$ 3,281	\$ 3,314	\$ 3,347	\$ 3,380	1.0%	each year after 2018
99	Lease- Postage Meter	\$ 137	\$ 102	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	1.0%	each year after 2018
100	Total	\$ 1,442,422	\$ 1,783,707	\$ 1,729,367	\$ 1,976,872	\$ 2,144,645	\$ 2,266,155	\$ 2,387,816	\$ 2,513,574	\$ 2,604,304	\$ 2,697,805	\$ 2,794,156	\$ 2,892,881	\$ 2,994,598		
101																
102	Transfer to F56-Utility Capital	\$ 459,089	\$ 86,000	\$ 172,000	\$ 172,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
103	Transfer to R&R Fund (Goal \$1.04 M/yr.)	\$ -	\$ -	\$ -	\$ 330,000	\$ 700,000	\$ 900,000	\$ 950,000	\$ 1,035,110	\$ 1,035,110	\$ 1,035,110	\$ 1,035,110	\$ 1,035,110	\$ 1,035,110		reduced contributions in first 4 years
104	Total Expenses	\$ 1,901,512	\$ 1,869,707	\$ 1,901,367	\$ 2,478,872	\$ 2,844,645	\$ 3,166,155	\$ 3,337,816	\$ 3,548,684	\$ 3,639,414	\$ 3,732,915	\$ 3,829,266	\$ 3,927,991	\$ 4,029,708		
105																
106	Operating Revenue Less Expenses	\$ 369,643	\$ 37,118	\$ 610,458	\$ 7,519	\$ 3,451	\$ 25,015	\$ 213,081	\$ 379,925	\$ 390,900	\$ 399,104	\$ 404,458	\$ 407,439	\$ 407,426		
107																
108	Renewal and Replacement Fund															
109	Beginning Balance			\$ -	\$ -	\$ 330,000	\$ 1,030,000	\$ 1,930,000	\$ 2,880,000	\$ 3,915,110	\$ 4,950,220	\$ 5,985,330	\$ 7,020,440	\$ 8,055,550		
110	Additions			\$ -	\$ 330,000	\$ 700,000	\$ 900,000	\$ 950,000	\$ 1,035,110	\$ 1,035,110	\$ 1,035,110	\$ 1,035,110	\$ 1,035,110	\$ 1,035,110		
111	Uses			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
112	Ending Balance			\$ -	\$ 330,000	\$ 1,030,000	\$ 1,930,000	\$ 2,880,000	\$ 3,915,110	\$ 4,950,220	\$ 5,985,330	\$ 7,020,440	\$ 8,055,550	\$ 9,090,660		
113																
114	Capital Fund:															
115	Beginning Capital Balance					\$ 1,297,781	\$ 2,238,198	\$ 41,078	\$ 753,941	\$ 655,824	\$ -	\$ -	\$ -	\$ -		
116	Transfer of Connection Fees				\$ 1,489,000	\$ 1,485,000	\$ 1,197,000	\$ 1,137,000	\$ 1,137,000	\$ 569,000	\$ 569,000	\$ 569,000	\$ 569,000	\$ 569,000		
117	Use of Funds:															
118	Debt Service															
119	Transfer of Any "Excess" Operating Funds	\$ 369,643	\$ 37,118	\$ 610,458	\$ 7,519	\$ 3,451	\$ 25,015	\$ 213,081	\$ 379,925	\$ 390,900	\$ 399,104	\$ 404,458	\$ 407,439	\$ 407,426		
120	\$3.7 M VRA 2006 and 2000 (P&I)	\$ (136,668)	\$ (127,975)	\$ (137,672)	\$ (198,738)	\$ (198,034)	\$ (199,136)	\$ (197,217)	\$ (195,042)	\$ (199,919)	\$ (196,847)	\$ (196,217)	\$ (197,914)	\$ (194,539)		
121	\$2.59 M VRA 2007A VCCW (P&I)	\$ (42,715)	\$ (97,772)	\$ (63,908)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
122	Capital Projects:															
123	Huguenot Hills Water	\$ -	\$ -	\$ -	\$ -	\$ (250,000)	\$ (2,270,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
124	Rivergate Watermain Loop					\$ (40,000)	\$ (10,000)									
125	West Creek-River Road Flow Control Valve	\$ -	\$ -	\$ -	\$ -	\$ (30,000)	\$ (100,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
126	Lanier Ind. Park Improvement	\$ -	\$ -	\$ -	\$ -	\$ (30,000)	\$ (260,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
127	Parke at Saddlecreek Water Main Loop	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (530,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
128	J. S. Reynolds Water Main Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (50,000)	\$ (270,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		

Appendix D. Water System - Revised Revenues and Expenses with 5% Increases

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Goochland County															
2	Water System															
3	Projected Revenues and Expenses															
4	With Projected Rate Increases 2019 - 2023															
5	Revised Jan 2018															
6		Actual	Budget	Budget	Projected	Projected	Projected	Projected								
7		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
129	Richmond Country Club Water Main	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (100,000)	\$ (940,000)	\$ -	\$ -	\$ -	\$ -	\$ -		
130	Water Installation - Plaza Drive	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (70,000)	\$ (400,000)	\$ -	\$ -	\$ -	\$ -	\$ -		
131	Water Installation - Lanier Park	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (80,000)	\$ (800,000)	\$ -	\$ -	\$ -	\$ -		
132	Courthouse - Fireflow	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (80,000)	\$ (700,000)	\$ -	\$ -	\$ -		
133	River Road Booster Station Upgrade	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (1,240,000)	\$ -	\$ -	\$ -		
134	Western River Rd. Communities Water Main Loop	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (800,000)	\$ -	\$ -	\$ -		
135	River Road High Pressure Zone Water Main Upgrad	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (680,000)	\$ -	\$ -	\$ -		
136	West Oak Water Main Loop	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (640,000)	\$ -	\$ -	\$ -		
137	River Road Low Pressure Zone Water Main Upgrad	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (200,000)	\$ (1,020,000)	\$ -	\$ -		
138	CH Elevated Storage Tank Mixer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (110,000)	\$ -	\$ -	\$ -		
139	Water Installation - St Matthews Lane (No. Area)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (90,000)	\$ (900,000)	\$ -	\$ -		
140	Water Installation - Hermitage Country Club	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (80,000)	\$ (500,000)	\$ -	\$ -		
141	Hockett Road Water Main	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (3,470,000)	\$ -		
142	River Road Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (240,000)	\$ (2,000,000)		
143	Lanier Industrial Park Elevated Water Storage Tank	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (2,830,000)		
144	Ending Balance	\$ 190,260	\$ (188,629)	408,878	1,297,781	2,238,198	41,078	753,941	655,824	535,805	(3,768,743)	(1,642,759)	(2,931,475)	(4,048,113)		



APPENDIX E.

Appendix E.

Sewer System – Projected Revenues and Expenses – With NO Rate
Increases

Appendix E. Sewer System – Projected Revenues and Expenses – With NO Rate Increases

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Goochland County															
2	Sewer System															
3	Projected Revenues and Expenses															
4	With Projected Rate Increases 2019 - 2023															
5																
6		Actual	Budget	Budget	Projected											
7		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
8																
9	Revenue:															
10	Revenue from Sewer Sales	\$ 1,381,897	\$ 1,425,000	\$ 1,325,000	\$ 1,608,173	\$ 1,948,939	\$ 2,176,792	\$ 2,393,278	\$ 2,609,765	\$ 2,718,644	\$ 2,827,523	\$ 2,936,401	\$ 3,045,280	\$ 3,154,159		
11	Henrico Cost Sharing	\$ 1,882,410	\$ 1,625,000	\$ 1,425,000	\$ 1,338,797	\$ 1,365,573	\$ 1,392,884	\$ 1,420,742	\$ 1,449,157	\$ 1,478,140	\$ 1,507,702	\$ 1,537,857	\$ 1,568,614	\$ 1,599,986		based on 78% of Repairs and maintenance and 95% of the
12	New Connections (# per year)															
13	Residential Connections															
14	288 area (1,400 homes over 5 years)				280	280	280	280	280							
15	Parkside (75 homes over 2 years)				38	37	-	-	-							
16	Kinloch (70 homes over 2-3 years)				35	35	-	-	-							
17	TC Subdivision (45 homes over 2-3 years)				15	15	15	-	-							
18	Courthouse Area (2 homes per year)				2	2	2	2	2	2	2	2	2	2		
19	Hickory Haven/Samary Forest				-	77	-	-	-	-	-	-	-	-		
20	Total Residential				370	446	297	282	282	140	140	140	140	140		
21	Non-Residential Connections (5/8 in meter)				3											
22																
23	Annual Rate Increase:															
24	Bi-Monthly Rates and Revenue from Rates															
25	Residential (Average Usage 15,000 bi-M)			\$ 126.30	\$ 126.30	\$ 126.30	\$ 126.30	\$ 126.30	\$ 126.30	\$ 126.30	\$ 126.30	\$ 126.30	\$ 126.30	\$ 126.30		
26	Non-Residential (Average Usage 9,500 bi-M)			\$ 154.83	\$ 154.83	\$ 154.83	\$ 154.83	\$ 154.83	\$ 154.83	\$ 154.83	\$ 154.83	\$ 154.83	\$ 154.83	\$ 154.83		
27	Annual Revenue from New Customers				\$ 283,173	\$ 340,766	\$ 227,853	\$ 216,486	\$ 216,486	\$ 108,879						
28																
29	Estimated Increase in Gallons				33,471,000	40,311,000	26,901,000	25,551,000	25,551,000	12,771,000	12,771,000	12,771,000	12,771,000	12,771,000		
30	convert to CCF				0.0013368	0.0013368	0.0013368	0.0013368	0.0013368	0.0013368	0.0013368	0.0013368	0.0013368	0.0013368		
31	CCF				44,744	53,888	35,961	34,157	34,157	17,072	17,072	17,072	17,072	17,072		
32																
33	Revenue from Connection Fees															
34	Residential Connection Fee				\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000		
35	New Non-Residential (5/8 inch meter)				\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000		
36	Revenue from Connection Fees				\$ 2,232,000	\$ 2,688,000	\$ 1,794,000	\$ 1,704,000	\$ 1,704,000	\$ 852,000						
37																
38																
39	Connection Fees	\$ 693,836	\$ 270,000	\$ 540,000	\$ 2,232,000	\$ 2,688,000	\$ 1,794,000	\$ 1,704,000	\$ 1,704,000	\$ 852,000	\$ 852,000	\$ 852,000	\$ 852,000	\$ 852,000		
40	Penalty and Interest	\$ 5,713	\$ 3,675	\$ 3,675	\$ 4,825	\$ 5,847	\$ 6,530	\$ 7,180	\$ 7,829	\$ 8,156	\$ 8,483	\$ 8,809	\$ 9,136	\$ 9,462	0.3%	
41	Total Revenue	\$ 3,963,856	\$ 3,323,675	\$ 3,293,675	\$ 5,183,794	\$ 6,008,358	\$ 5,370,206	\$ 5,525,200	\$ 5,770,751	\$ 5,056,939	\$ 5,195,708	\$ 5,335,067	\$ 5,475,030	\$ 5,615,608		
42																
43	Total Revenue less Connection Fees / Operating Revenue (after 2018)	\$ 3,963,856	\$ 3,323,675	\$ 3,293,675	\$ 2,951,794	\$ 3,320,358	\$ 3,576,206	\$ 3,821,200	\$ 4,066,751	\$ 4,204,939	\$ 4,343,708	\$ 4,483,067	\$ 4,623,030	\$ 4,763,608		
44																
45	Expenses:															
46	Salary	\$ 195,422	\$ 215,600	\$ 228,277	\$ 232,843	\$ 265,000	\$ 270,300	\$ 275,706	\$ 281,220	\$ 286,844	\$ 292,581	\$ 298,433	\$ 304,401	\$ 310,489	2.0%	each year after 2018 / add 50% of \$55,000 salary in FY20
47	Overtime	\$ -	\$ 1,470	\$ 1,470	\$ 1,499	\$ 1,529	\$ 1,560	\$ 1,591	\$ 1,623	\$ 1,655	\$ 1,689	\$ 1,722	\$ 1,757	\$ 1,792	2.0%	each year after 2018
48	FICA	\$ 14,327	\$ 16,493	\$ 17,576	\$ 18,279	\$ 20,789	\$ 21,205	\$ 21,629	\$ 22,062	\$ 22,503	\$ 22,953	\$ 23,412	\$ 23,880	\$ 24,358	7.8%	of salary and overtime
49	VRS	\$ 20,079	\$ 19,404	\$ 20,271	\$ 20,856	\$ 23,721	\$ 24,196	\$ 24,679	\$ 25,173	\$ 25,676	\$ 26,190	\$ 26,714	\$ 27,248	\$ 27,793	8.9%	of salary and overtime
50	Health	\$ 30,456	\$ 30,919	\$ 43,428	\$ 44,514	\$ 45,627	\$ 46,767	\$ 47,937	\$ 49,135	\$ 50,363	\$ 51,622	\$ 52,913	\$ 54,236	\$ 55,592	2.5%	each year after 2018
51	Life Insurance	\$ 2,211	\$ 2,566	\$ 2,990	\$ 3,046	\$ 3,465	\$ 3,534	\$ 3,605	\$ 3,677	\$ 3,750	\$ 3,826	\$ 3,902	\$ 3,980	\$ 4,060	1.3%	of salary and overtime
52	Workman's Comp	\$ 2,846	\$ 3,381	\$ 3,907	\$ 3,984	\$ 4,531	\$ 4,622	\$ 4,714	\$ 4,808	\$ 4,904	\$ 5,003	\$ 5,103	\$ 5,205	\$ 5,309	1.7%	of salary and overtime
53	Professional Services	\$ 49,583	\$ 83,300	\$ 78,400	\$ 79,968	\$ 81,567	\$ 83,199	\$ 84,863	\$ 86,560	\$ 88,291	\$ 90,057	\$ 91,858	\$ 93,695	\$ 95,569	2.0%	
54	Labor Charges-Vehicle	\$ 45	\$ 490	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
55	Repairs & Maintenance	\$ 53,446	\$ 85,750	\$ 56,350	\$ 57,195	\$ 58,053	\$ 58,924	\$ 59,808	\$ 60,705	\$ 61,616	\$ 62,540	\$ 63,478	\$ 64,430	\$ 65,396	1.5%	each year after 2018

Appendix E. Sewer System – Projected Revenues and Expenses – With NO Rate Increases

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Goochland County															
2	Sewer System															
3	Projected Revenues and Expenses															
4	With Projected Rate Increases 2019 - 2023															
5																
6		Actual	Budget	Budget	Projected											
7		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
56	Contracted Services	\$ 107,320	\$ 73,500	\$ 73,500	\$ 74,603	\$ 75,722	\$ 76,857	\$ 78,010	\$ 79,180	\$ 80,368	\$ 81,574	\$ 82,797	\$ 84,039	\$ 85,300	1.5%	each year after 2018
57	Printing	\$ 1,293	\$ 1,323	\$ 1,323	\$ 1,343	\$ 1,363	\$ 1,383	\$ 1,404	\$ 1,425	\$ 1,447	\$ 1,468	\$ 1,490	\$ 1,513	\$ 1,535	1.5%	each year after 2018
58	Advertising	\$ 15	\$ 490	\$ 25	\$ 25	\$ 25	\$ 25	\$ 25	\$ 26	\$ 26	\$ 26	\$ 27	\$ 27	\$ 27	1.0%	each year after 2018
59	Software Maintenance Contracts	\$ 1,685	\$ 16,170	\$ 9,800	\$ 9,898	\$ 9,997	\$ 10,097	\$ 10,198	\$ 10,300	\$ 10,403	\$ 10,507	\$ 10,612	\$ 10,718	\$ 10,825	1.0%	each year after 2018
60	Electrical Services	\$ 14,575	\$ 78,400	\$ 79,968	\$ 80,768	\$ 81,575	\$ 82,391	\$ 83,215	\$ 84,047	\$ 84,888	\$ 85,737	\$ 86,594	\$ 87,460	\$ 88,334	1.0%	each year after 2018
61	Postage	\$ 3,058	\$ 2,205	\$ 2,940	\$ 2,969	\$ 2,999	\$ 3,029	\$ 3,059	\$ 3,090	\$ 3,121	\$ 3,152	\$ 3,184	\$ 3,215	\$ 3,248	1.0%	each year after 2018
62	Telecommunication	\$ 5,562	\$ 16,170	\$ 7,840	\$ 7,918	\$ 7,998	\$ 8,078	\$ 8,158	\$ 8,240	\$ 8,322	\$ 8,406	\$ 8,490	\$ 8,574	\$ 8,660	1.0%	each year after 2018
63	Software/License-Non Capital	\$ 2,328	\$ 3,430	\$ 7,350	\$ 7,424	\$ 7,498	\$ 7,573	\$ 7,648	\$ 7,725	\$ 7,802	\$ 7,880	\$ 7,959	\$ 8,039	\$ 8,119	1.0%	each year after 2018
64	Office Supplies	\$ 3,338	\$ 1,470	\$ 2,205	\$ 2,227	\$ 2,249	\$ 2,272	\$ 2,295	\$ 2,317	\$ 2,341	\$ 2,364	\$ 2,388	\$ 2,412	\$ 2,436	1.0%	each year after 2018
65	Repair & Maintenance Supplies	\$ 26,630	\$ 71,050	\$ 26,950	\$ 27,220	\$ 27,492	\$ 27,767	\$ 28,044	\$ 28,325	\$ 28,608	\$ 28,894	\$ 29,183	\$ 29,475	\$ 29,770	1.0%	each year after 2018
66	Vehicle-Powered Equipment Supplies	\$ 6,121	\$ 1,960	\$ 5,880	\$ 5,939	\$ 5,998	\$ 6,058	\$ 6,119	\$ 6,180	\$ 6,242	\$ 6,304	\$ 6,367	\$ 6,431	\$ 6,495	1.0%	each year after 2018
67	Uniforms/Safety Equipment	\$ 1,102	\$ 1,960	\$ 1,470	\$ 1,485	\$ 1,500	\$ 1,515	\$ 1,530	\$ 1,545	\$ 1,560	\$ 1,576	\$ 1,592	\$ 1,608	\$ 1,624	1.0%	each year after 2018
68	Books & Subscriptions	\$ 25	\$ 490	\$ 98	\$ 99	\$ 100	\$ 101	\$ 102	\$ 103	\$ 104	\$ 105	\$ 106	\$ 107	\$ 108	1.0%	each year after 2018
69	Subtotal	\$ 541,463	\$ 727,992	\$ 672,018	\$ 684,101	\$ 728,798	\$ 741,452	\$ 754,340	\$ 767,466	\$ 780,836	\$ 794,453	\$ 808,323	\$ 822,450	\$ 836,839		
70																
71	Henrico Sewer															
72	Capacity charge (\$ per month)	\$12,952 / \$14,028	\$14,028 / \$13,484													
73	Sewer Capacity Charge	\$ 161,880	\$ 166,160	\$ 171,145	\$ 176,279	\$ 181,568	\$ 187,015	\$ 192,625	\$ 198,404	\$ 204,356	\$ 210,487	\$ 216,801	\$ 223,305	\$ 230,004	3.0%	per year after 2018
74	Sewer Costs:															
75	CCF	52,483	32,515	32,515	77,259	131,147	167,108	201,265	235,421	252,493	269,566	286,638	303,710	320,783		
76	Annual Increase:															
77	Rate	\$1.45 / \$1.81	\$1.81 / \$1.58	\$ 1.75	\$ 1.80	\$ 1.85	\$ 1.91	\$ 1.96	\$ 2.02	\$ 2.08	\$ 2.15	\$ 2.21	\$ 2.28	\$ 2.35	3.0%	per year after 2018
78	CCF X Rate	\$ 81,697	\$ 56,187	\$ 56,766	\$ 138,929	\$ 242,906	\$ 318,798	\$ 395,479	\$ 476,473	\$ 526,357	\$ 578,805	\$ 633,926	\$ 691,833	\$ 752,645		
79	Total (Capacity Charge plus Sewer Charge)	\$ 243,577	\$ 222,347	\$ 227,911	\$ 315,208	\$ 424,474	\$ 505,813	\$ 588,104	\$ 674,877	\$ 730,713	\$ 789,291	\$ 850,727	\$ 915,138	\$ 982,649		
80																
81	Purchase of Sewer - Henrico	\$ 266,852	\$ 205,000	\$ 234,000	\$ 315,208	\$ 424,474	\$ 505,813	\$ 588,104	\$ 674,877	\$ 730,713	\$ 789,291	\$ 850,727	\$ 915,138	\$ 982,649		
82	Purchase of Sewer-Corrections	\$ 26,996	\$ 38,000	\$ 35,000	\$ 35,350	\$ 35,704	\$ 36,061	\$ 36,421	\$ 36,785	\$ 37,153	\$ 37,525	\$ 37,900	\$ 38,279	\$ 38,662	1.0%	per year after 2018
83	Purchase of Sewer-Richmond	\$ 600,000	\$ 650,000	\$ 650,000	\$ 669,500	\$ 689,585	\$ 710,273	\$ 731,581	\$ 753,528	\$ 776,134	\$ 799,418	\$ 823,401	\$ 848,103	\$ 873,546	3.0%	per year after 2018
84	Computer Equipment-Non Capital	\$ 430	\$ 1,960	\$ 1,715	\$ 1,732	\$ 1,749	\$ 1,767	\$ 1,785	\$ 1,802	\$ 1,821	\$ 1,839	\$ 1,857	\$ 1,876	\$ 1,894	1.0%	per year after 2018
85	Furniture & Fixtures	\$ -	\$ 1,470	\$ 1,470	\$ 1,485	\$ 1,500	\$ 1,515	\$ 1,530	\$ 1,545	\$ 1,560	\$ 1,576	\$ 1,592	\$ 1,608	\$ 1,624	1.0%	per year after 2018
86	Equipment-Machinery-Non Capital	\$ 35,046	\$ 24,500	\$ 34,300	\$ 34,643	\$ 34,989	\$ 35,339	\$ 35,693	\$ 36,050	\$ 36,410	\$ 36,774	\$ 37,142	\$ 37,513	\$ 37,889	1.0%	per year after 2018
87	Travel Expenses- Education/Training	\$ 390	\$ 1,225	\$ 1,715	\$ 1,732	\$ 1,749	\$ 1,767	\$ 1,785	\$ 1,802	\$ 1,821	\$ 1,839	\$ 1,857	\$ 1,876	\$ 1,894	1.0%	per year after 2018
88	Education/Training-Tuition, Reg	\$ 2,726	\$ 1,225	\$ 2,450	\$ 2,475	\$ 2,499	\$ 2,524	\$ 2,549	\$ 2,575	\$ 2,601	\$ 2,627	\$ 2,653	\$ 2,680	\$ 2,706	1.0%	per year after 2018
89	Dues & Membership	\$ 925	\$ 490	\$ 980	\$ 990	\$ 1,000	\$ 1,010	\$ 1,020	\$ 1,030	\$ 1,040	\$ 1,051	\$ 1,061	\$ 1,072	\$ 1,083	1.0%	per year after 2018
90	Vehicle-Fuel	\$ 4,240	\$ 6,860	\$ 4,410	\$ 4,454	\$ 4,499	\$ 4,544	\$ 4,589	\$ 4,635	\$ 4,681	\$ 4,728	\$ 4,775	\$ 4,823	\$ 4,871	1.0%	per year after 2018
91	Machinery & Equipment	\$ 14,688	\$ 17,150	\$ 14,700	\$ 14,847	\$ 14,995	\$ 15,145	\$ 15,297	\$ 15,450	\$ 15,604	\$ 15,760	\$ 15,918	\$ 16,077	\$ 16,238	1.0%	per year after 2018
92	Motor Vehicles And Equipment	\$ 12,942	\$ 12,740	\$ 14,700	\$ 14,847	\$ 14,995	\$ 15,145	\$ 15,297	\$ 15,450	\$ 15,604	\$ 15,760	\$ 15,918	\$ 16,077	\$ 16,238	1.0%	per year after 2018
93	Lease/Rent of Equipment	\$ 1,256	\$ 980	\$ 2,940	\$ 2,969	\$ 2,999	\$ 3,029	\$ 3,059	\$ 3,090	\$ 3,121	\$ 3,152	\$ 3,184	\$ 3,215	\$ 3,248	1.0%	per year after 2018
94	Lease- Postage Meter	\$ 132	\$ 98	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	1.0%	per year after 2018
95	Total	\$ 1,508,087	\$ 1,689,690	\$ 1,670,398	\$ 1,784,333	\$ 1,959,536	\$ 2,075,383	\$ 2,193,049	\$ 2,316,086	\$ 2,409,099	\$ 2,505,793	\$ 2,606,307	\$ 2,710,786	\$ 2,819,380		
96																
97	Henrico True-Up															
98	Professional Services	\$ 4,882	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
99	Repairs and Maintenance	\$ 16,483	\$ -	\$ 17,579	\$ 29,547	\$ 30,138	\$ 30,741	\$ 31,356	\$ 31,983	\$ 32,622	\$ 33,275	\$ 33,940	\$ 34,619	\$ 35,311	2%	
100	Contracted Services	\$ 71,489	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
101	Electrical Services	\$ 110,254	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
102	Telecommunication	\$ 13,342	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
103	Repair Maintenance/Supplies	\$ 45,067	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
104	Chemicals	\$ 1,374,567	\$ 1,375,000	\$ 1,385,000	\$ 1,385,000	\$ 1,412,700	\$ 1,440,954	\$ 1,469,773	\$ 1,499,169	\$ 1,529,152	\$ 1,559,735	\$ 1,590,930	\$ 1,622,748	\$ 1,655,203	2%	

Appendix E. Sewer System – Projected Revenues and Expenses – With NO Rate Increases

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Goochland County															
2	Sewer System															
3	Projected Revenues and Expenses															
4	With Projected Rate Increases 2019 - 2023															
5																
6		Actual	Budget	Budget	Projected											
7		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
105	Equip-Machinery/Non-Capital	\$ 4,749	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
106	Vehicle Fuel	\$ 1,158	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
107	Total	\$ 1,641,991	\$ 1,375,000	\$ 1,402,579	\$ 1,414,547	\$ 1,442,838	\$ 1,471,695	\$ 1,501,129	\$ 1,531,151	\$ 1,561,774	\$ 1,593,010	\$ 1,624,870	\$ 1,657,367	\$ 1,690,515		
108																
109																
110	Transfer to F56-Utility Capital	\$ 523,148	\$ 98,000	\$ 196,000	\$ 196,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
111	Transfer to R&R Fund (Goal \$1.736 M/year)	\$ -	\$ -	\$ -	\$ 1,736,000	\$ 1,736,000	\$ 1,736,000	\$ 1,736,000	\$ 1,736,000	\$ 1,736,000	\$ 1,736,000	\$ 1,736,000	\$ 1,736,000	\$ 1,736,000		
112	Total Expenses	\$ 3,673,226	\$ 3,162,690	\$ 3,268,977	\$ 5,130,880	\$ 5,138,374	\$ 5,283,078	\$ 5,430,177	\$ 5,583,237	\$ 5,706,873	\$ 5,834,803	\$ 5,967,177	\$ 6,104,154	\$ 6,245,895		
113																
114	Operating Revenue Less Expenses	\$ 290,630	\$ 160,985	\$ 24,698	\$ (2,179,086)	\$ (1,818,016)	\$ (1,706,871)	\$ (1,608,977)	\$ (1,516,486)	\$ (1,501,934)	\$ (1,491,095)	\$ (1,484,110)	\$ (1,481,124)	\$ (1,482,288)		
115																
116	Renewal and Replacement Fund															
117	Beginning Balance			\$ -	\$ -	\$ 1,736,000	\$ 3,472,000	\$ 5,208,000	\$ 6,944,000	\$ 8,680,000	\$ 10,416,000	\$ 12,152,000	\$ 13,888,000	\$ 15,624,000		
118	Additions			\$ -	\$ 1,736,000	\$ 1,736,000	\$ 1,736,000	\$ 1,736,000	\$ 1,736,000	\$ 1,736,000	\$ 1,736,000	\$ 1,736,000	\$ 1,736,000	\$ 1,736,000		
119	Uses			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
120	Ending Balance			\$ -	\$ 1,736,000	\$ 3,472,000	\$ 5,208,000	\$ 6,944,000	\$ 8,680,000	\$ 10,416,000	\$ 12,152,000	\$ 13,888,000	\$ 15,624,000	\$ 17,360,000		
121																
122	Capital Fund:															
123	Beginning Capital Balance					\$ -	\$ 1,547,966	\$ 229,330	\$ 1,526,113	\$ 1,835,071	\$ 2,487,152	\$ 2,682,305	\$ (1,461,912)	\$ (807,826)		
124	Transfer of Connection Fees				\$ 1,674,000	\$ 2,016,000	\$ 1,345,500	\$ 1,704,000	\$ 1,704,000	\$ 852,000	\$ 852,000	\$ 852,000	\$ 852,000	\$ 852,000		
125	Transfer of any "Excess" Funds	\$ 290,630	\$ 160,985	\$ 24,698												
126	Use of Funds:															
127	Debt Service															
128	\$3.7 M VRA 2006 and 2000 (P&I)	\$ (136,668)	\$ (127,975)	\$ (137,672)	\$ (198,738)	\$ (198,034)	\$ (199,136)	\$ (197,217)	\$ (195,042)	\$ (199,919)	\$ (196,847)	\$ (196,217)	\$ (197,914)	\$ (194,539)		
129	\$2.59 M VRA 2007A VCCW (P&I)	\$ (42,715)	\$ (97,772)	\$ (63,908)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
130																
131	Hickory Haven and Samary Forest	\$ -	\$ -	\$ -	\$ (2,400,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
132	Huguenot Hills Sewer	\$ -	\$ -	\$ -	\$ -	\$ (270,000)	\$ (2,440,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
133	Sewer Laterals - Pond View Lane	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (25,000)	\$ (50,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
134	Sewer Installation - Plaza Drive	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (80,000)	\$ (800,000)	\$ -	\$ -	\$ -	\$ -	\$ -		
135	Sewer Installation - Biggs Drive	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (80,000)	\$ (400,000)	\$ -	\$ -	\$ -	\$ -	\$ -		
136	Sewer Installation - Broad Street to Rte 288	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (80,000)	\$ (800,000)	\$ -	\$ -		
137	Valley View Pump Station - Pump Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (380,000)	\$ -	\$ -	\$ -		
138	Courthouse Wastewater Treatment Plant	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (4,000,000)	\$ -	\$ -		
139	Ending Balance	\$ 111,247	\$ (64,761)	\$ (176,882)	\$ (924,738)	\$ 1,547,966	\$ 229,330	\$ 1,526,113	\$ 1,835,071	\$ 2,487,152	\$ 2,682,305	\$ (1,461,912)	\$ (807,826)	\$ (150,365)		
140																
156																



APPENDIX F.

Appendix F.

Sewer System – Projected Revenues and Expenses – With 6% Rate Increase

Appendix F. Sewer System – Revised Revenues and Expenses – With 6% Rate Increases

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Goochland County															
2	Sewer System															
3	Projected Revenues and Expenses															
4	With Projected Rate Increases 2019 - 2023															
5																
6		Actual	Budget	Budget	Projected											
7		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
8																
9	Revenue:															
10	Revenue from Sewer Sales	\$ 1,381,897	\$ 1,425,000	\$ 1,325,000	\$ 1,704,496	\$ 2,189,306	\$ 2,591,509	\$ 3,019,577	\$ 3,417,238	\$ 3,526,117	\$ 3,634,996	\$ 3,743,875	\$ 3,852,753	\$ 3,961,632		
11	Henrico Cost Sharing	\$ 1,882,410	\$ 1,625,000	\$ 1,425,000	\$ 1,338,797	\$ 1,365,573	\$ 1,392,884	\$ 1,420,742	\$ 1,449,157	\$ 1,478,140	\$ 1,507,702	\$ 1,537,857	\$ 1,568,614	\$ 1,599,986		based on 78% of Repairs and maintenance and 95% of the
12	New Connections (# per year)															
13	Residential Connections															
14	288 area (1,400 homes over 5 years)				280	280	280	280	280							
15	Parkside (75 homes over 2 years)				38	37	-	-	-							
16	Kinloch (70 homes over 2-3 years)				35	35	-	-	-							
17	TC Subdivision (45 homes over 2-3 years)				15	15	15	-	-							
18	Courthouse Area (2 homes per year)				2	2	2	2	2	2	2	2	2	2		
19	Hickory Haven/Samary Forest				-	77	-	-	-	-	-	-	-	-		
20	Total Residential				370	446	297	282	282	140	140	140	140	140		
21	Non-Residential Connections (5/8 in meter)				3											
22																
23	Annual Rate Increase:				6.0%	6.0%	6.0%	6.0%	6.0%							
24	Bi-Monthly Rates and Revenue from Rates															
25	Residential (Average Usage 15,000 bi-M)			\$ 126.30	\$ 133.88	\$ 141.91	\$ 150.43	\$ 159.45	\$ 126.30	\$ 126.30	\$ 126.30	\$ 126.30	\$ 126.30	\$ 126.30		
26	Non-Residential (Average Usage 9,500 bi-M)			\$ 154.83	\$ 154.83	\$ 154.83	\$ 154.83	\$ 154.83	\$ 154.83	\$ 154.83	\$ 154.83	\$ 154.83	\$ 154.83	\$ 154.83		
27	Annual Revenue from New Customers				\$ 299,996	\$ 382,540	\$ 270,845	\$ 272,578	\$ 216,486	\$ 108,879						
28																
29	Estimated Increase in Gallons				33,471,000	40,311,000	26,901,000	25,551,000	25,551,000	12,771,000	12,771,000	12,771,000	12,771,000	12,771,000		
30	convert to CCF				0.0013368	0.0013368	0.0013368	0.0013368	0.0013368	0.0013368	0.0013368	0.0013368	0.0013368	0.0013368		
31	CCF				44,744	53,888	35,961	34,157	34,157	17,072	17,072	17,072	17,072	17,072		
32																
33	Revenue from Connection Fees															
34	Residential Connection Fee				\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000		
35	New Non-Residential (5/8 inch meter)				\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000		
36	Revenue from Connection Fees				\$ 2,232,000	\$ 2,688,000	\$ 1,794,000	\$ 1,704,000	\$ 1,704,000	\$ 852,000						
37																
38																
39	Connection Fees	\$ 693,836	\$ 270,000	\$ 540,000	\$ 2,232,000	\$ 2,688,000	\$ 1,794,000	\$ 1,704,000	\$ 1,704,000	\$ 852,000	\$ 852,000	\$ 852,000	\$ 852,000	\$ 852,000		
40	Penalty and Interest	\$ 5,713	\$ 3,675	\$ 3,675	\$ 5,113	\$ 6,568	\$ 7,775	\$ 9,059	\$ 10,252	\$ 10,578	\$ 10,905	\$ 11,232	\$ 11,558	\$ 11,885	0.3%	
41	Total Revenue	\$ 3,963,856	\$ 3,323,675	\$ 3,293,675	\$ 5,280,406	\$ 6,249,446	\$ 5,786,167	\$ 6,153,377	\$ 6,580,646	\$ 5,866,835	\$ 6,005,603	\$ 6,144,963	\$ 6,284,925	\$ 6,425,503		
42																
43	Total Revenue less 75% of Connection Fees / Operating Revenue (after 2018)	\$ 3,963,856	\$ 3,323,675	\$ 3,293,675	\$ 3,606,406	\$ 4,233,446	\$ 4,440,667	\$ 4,449,377	\$ 4,876,646	\$ 5,014,835	\$ 5,153,603	\$ 5,292,963	\$ 5,432,925	\$ 5,573,503		
44																
45	Expenses:															
46	Salary	\$ 195,422	\$ 215,600	\$ 228,277	\$ 232,843	\$ 265,000	\$ 270,300	\$ 275,706	\$ 281,220	\$ 286,844	\$ 292,581	\$ 298,433	\$ 304,401	\$ 310,489	2.0%	each year after 2018 / add 50% of \$55,000 salary in FY20
47	Overtime	\$ -	\$ 1,470	\$ 1,470	\$ 1,499	\$ 1,529	\$ 1,560	\$ 1,591	\$ 1,623	\$ 1,655	\$ 1,689	\$ 1,722	\$ 1,757	\$ 1,792	2.0%	each year after 2018
48	Salary-Part Time	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
49	Bonus	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
50	FICA	\$ 14,327	\$ 16,493	\$ 17,576	\$ 18,279	\$ 20,789	\$ 21,205	\$ 21,629	\$ 22,062	\$ 22,503	\$ 22,953	\$ 23,412	\$ 23,880	\$ 24,358	7.8%	of salary and overtime
51	VRS	\$ 20,079	\$ 19,404	\$ 20,271	\$ 20,856	\$ 23,721	\$ 24,196	\$ 24,679	\$ 25,173	\$ 25,676	\$ 26,190	\$ 26,714	\$ 27,248	\$ 27,793	8.9%	of salary and overtime
52	Health	\$ 30,456	\$ 30,919	\$ 43,428	\$ 44,514	\$ 45,627	\$ 46,767	\$ 47,937	\$ 49,135	\$ 50,363	\$ 51,622	\$ 52,913	\$ 54,236	\$ 55,592	2.5%	each year after 2018
53	Life Insurance	\$ 2,211	\$ 2,566	\$ 2,990	\$ 3,046	\$ 3,465	\$ 3,534	\$ 3,605	\$ 3,677	\$ 3,750	\$ 3,826	\$ 3,902	\$ 3,980	\$ 4,060	1.3%	of salary and overtime
54	Workman's Comp	\$ 2,846	\$ 3,381	\$ 3,907	\$ 3,984	\$ 4,531	\$ 4,622	\$ 4,714	\$ 4,808	\$ 4,904	\$ 5,003	\$ 5,103	\$ 5,205	\$ 5,309	1.7%	of salary and overtime
55	Professional Services	\$ 49,583	\$ 83,300	\$ 78,400	\$ 79,968	\$ 81,567	\$ 83,199	\$ 84,863	\$ 86,560	\$ 88,291	\$ 90,057	\$ 91,858	\$ 93,695	\$ 95,569	2.0%	

Appendix F. Sewer System – Revised Revenues and Expenses – With 6% Rate Increases

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Goochland County															
2	Sewer System															
3	Projected Revenues and Expenses															
4	With Projected Rate Increases 2019 - 2023															
5																
6		Actual	Budget	Budget	Projected											
7		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
56	Labor Charges-Vehicle	\$ 45	\$ 490	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
57	Repairs & Maintenance	\$ 53,446	\$ 85,750	\$ 56,350	\$ 57,195	\$ 58,053	\$ 58,924	\$ 59,808	\$ 60,705	\$ 61,616	\$ 62,540	\$ 63,478	\$ 64,430	\$ 65,396	1.5%	each year after 2018
58	Contracted Services	\$ 107,320	\$ 73,500	\$ 73,500	\$ 74,603	\$ 75,722	\$ 76,857	\$ 78,010	\$ 79,180	\$ 80,368	\$ 81,574	\$ 82,797	\$ 84,039	\$ 85,300	1.5%	each year after 2018
59	Printing	\$ 1,293	\$ 1,323	\$ 1,323	\$ 1,343	\$ 1,363	\$ 1,383	\$ 1,404	\$ 1,425	\$ 1,447	\$ 1,468	\$ 1,490	\$ 1,513	\$ 1,535	1.5%	each year after 2018
60	Advertising	\$ 15	\$ 490	\$ 25	\$ 25	\$ 25	\$ 25	\$ 25	\$ 26	\$ 26	\$ 26	\$ 27	\$ 27	\$ 27	1.0%	each year after 2018
61	Software Maintenance Contracts	\$ 1,685	\$ 16,170	\$ 9,800	\$ 9,898	\$ 9,997	\$ 10,097	\$ 10,198	\$ 10,300	\$ 10,403	\$ 10,507	\$ 10,612	\$ 10,718	\$ 10,825	1.0%	each year after 2018
62	Electrical Services	\$ 14,575	\$ 78,400	\$ 79,968	\$ 80,768	\$ 81,575	\$ 82,391	\$ 83,215	\$ 84,047	\$ 84,888	\$ 85,737	\$ 86,594	\$ 87,460	\$ 88,334	1.0%	each year after 2018
63	Propane Gas	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
64	Postage	\$ 3,058	\$ 2,205	\$ 2,940	\$ 2,969	\$ 2,999	\$ 3,029	\$ 3,059	\$ 3,090	\$ 3,121	\$ 3,152	\$ 3,184	\$ 3,215	\$ 3,248	1.0%	each year after 2018
65	Telecommunication	\$ 5,562	\$ 16,170	\$ 7,840	\$ 7,918	\$ 7,998	\$ 8,078	\$ 8,158	\$ 8,240	\$ 8,322	\$ 8,406	\$ 8,490	\$ 8,574	\$ 8,660	1.0%	each year after 2018
66	Software/License-Non Capital	\$ 2,328	\$ 3,430	\$ 7,350	\$ 7,424	\$ 7,498	\$ 7,573	\$ 7,648	\$ 7,725	\$ 7,802	\$ 7,880	\$ 7,959	\$ 8,039	\$ 8,119	1.0%	each year after 2018
67	Office Supplies	\$ 3,338	\$ 1,470	\$ 2,205	\$ 2,227	\$ 2,249	\$ 2,272	\$ 2,295	\$ 2,317	\$ 2,341	\$ 2,364	\$ 2,388	\$ 2,412	\$ 2,436	1.0%	each year after 2018
68	Repair & Maintenance Supplies	\$ 26,630	\$ 71,050	\$ 26,950	\$ 27,220	\$ 27,492	\$ 27,767	\$ 28,044	\$ 28,325	\$ 28,608	\$ 28,894	\$ 29,183	\$ 29,475	\$ 29,770	1.0%	each year after 2018
69	Vehicle-Powered Equipment Supplies	\$ 6,121	\$ 1,960	\$ 5,880	\$ 5,939	\$ 5,998	\$ 6,058	\$ 6,119	\$ 6,180	\$ 6,242	\$ 6,304	\$ 6,367	\$ 6,431	\$ 6,495	1.0%	each year after 2018
70	Uniforms/Safety Equipment	\$ 1,102	\$ 1,960	\$ 1,470	\$ 1,485	\$ 1,500	\$ 1,515	\$ 1,530	\$ 1,545	\$ 1,560	\$ 1,576	\$ 1,592	\$ 1,608	\$ 1,624	1.0%	each year after 2018
71	Books & Subscriptions	\$ 25	\$ 490	\$ 98	\$ 99	\$ 100	\$ 101	\$ 102	\$ 103	\$ 104	\$ 105	\$ 106	\$ 107	\$ 108	1.0%	each year after 2018
72	Subtotal	\$ 541,463	\$ 727,992	\$ 672,018	\$ 684,101	\$ 728,798	\$ 741,452	\$ 754,340	\$ 767,466	\$ 780,836	\$ 794,453	\$ 808,323	\$ 822,450	\$ 836,839		
73																
74	Henrico Sewer															
75	Capacity charge (\$ per month)	\$12,952 / \$14,028	\$14,028 / \$13,484													
76	Sewer Capacity Charge	\$ 161,880	\$ 166,160	\$ 171,145	\$ 176,279	\$ 181,568	\$ 187,015	\$ 192,625	\$ 198,404	\$ 204,356	\$ 210,487	\$ 216,801	\$ 223,305	\$ 230,004	3.0%	per year after 2018
77	Sewer Costs:															
78	CCF	52,483	32,515	32,515	77,259	131,147	167,108	201,265	235,421	252,493	269,566	286,638	303,710	320,783		
79	Annual Increase:															
80	Rate	\$1.45 / \$1.81	\$1.81 / \$1.58	\$ 1.75	\$ 1.80	\$ 1.85	\$ 1.91	\$ 1.96	\$ 2.02	\$ 2.08	\$ 2.15	\$ 2.21	\$ 2.28	\$ 2.35	3.0%	per year after 2018
81	CCF X Rate	\$ 81,697	\$ 56,187	\$ 56,766	\$ 138,929	\$ 242,906	\$ 318,798	\$ 395,479	\$ 476,473	\$ 526,357	\$ 578,805	\$ 633,926	\$ 691,833	\$ 752,645		
82	Total (Capacity Charge plus Sewer Charge)	\$ 243,577	\$ 222,347	\$ 227,911	\$ 315,208	\$ 424,474	\$ 505,813	\$ 588,104	\$ 674,877	\$ 730,713	\$ 789,291	\$ 850,727	\$ 915,138	\$ 982,649		
83																
84	Purchase of Sewer - Henrico	\$ 266,852	\$ 205,000	\$ 234,000	\$ 315,208	\$ 424,474	\$ 505,813	\$ 588,104	\$ 674,877	\$ 730,713	\$ 789,291	\$ 850,727	\$ 915,138	\$ 982,649		
85	Purchase of Sewer-Corrections	\$ 26,996	\$ 38,000	\$ 35,000	\$ 35,350	\$ 35,704	\$ 36,061	\$ 36,421	\$ 36,785	\$ 37,153	\$ 37,525	\$ 37,900	\$ 38,279	\$ 38,662	1.0%	per year after 2018
86	Purchase of Sewer-Richmond	\$ 600,000	\$ 650,000	\$ 650,000	\$ 669,500	\$ 689,585	\$ 710,273	\$ 731,581	\$ 753,528	\$ 776,134	\$ 799,418	\$ 823,401	\$ 848,103	\$ 873,546	3.0%	per year after 2018
87	Computer Equipment-Non Capital	\$ 430	\$ 1,960	\$ 1,715	\$ 1,732	\$ 1,749	\$ 1,767	\$ 1,785	\$ 1,802	\$ 1,821	\$ 1,839	\$ 1,857	\$ 1,876	\$ 1,894	1.0%	per year after 2018
88	Furniture & Fixtures	\$ -	\$ 1,470	\$ 1,470	\$ 1,485	\$ 1,500	\$ 1,515	\$ 1,530	\$ 1,545	\$ 1,560	\$ 1,576	\$ 1,592	\$ 1,608	\$ 1,624	1.0%	per year after 2018
89	Equipment-Machinery-Non Capital	\$ 35,046	\$ 24,500	\$ 34,300	\$ 34,643	\$ 34,989	\$ 35,339	\$ 35,693	\$ 36,050	\$ 36,410	\$ 36,774	\$ 37,142	\$ 37,513	\$ 37,889	1.0%	per year after 2018
90	Travel Expenses- Education/Training	\$ 390	\$ 1,225	\$ 1,715	\$ 1,732	\$ 1,749	\$ 1,767	\$ 1,785	\$ 1,802	\$ 1,821	\$ 1,839	\$ 1,857	\$ 1,876	\$ 1,894	1.0%	per year after 2018
91	Education/Training-Tuition, Reg	\$ 2,726	\$ 1,225	\$ 2,450	\$ 2,475	\$ 2,499	\$ 2,524	\$ 2,549	\$ 2,575	\$ 2,601	\$ 2,627	\$ 2,653	\$ 2,680	\$ 2,706	1.0%	per year after 2018
92	Dues & Membership	\$ 925	\$ 490	\$ 980	\$ 990	\$ 1,000	\$ 1,010	\$ 1,020	\$ 1,030	\$ 1,040	\$ 1,051	\$ 1,061	\$ 1,072	\$ 1,083	1.0%	per year after 2018
93	Vehicle-Fuel	\$ 4,240	\$ 6,860	\$ 4,410	\$ 4,454	\$ 4,499	\$ 4,544	\$ 4,589	\$ 4,635	\$ 4,681	\$ 4,728	\$ 4,775	\$ 4,823	\$ 4,871	1.0%	per year after 2018
94	Machinery & Equipment	\$ 14,688	\$ 17,150	\$ 14,700	\$ 14,847	\$ 14,995	\$ 15,145	\$ 15,297	\$ 15,450	\$ 15,604	\$ 15,760	\$ 15,918	\$ 16,077	\$ 16,238	1.0%	per year after 2018
95	Motor Vehicles And Equipment	\$ 12,942	\$ 12,740	\$ 14,700	\$ 14,847	\$ 14,995	\$ 15,145	\$ 15,297	\$ 15,450	\$ 15,604	\$ 15,760	\$ 15,918	\$ 16,077	\$ 16,238	1.0%	per year after 2018
96	Computer Software	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	1.0%	per year after 2018
97	Lease/Rent of Equipment	\$ 1,256	\$ 980	\$ 2,940	\$ 2,969	\$ 2,999	\$ 3,029	\$ 3,059	\$ 3,090	\$ 3,121	\$ 3,152	\$ 3,184	\$ 3,215	\$ 3,248	1.0%	per year after 2018
98	Lease- Postage Meter	\$ 132	\$ 98	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	1.0%	per year after 2018
99	Total	\$ 1,508,087	\$ 1,689,690	\$ 1,670,398	\$ 1,784,333	\$ 1,959,536	\$ 2,075,383	\$ 2,193,049	\$ 2,316,086	\$ 2,409,099	\$ 2,505,793	\$ 2,606,307	\$ 2,710,786	\$ 2,819,380		
100																
101	Henrico True-Up															
102	Professional Services	\$ 4,882	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
103	Repairs and Maintenance	\$ 16,483	\$ -	\$ 17,579	\$ 29,547	\$ 30,138	\$ 30,741	\$ 31,356	\$ 31,983	\$ 32,622	\$ 33,275	\$ 33,940	\$ 34,619	\$ 35,311	2%	
104	Contracted Services	\$ 71,489	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		

Appendix F. Sewer System – Revised Revenues and Expenses – With 6% Rate Increases

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Goochland County															
2	Sewer System															
3	Projected Revenues and Expenses															
4	With Projected Rate Increases 2019 - 2023															
5																
6		Actual	Budget	Budget	Projected											
7		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
105	Test Line Item	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
106	Electrical Services	\$ 110,254	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
107	Telecommunication	\$ 13,342	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
108	Repair Maintenance/Supplies	\$ 45,067	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
109	Vehicle-Powered Equip. Supplies	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
110	Chemicals	\$ 1,374,567	\$ 1,375,000	\$ 1,385,000	\$ 1,385,000	\$ 1,412,700	\$ 1,440,954	\$ 1,469,773	\$ 1,499,169	\$ 1,529,152	\$ 1,559,735	\$ 1,590,930	\$ 1,622,748	\$ 1,655,203	2%	
111	Uniforms/Safety Equip.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
112	Computer Equip/Non-Capital	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
113	Equip-Machinery/Non-Capital	\$ 4,749	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
114	Vehicle Fuel	\$ 1,158	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
115	Total	\$ 1,641,991	\$ 1,375,000	\$ 1,402,579	\$ 1,414,547	\$ 1,442,838	\$ 1,471,695	\$ 1,501,129	\$ 1,531,151	\$ 1,561,774	\$ 1,593,010	\$ 1,624,870	\$ 1,657,367	\$ 1,690,515		
116																
117																
118	Transfer to F56-Utility Capital	\$ 523,148	\$ 98,000	\$ 196,000	\$ 196,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
119	Transfer to R&R Fund (Goal \$1.736 M/year)	\$ -	\$ -	\$ -	\$ 200,000	\$ 650,000	\$ 840,000	\$ 675,000	\$ 960,000	\$ 975,000	\$ 975,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000		
120	Total Expenses	\$ 3,673,226	\$ 3,162,690	\$ 3,268,977	\$ 3,594,880	\$ 4,052,374	\$ 4,387,078	\$ 4,369,177	\$ 4,807,237	\$ 4,945,873	\$ 5,073,803	\$ 5,231,177	\$ 5,368,154	\$ 5,509,895		
121																
122	Operating Revenue Less Expenses	\$ 290,630	\$ 160,985	\$ 24,698	\$ 11,526	\$ 181,073	\$ 53,590	\$ 80,200	\$ 69,409	\$ 68,962	\$ 79,800	\$ 61,786	\$ 64,772	\$ 63,608		
123																
124																
125	Renewal and Replacement Fund															
126	Beginning Balance			\$ -	\$ -	\$ 200,000	\$ 850,000	\$ 1,690,000	\$ 2,365,000	\$ 3,325,000	\$ 4,300,000	\$ 5,275,000	\$ 6,275,000	\$ 7,275,000		
127	Additions			\$ -	\$ 200,000	\$ 650,000	\$ 840,000	\$ 675,000	\$ 960,000	\$ 975,000	\$ 975,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000		
128	Uses			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
129	Ending Balance			\$ -	\$ 200,000	\$ 850,000	\$ 1,690,000	\$ 2,365,000	\$ 3,325,000	\$ 4,300,000	\$ 5,275,000	\$ 6,275,000	\$ 7,275,000	\$ 8,275,000		
130																
131	Capital Fund:															
132	Beginning Capital Balance						\$ 1,729,039	\$ 463,992	\$ 1,840,976	\$ 2,219,343	\$ 2,940,385	\$ 3,215,339	\$ (867,093)	\$ (148,235)		
133	Transfer of Connection Fees				\$ 1,674,000	\$ 2,016,000	\$ 1,345,500	\$ 1,704,000	\$ 1,704,000	\$ 852,000	\$ 852,000	\$ 852,000	\$ 852,000	\$ 852,000	75% for 3 years	
134	Transfer of any "Excess" Funds	\$ 290,630	\$ 160,985	\$ 24,698	\$ 11,526	\$ 181,073	\$ 53,590	\$ 80,200	\$ 69,409	\$ 68,962	\$ 79,800	\$ 61,786	\$ 64,772	\$ 63,608		
135	Use of Funds:															
136	Debt Service															
137	\$3.7 M VRA 2006 and 2000 (P&I)	\$ (136,668)	\$ (127,975)	\$ (137,672)	\$ (198,738)	\$ (198,034)	\$ (199,136)	\$ (197,217)	\$ (195,042)	\$ (199,919)	\$ (196,847)	\$ (196,217)	\$ (197,914)	\$ (194,539)		
138	\$2.59 M VRA 2007A VCCW (P&I)	\$ (42,715)	\$ (97,772)	\$ (63,908)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
139																
140	Hickory Haven and Sarny Forest	\$ -	\$ -	\$ -	\$ (2,400,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
141	Huguenot Hills Sewer	\$ -	\$ -	\$ -	\$ -	\$ (270,000)	\$ (2,440,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
142	Sewer Laterals - Pond View Lane	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (25,000)	\$ (50,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
143	Sewer Installation - Plaza Drive	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (80,000)	\$ (800,000)	\$ -	\$ -	\$ -	\$ -	\$ -		
144	Sewer Installation - Biggs Drive	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (80,000)	\$ (400,000)	\$ -	\$ -	\$ -	\$ -	\$ -		
145	Sewer Installation - Broad Street to Rte 288	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (80,000)	\$ (800,000)	\$ -	\$ -		
146	Valley View Pump Station - Pump Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (380,000)	\$ -	\$ -	\$ -		
147	Courthouse Wastewater Treatment Plant	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (4,000,000)	\$ -	\$ -		
148	Ending Balance	\$ 111,247	\$ (64,761)	\$ (176,882)	\$ (913,212)	\$ 1,729,039	\$ 463,992	\$ 1,840,976	\$ 2,219,343	\$ 2,940,385	\$ 3,215,339	\$ (867,093)	\$ (148,235)	\$ 572,834		



APPENDIX G.

Appendix G.

The Capital Improvements Plan

Goochland County Utilities CIP - 2019 - 2028

Project Name	Water or Sewer	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Hickory Haven and Samary Forest	S	\$ 2,400,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,400,000
Huguenot Hills Sewer	S	\$ -	\$ 270,000	\$ 2,440,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,710,000
Sewer Laterals - Pond View Lane	S	\$ -	\$ -	\$ 25,000	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 75,000
Sewer Installation - Plaza Drive	S	\$ -	\$ -	\$ -	\$ 80,000	\$ 800,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 880,000
Sewer Installation - Biggs Drive	S	\$ -	\$ -	\$ -	\$ 80,000	\$ 400,000	\$ -	\$ 90,000	\$ 900,000	\$ -	\$ -	\$ 1,470,000
Valley View Pump Station - Pump Replacement	S	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 380,000	\$ -	\$ -	\$ -	\$ 380,000
Courthouse Wastewater Treatment Plant	S	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,000,000	\$ -	\$ -	\$ 4,000,000
West Creek-River Road Flow Control Valve	W	\$ -	\$ 40,000	\$ 10,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 50,000
CH Elevated Storage Tank Mixer	W	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 110,000	\$ -	\$ -	\$ -	\$ 110,000
Lower Tuckahoe and Randolph Square Water Main Upgrades	W	\$ -	\$ 30,000	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 130,000
Lanier Ind. Park Improvement	W	\$ -	\$ 30,000	\$ 260,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 290,000
J. S. Reynolds Water Main Improvements	W	\$ -	\$ -	\$ 50,000	\$ 270,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 320,000
Water Installation - Plaza Drive	W	\$ -	\$ -	\$ -	\$ 70,000	\$ 400,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 470,000
Parke at Saddlecreek Water Main Loop	W	\$ -	\$ -	\$ 530,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 530,000
Water Installation - Hermitage	W	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 80,000	\$ 500,000	\$ -	\$ -	\$ 580,000
West Oak Water Main Loop	W	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 640,000	\$ -	\$ -	\$ -	\$ 640,000
River Road High Pressure Zone Water Main Upgrade	W	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 680,000	\$ -	\$ -	\$ -	\$ 680,000
Courthouse - Fireflow	W	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 80,000	\$ 700,000	\$ -	\$ -	\$ -	\$ 780,000
Western River Road Communities Water Main Looping	W	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 800,000	\$ -	\$ -	\$ -	\$ 800,000
Water Installation - St Matthews Lane (Northern Area)	W	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 80,000	\$ 800,000	\$ -	\$ -	\$ 880,000
Water Installation - Lanier Park	W	\$ -	\$ -	\$ -	\$ -	\$ 80,000	\$ 800,000	\$ -	\$ -	\$ -	\$ -	\$ 880,000
Richmond Country Club Water Main	W	\$ -	\$ -	\$ -	\$ 100,000	\$ 940,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,040,000
River Road Low Pressure Zone Water Main Upgrade	W	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 200,000	\$ 1,020,000	\$ -	\$ -	\$ 1,220,000
River Road Booster Station Upgrade	W	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,240,000	\$ -	\$ -	\$ -	\$ 1,240,000
River Road Improvements	W	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 240,000	\$ 2,000,000	\$ 2,240,000
Huguenot Hills Water	W	\$ -	\$ 250,000	\$ 2,270,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,520,000
Lanier Industrial Park Elevated Water Storage Tank	W	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,830,000	\$ 2,830,000
Hockett Road Water Main	W	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,470,000	\$ -	\$ 3,470,000
Total		\$2,400,000	\$ 620,000	\$5,685,000	\$ 650,000	\$2,620,000	\$ 880,000	\$5,000,000	\$7,220,000	\$3,710,000	\$4,830,000	\$ 33,615,000