Water and Sewer Rate Study
New Windsor, MD

February 2018

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Final Water and Sewer Rate Study
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Purpose/Objectives of Study

1. To review the Town's current water and sewer rate structure for revenue stability and sufficiency, e.g., expense coverage
2. To analyze historic water production and consumption trends for projecting:
    a. Water usage
    b. Water and sewer revenues based on water usage and projected charges
3. To develop a water and sewer rate model for the Town's use:
    a. To project water and sewer rates – 2019 through 2023
    b. To calculate operating revenue/expense coverage ratios (Recommended cover – greater than 1.1)
    c. To trend cash balances/reserves (Recommended cash reserve - greater than 12 months of operating expenses)
4. To recommend a rate structure(s) for the next five years that will stabilize revenues and cover water and sewer operating and maintenance (O&M), debt, and capital outlay expenses, fixed and variable:

    a. Provide sufficient water and sewer operating revenues and adequate cash balances in the Water and Sewer Funds
    b. Cover rising O&M expenses associated with the operation of the water and sewer systems
    c. Cover future debt expenses associated with the Town's Urban Reconstruction (Streetscape) project, which will include the lining of sewers but mostly the upgrading of water lines
    d. Cover needed capital outlay expenses for water and sewer system infrastructure repairs and replacements

Acknowledgements

Assistance by the Town staff was essential to this rate analysis, particularly assistance by:

Mr. Franklin Schaeffer, Town Manager

Mr. Michael Reynolds, Circuit Rider, Maryland Rural Development Corporation

Ms. Donna Alban, Town Clerk/Treasurer

The Town provided valuable planning and demographic data (population and household); insights on Town growth; flow data (billed water); Town and County Comprehensive Planning documents; financial (audited financial statements) and annual budget information; fund and accounting practices; City Water and Sewer ordinance documents; and water and sewer rate information.

Introduction

In November 2017, the Town requested the Maryland Center for Environmental Training (MCET) to perform a water and sewer rate study and recommend a 5-year rate structure to ensure coverage of future increases in water and sewer O&M, debt, and capital expenses.

New Windsor's last comprehensive water and sewer rate review was performed in 2010. Based on the 2010 study, new water and sewer rates were adopted in 2011. Typically, base rates were step increased $6.00 annually while usage rates were step increased 5.0% annually.

Several adjustments to the sewer rates, particularly the base rate, were made through 2017 as various grants were received and as projects were completed. With planning underway for a Streetscape Project to upgrade water distribution and sewer collection lines, the Town felt it was time to have another comprehensive rate review and update to ensure both water and sewer rates are properly set to cover design, engineering, and construction costs of the Streetscape Project while at the same time remain fair and equitable to system users.

MCET's financial analysis process included a review of the Town's historic water and sewer service rate structure (FY 2011 – FY 2017) for existing Town customers. A fixed rate ($/quarter/bill) base charge and a volumetric rate ($/1,000 gallons) usage charge are collected from existing customers and used to cover O&M, debt, and pay-as-you-go (PAYGO) capital outlay expenses. A portion of base charge revenues collected is set aside for future capital Renew, Rehab, and Replacement (Capital Reserve 3 R's account). Connection charges are collected from new customers and set aside in a separate reserve account for future infrastructure improvement needs.

Water and sewer revenues and expenses are audited and recorded in Financial Statements separate from the General Fund. New Windsor's Water and Sewer Fund Financial Statements post separate water and sewer revenues from

customers, but combine O&M, debt, and capital outlay expenses. Historic water and sewer expense information (FY 2011 – FY 2017) was developed using Town budget information. Historic water and sewer debt expense information was developed using Town budget information along with debt information in the FY 2011 – FY 2017 Financial Statements. Cover ratios (ratios of Revenues/Expenses) were then calculated for combined, separate water, and separate sewer revenue/expense streams to determine rate and revenue sufficiency.

Customer base (e.g., population, housing units, accounts) and water consumption data was essential to this study. Demographic and water consumption data was provided by the Town and trended (FY 2011 – FY 2017) to compute water usage on a per EDU, per household, and per capita basis. Revenues needed to cover future expenses will be projected using forecasted number of accounts, historic water usage parameters, and forecasted water and sewer service rates.

Water and Sewer Rate Structures and Revenue Sufficiency Studies

Small towns face a challenge in providing water and sewer services because they serve a smaller customer base. Small towns need to periodically evaluate water and sewer rates to ensure that "revenues cover expenses."

Key questions to answer during revenue sufficiency studies:

1. Are revenues covering current expenses?
2. Is population increasing or decreasing?
3. Is water usage increasing or decreasing (water conservation)?
4. Will revenues cover future expenses?
5. Are cash balances available for unexpected expenses?
6. Is the rate structure fair and equitable?
7. Is the Town financially able to build new facilities?
8. Can the Town apply for grants and/or loans?
9. What if the economy, inflation, or interest rates change?

Water and sewer (W&S) agencies use a range of rate structures to bill customers for services. Almost all W&S agencies use a combination of fixed "base charges" and volumetric "usage charges". However, considerable variations exist in how rates are calculated and how different customer classes are charged. Regardless, the price of water and sewer services must roughly equal its cost or value to produce, store, and distribute water and/or treat wastewater if equity among customers is to be maintained, a concept principle referred to as "cost-based" or "cost of service".

Most W&S agencies use the same rate structure for residential, business, commercial, and industrial customers, but some have separate rates for different customer classes. Water and sewer bills are almost always calculated based on metered water consumption quantities. Consequently, water use patterns have a strong influence on revenue receipts and on an agency's financial position. The relative share of an agency's water usage consumed by different customer sectors can affect the agency's revenue and costs, and the vulnerability of its revenue

generation to customer demand fluctuations, e.g., seasonal customers, seasonal variations.

Water and sewer rates are priced to generate revenues that will cover operating and maintenance expenses (O&M), debt, and pay-as-you-go (PAYGO) capital outlay expenses. Water and sewer rates should be cost-based, equitable, and set at a level to ensure revenue sufficiency. Rates should also be easy to understand and administer.

Three rate structures commonly used for billing W&S services are as follows:

1. Fixed base rate ($/ERU/quarter)
2. Fixed base rate ($/ERU/quarter) for a prescribed minimum water usage along with a volumetric rate ($/1000 gals) for water usage over minimum
3. Uniform volumetric rate ($/1000 gals), no minimum water usage rate

The rate structure used by the Town for billing water service is a combination of fixed base rate (no minimum volume) and a volumetric rate for water usage. With an adequate, fixed rate/volumetric rate structure, the Town is assured recovery of fixed expenses, e.g., salary expenses, utility, capital outlay, and debt expenses. A combination fixed rate/volumetric rate structure is Town friendly for revenue generation purposes.

In many cases, agencies charge different rates for customers living inside or outside municipal boundaries. Out-of-town customers who are charged a different water and sewer rate than in-town customers pay as much as 2 times, but on average, 1.5 times more than in-town customers.

Water and sewer service rates are adopted to recover the cost of operating, maintaining, and financing improvements in water and sewer systems. Typically, water and sewer charges are collected at the beginning of each quarter based on water used in the prior quarter. New Winsor mails out water and sewer bills the first week in January, April, July, and October. Property owners have until the 20th of the month to pay the bill without any penalties.

Water and Sewer rate studies and revenue sufficiency studies typically consist of three interrelated analyses:

1. Multi-year Financial Analysis: Develop a financial plan that meets future obligations of the Water and Sewer Enterprise Fund, recommend reserve requirements, and assure that the coverage ratios are met. Expenses and revenues are projected 3 - 5 years in financial forecasts to identify annual increases in operating and maintenance (O&M) expenses, any known capital improvement program (CIP) expenses, and debt service expenses for capital improvements. The analysis compares revenues to expenses (e.g., coverage ratios) to determine annual revenue adjustments, which results in rate increases typically due to inflation. In addition, the long-term financial forecast identifies and maintains adequate cash reserves based on agency fiscal policies, e.g., typically unreserved cash balances no less than 3 to 6 months of O&M and debt expenses.

   Key Coverage Ratios:

   a. Coverage Ratio = $\frac{\text{Operating Revenue}}{\text{Operating Expenses}}$

      Coverage Ratio is a comparison of system revenues to expenses (with debt) and should be > 1.1 for revenue sufficiency, the bigger the better.

   b. Operating Ratio = $\frac{\text{Operating Revenue}}{\text{Operating Expenses}}$

      Operating Ratio is a comparison of system revenues to operating expenses (w/o debt) and should be > 1.1 for revenue sufficiency, the bigger the better.

   c. Debt Coverage Ratio = $\frac{\text{(Total Revenue – Operating Expenses)}}{\text{Debt Service Expenses}}$

This ratio shows how well water and sewer systems can repay debt, e.g., principal and interest on loans; >1.25 is a normal target for loan/debt coverage. Again, the bigger the better.

d. Fixed Expense Cover Ratio = $\frac{\text{Base Charge Revenues}}{\text{Fixed Operating and Debt Expenses}}$

For this study, base charge revenues need to be analyzed for sufficiency, so a new coverage ratio was developed. (Target > 1.0)

e. Variable Expense Cover Ratio = $\frac{\text{Usage Charge Revenues}}{\text{Variable operating Expenses}}$

Likewise, usage charge revenue need to be analyzed for sufficiency, so a new coverage ratio was developed. (Target > 1.0)

2. Cost of Service Analysis: Annual expenses and revenues are identified and distributed between the water and sewer systems. The analysis can allocate revenue requirements based on how costs are incurred. For example, what fixed expenses should be considered in a base rate, what variable expenses should be included in the volumetric rates.

3. Rate Design: Equitable and proportionate schedules of fixed and volumetric rates are prepared and designed to recover water and sewer expenses. Rate schedules developed consider both the pricing and structure of the rates to collect the appropriate and targeted level of revenues. Policy objectives are also considered during rate design, such as target minimum cash reserves and coverage ratios and encouragement of water conservation. Policy objectives are blended with cost of service objectives to achieve a balance of rate equity and fairness, financial stability, and resource conservation goals. Adjusting the rate structure can assist the Town in achieving different goals and objectives, such as revenue stability, water conservation, or affordability for essential use.

4. Water usage: Determining water consumption is critical when setting water and sewer rates since water usage per customer has been declining over the past decade. Whether the result of changes in rates, weather, household size, water conservation policies, economic realities, or a

combination of all factors, lower levels of water use per customer likely represents a “new normal” for water and sewer utilities. Future financing strategies should focus on maintaining revenue stability and financial solvency in the context of lower water demand.

Recommendations

1. Future Rate Adjustments – Historic annual sewer base charge step increases (and decreases) have caused sewer base charges to be underpriced as of FY 2017. Water base charge step increases have generated conservatively priced base charges. Scheduled water and sewer usage charge increases have created conservatively priced usage charges. Continuance of annual base charge step increases will generate stable revenue streams and improve coverage of future fixed operating expenses (e.g., employee and utility expenses) and debt.

2. Base Charges – FY 2012 – FY 2017 water base charges were slightly overpriced while sewer base charges were underpriced. However, FY 2019 – FY 2023 water base charges should continue to be increased $6.00 annually to cover future Streetscape Project debt. Sewer base charges should be step increased from $6.00 to $12.00 annually to recover from previous years of base charge revenue shortfalls and to cover future fixed O&M and debt expenses.

3. Usage Charges – Water and sewer usage charge increase can be reduced from historic 5.0% annual step increases to 3.0% annual step increases in FY 2019 – FY 2023 to keep up with inflation.

4. FY 2018 through FY 2023 projected water and sewer rates are shown below.

Projected Water and Sewer Rates				
Fiscal Year	Water Charges		Sewer Charges	
	Base, $/Qtr	Usage, $/TG	Base, $/Qtr	Usage, $/TG
2018	$133	$3.75	$85	$7.66
2019	$139	$3.86	$97	$7.89
2020	$145	$3.98	$109	$8.13
2021	$151	$4.10	$121	$8.37
2022	$157	$4.22	$133	$8.62
2023	$163	$4.35	$145	$8.88

5. Unreserved Cash Balance – Cash balances in the Water and Sewer Funds are both reserved and unreserved. Cash reserves in the Funds should remain reserved at current levels for planned and emergency infrastructure improvements. Unreserved cash balances in the Water and Sewer Fund should equal a minimum of 6 months of operating and debt expenses. The available cash will help weather unexpected "bumps" experienced in the Fund, e.g., an upturn in operating costs, a downturn in operating revenue, or an unexpected equipment failure.

Significant Observations - FY 2012 – FY 2018

1. Water System - The Town of New Windsor owns the community water supply system that serves residents and businesses within its corporate limits. Water production averages about 0.08 mgd. The system is currently operated by the Maryland Environmental Service (MES).

   The system is supplied by spring and well sources and is presently permitted for an average daily total demand of 0.196 mgd from the system's multiple sources. The Town's water sources consist of two drilled wells in the Sams Creek Phyllite formation and a natural spring. Water travels from the Dennings Well through a 4 inch-diameter gravity waterline to Main Spring Well, then from the Main Spring Well through a 5-mile pipeline to the Town's raw-water reservoir.

   From the raw water reservoir, water flows through a booster pump station where the water is metered, disinfected with chlorine, and pumped into the distribution system. Drinking water is stored in a 250,000-gallon finished-water standpipe and a new 375,000-gallon water storage tank, which was completed and placed into service in 2010. The water standpipe was rehabbed in 2013.

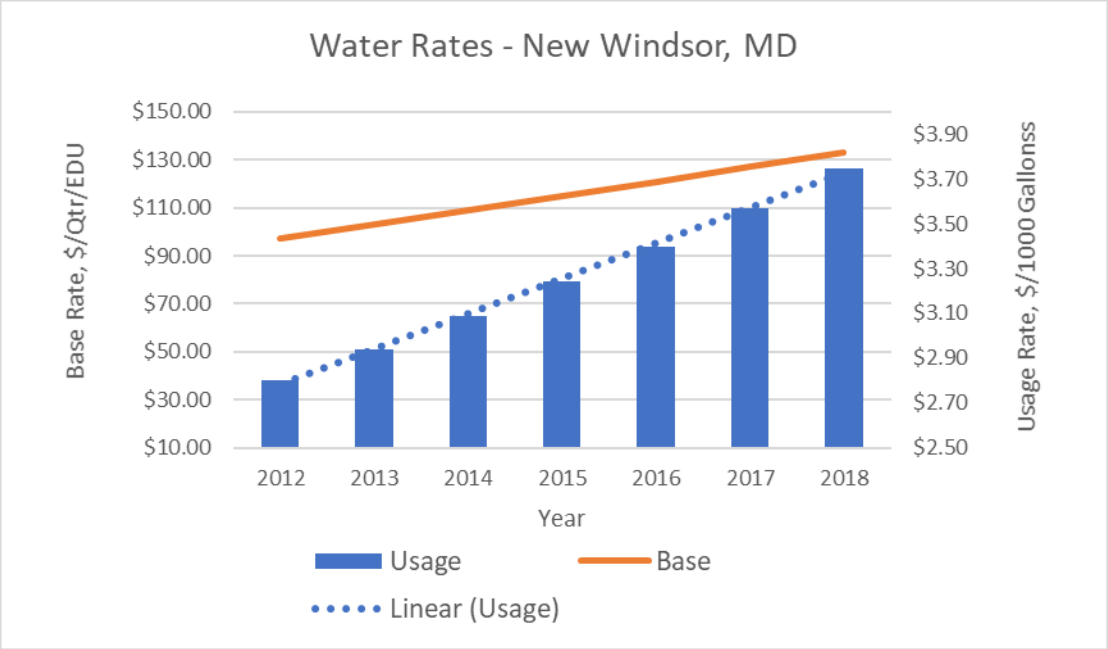
2. Sewer System - The Town of New Windsor owns the community sewerage system, which is operated by the Maryland Environmental Service. The New Windsor wastewater system consists of collection lines, five pumping stations, and a new wastewater treatment facility. Pump station upgrades were completed in 2017.

   The design capacity of the new wastewater treatment facility is 0.115 mgd; average flow treated is 0.09 mgd. The treated effluent is discharged to Dickenson Run. Design of a new $5.0 million Continuous Sequencing Batch Reactor (CSBR) wastewater treatment plant (WWTP) began in March 2010.

Construction was completed in July 2011. The new WWTP plant is capable of meeting Chesapeake Bay nutrient (phosphorus and nitrogen) removal discharge standards.

The new plant replaced a lagoon treatment system. The old lagoons are being phased out and decommissioned. The Town is having them dredged, regraded, and converted to ballfields/recreational areas.

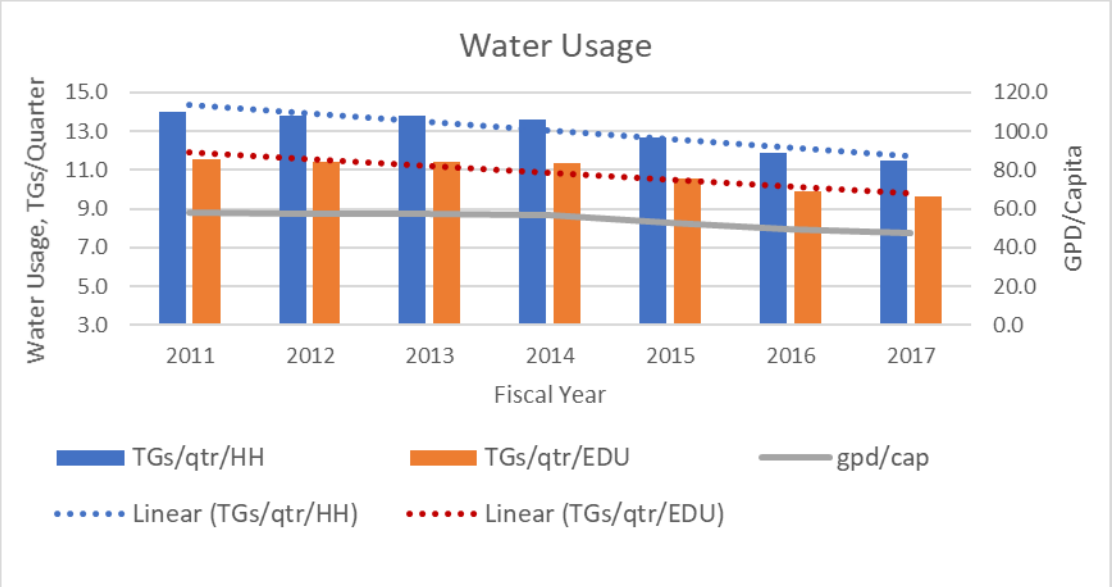
3. In New Windsor, water and sewer revenues are collected from existing and new customers. Revenues from existing customers are collected quarterly through two charges, which will be the focus of this study:
    a. Base charges (Fixed base rate, $/unit/quarterly bill)
    b. Usage charges (Volumetric rates, $/1000 gallons)
4. New customers (growth related) are billed connection charges prior to connecting to either the water or sewer system. Connection charge revenues are set aside and reserved for future rehab and replacement of water and sewer infrastructure.
5. Usage charge revenues and base charge revenues collected are used to cover operating, debt, and capital outlay expenses. Annually, some base charge revenue is also set aside in an Enterprise Capital fund reserved for rehab and replacement of water and sewer infrastructure.
6. New Windsor water base rates in FY 2012 were $97/quarter/EDU and usage rates were $2.80/1000 gallons
    a. Base rates increased $6.00/quarter/EDU annually through FY 2018
    b. Water usage rates increased 5% annually through FY 2018



7. Historic water and sewer rates:

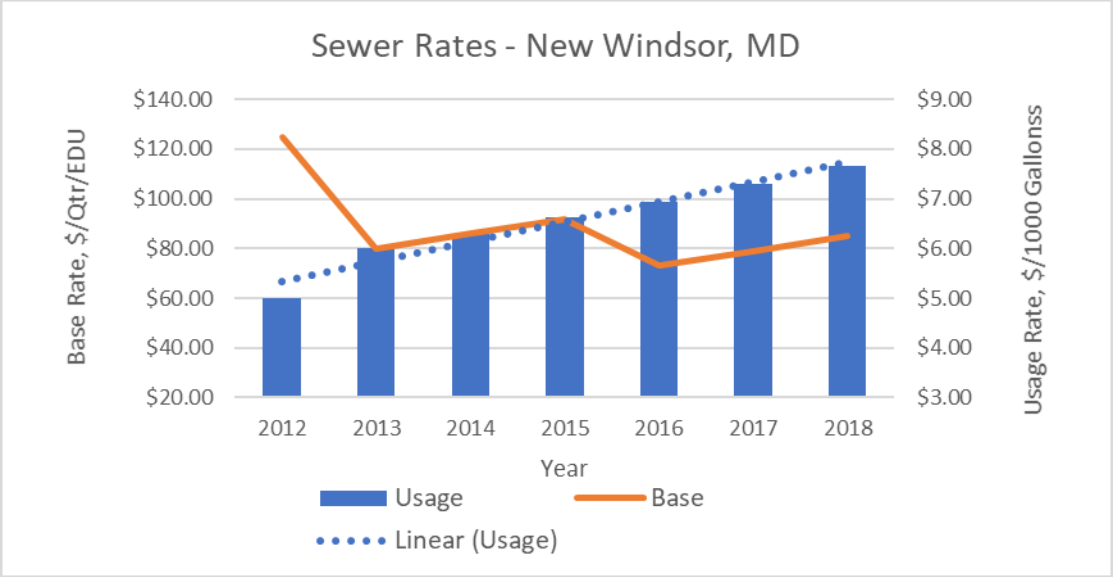
Historic Water and Sewer Rates				
Fiscal Year	Water Rates		Sewer Rates	
	Unit $/unit/Qtr	Usage $/1000 gals	Unit $/unit/Qtr	Usage, $/1000 gals
2012	$97	$2.80	$125	$5.00
2013	$103	$2.94	$80	$6.00
2014	$109	$3.09	$86	$6.30
2015	$115	$3.24	$92	$6.62
2016	$121	$3.40	$73	$6.95
2017	$127	$3.57	$79	$7.29
2018	$133	$3.75	$85	$7.66

8. Water consumption has declined over time as water (and sewer) rates increased. Water usage averaged about 11,500 gallons/EDU (TGs/EDU) in FY 2011 but dropped to about 9,500 TGs/EDU in FY 2017.



Billed water averaged 76,500 gpd in FY 2011 and decreased to 64,000 gpd by FY 2017. When water usage falls, revenues fall with them, unless water and sewer rates are increased. But a decrease in water sales does not lead to a commensurate reduction in utility expenses. Consistent decreases in water use from year to year can lead to significant revenue shortfalls for utilities. Excessive declines in water use over recent years have caught many utilities off-guard as revenues have fallen below budgeted levels.

9. Sewer base rates started out at $125/quarter/EDU in FY 2012 and usage rates were $5.00/1000 gallons.
    a. Base rates were reduced to $80/quarter/EDU in FY2013, increased $6.00/quarter/EDU annually through FY 2015, reduced again to $73/quarter/EDU in FY 2016, then increased $6.00/quarter/EDU annually through FY 2018.
    b. Usage rates increased to $6.00/1,000 gallons in FY 2013, then increased 5% annually through FY 2018.



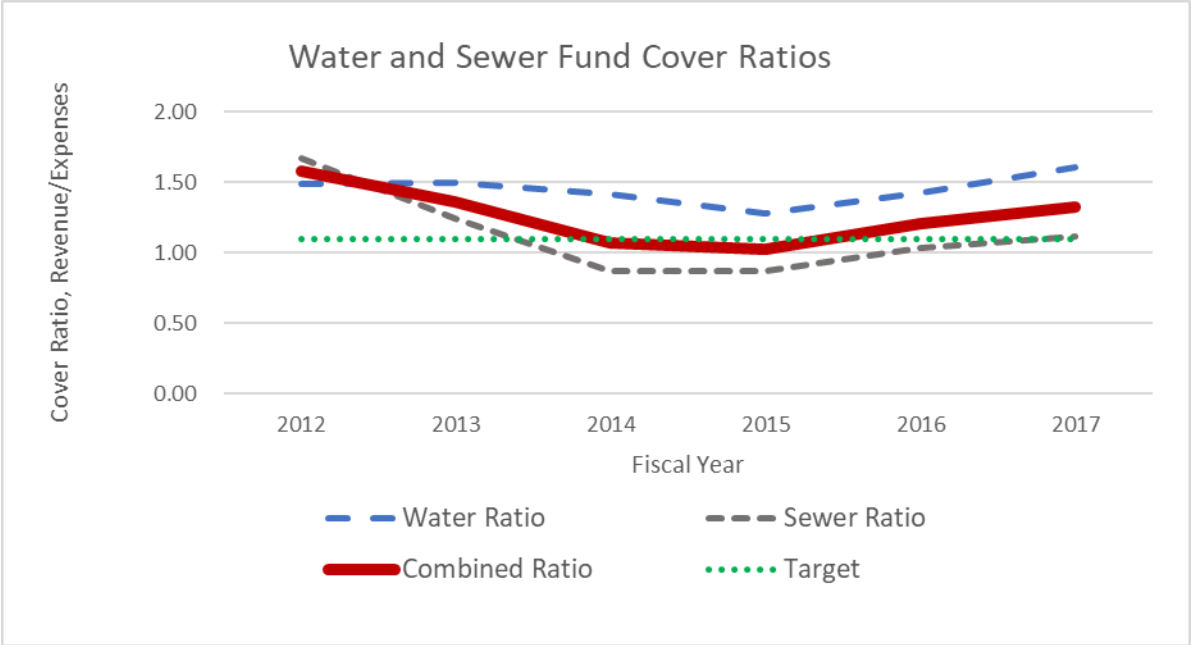
10. An initial $550,000 Chesapeake Bay Water Quality Projects grant helped fund the new WWTP. In FY 2013, a $2.0 million Chesapeake Bay Water Quality Projects grant was used to pay off a portion of the $3,808,474 principal balance on a loan with the Maryland Department of the Environment's Water Quality Financing Administration. The second grant provided a sewer base rate reduction of $45.00 per quarter. A third grant was provided in FY 2016 for $1.0 million. Once again, the sewer base rate was reduced, this time by $19.00 per quarter.

11. Billed sewer averaged 73,500 gpd in FY 2011 and 63,000 gpd in FY 2017. Assuming infiltration/inflow rates of 30%, average wastewater flows treated in FY 2011 were approximately 0.1 mgd and 0.09 mgd in FY 2017.

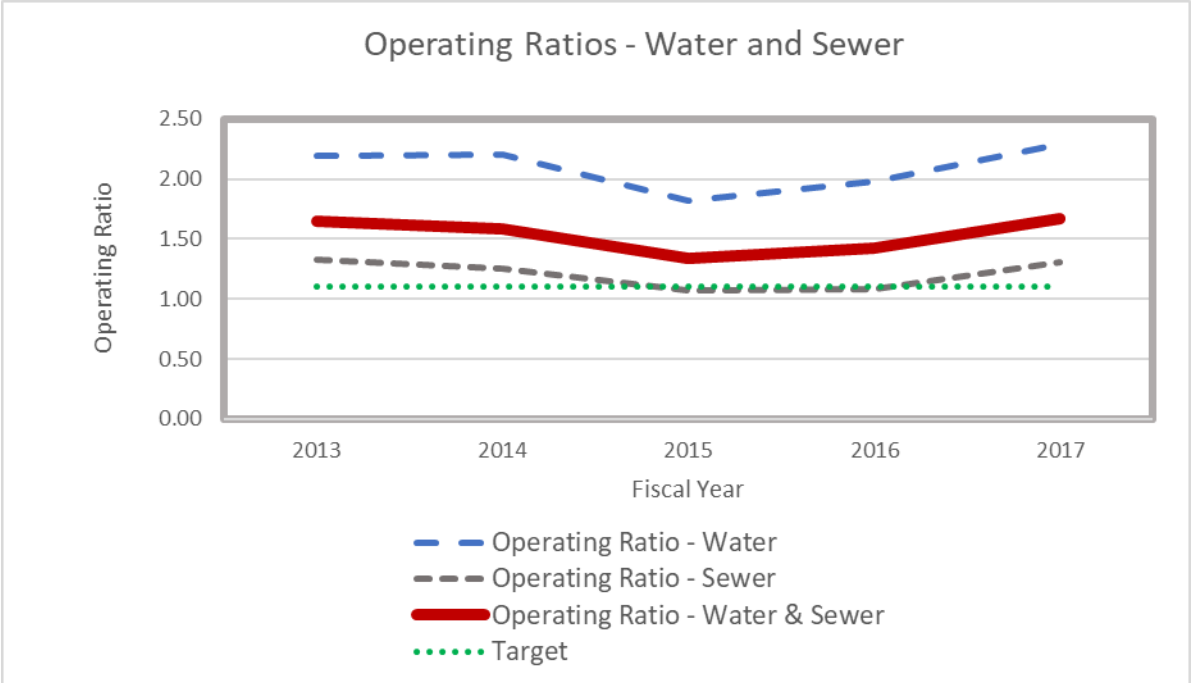
12. Revenue coverage of water and sewer operations and maintenance (O&M), debt, and capital outlay expenses was adequate using combined water and sewer operating revenues. However, water service rates were slightly overpriced while sewer rates were slightly underpriced, thus netting out and covering expenses. The recommended coverage ratio (Revenues/Expenses) to pay for any unexpected/unplanned expenses should average greater than 1.1.

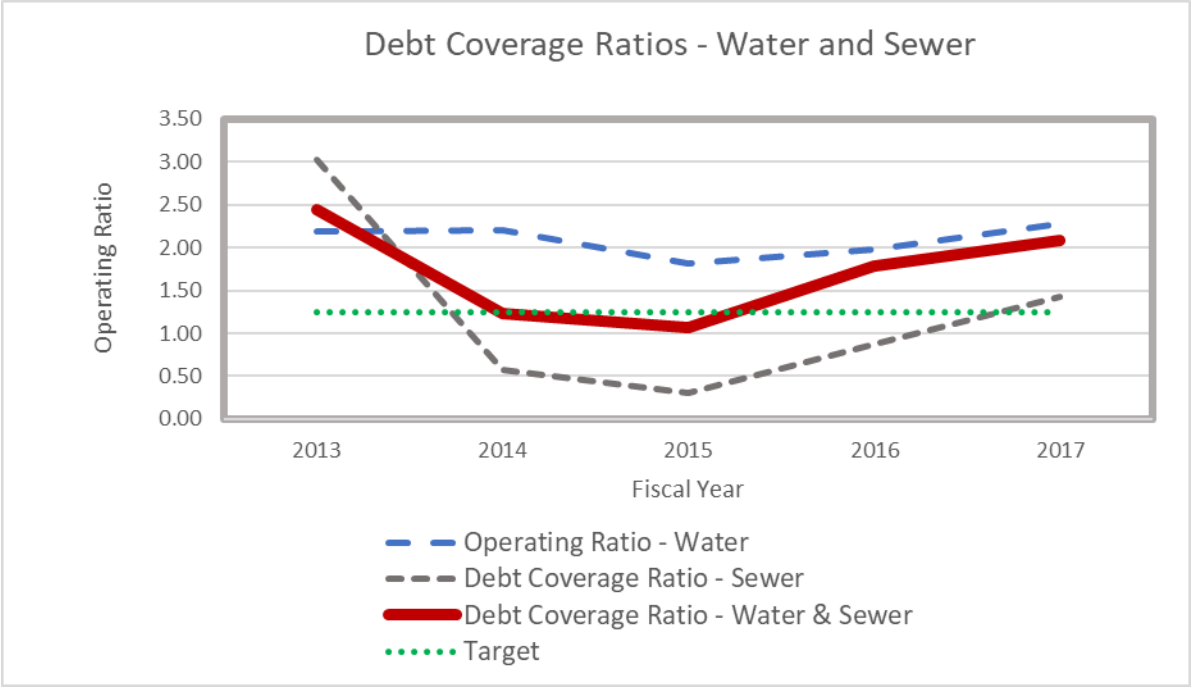
    a. The water coverage ratio averages greater than 1.1

b. The sewer cover ratio averages less than 1.1.

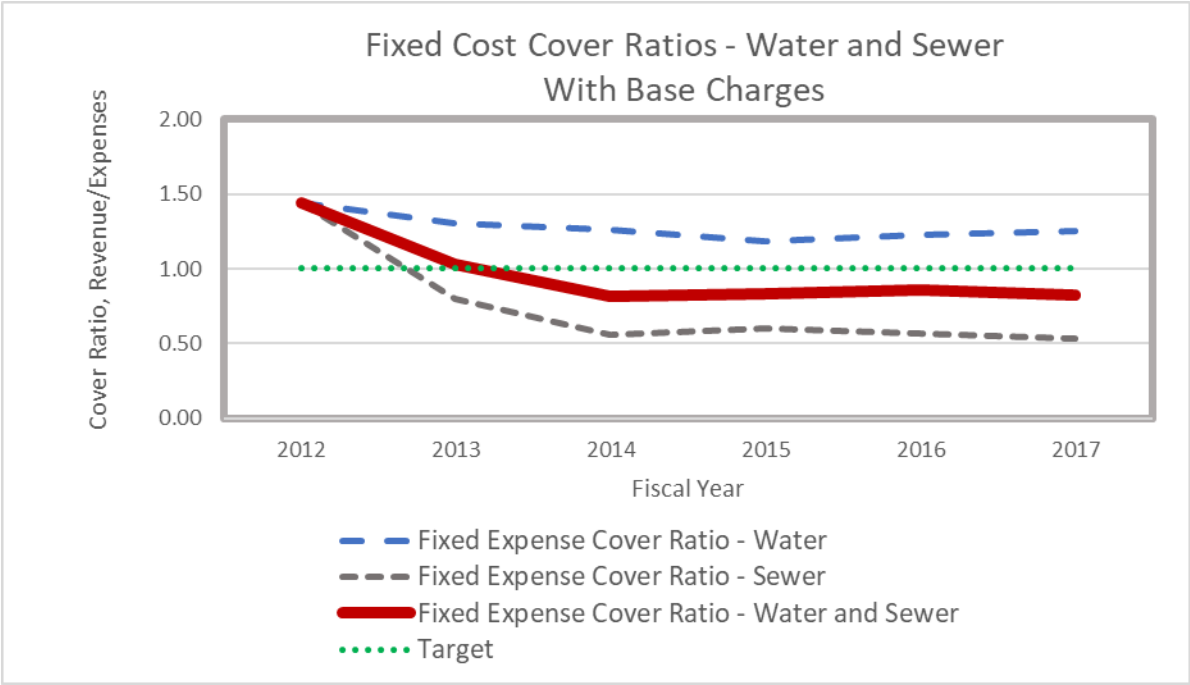


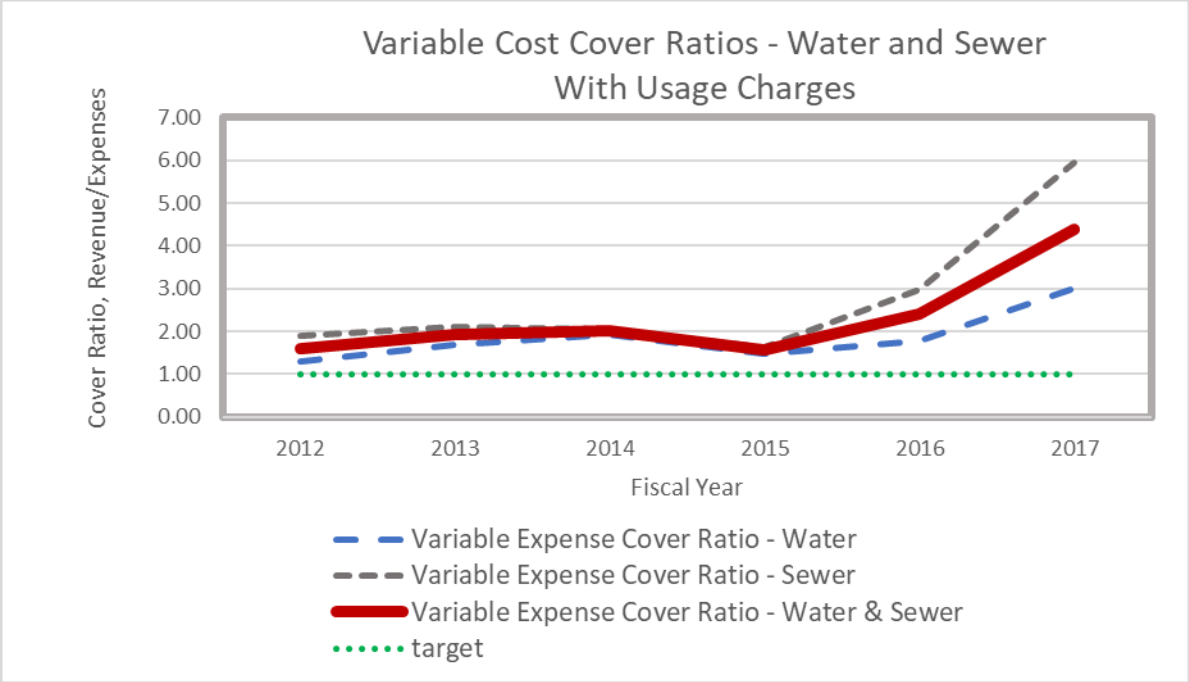
The above graph combines "operating ratio' calculations and "Debt coverage" calculations into one "coverage ratio." The following graphs break out "Operating ratio" trends and "Debt coverage" trends. The graphs that follow also indicate that sewer rates were underpriced.





13. To determine which of the sewer charges needs attention, fixed and variable expense coverage ratios were plotted in the graphs below.

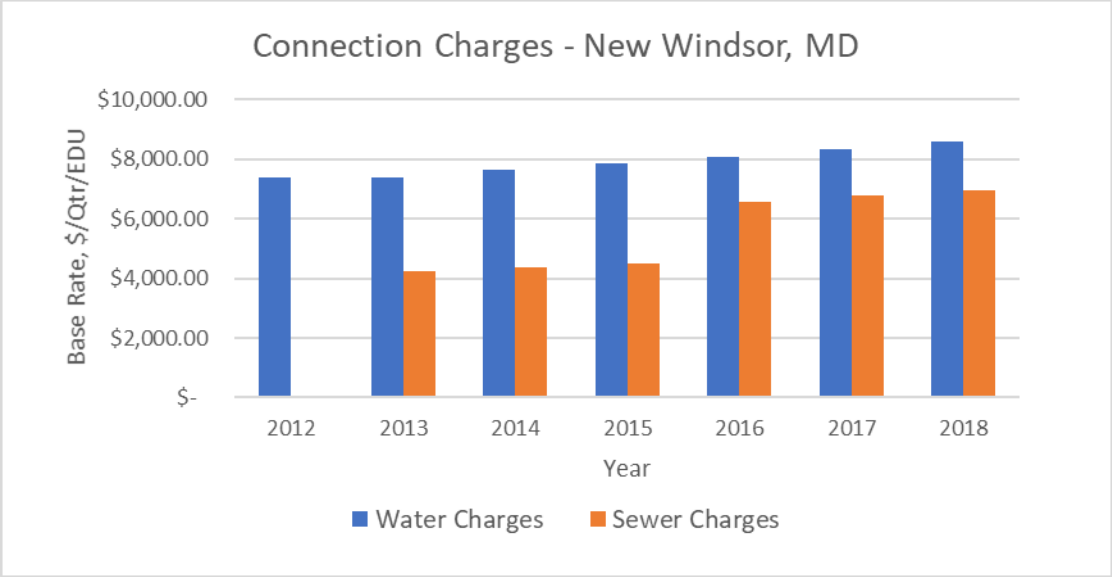




Usage rates are adequate, while sewer base rates need to be looked at in forecasted rates, likely increased.

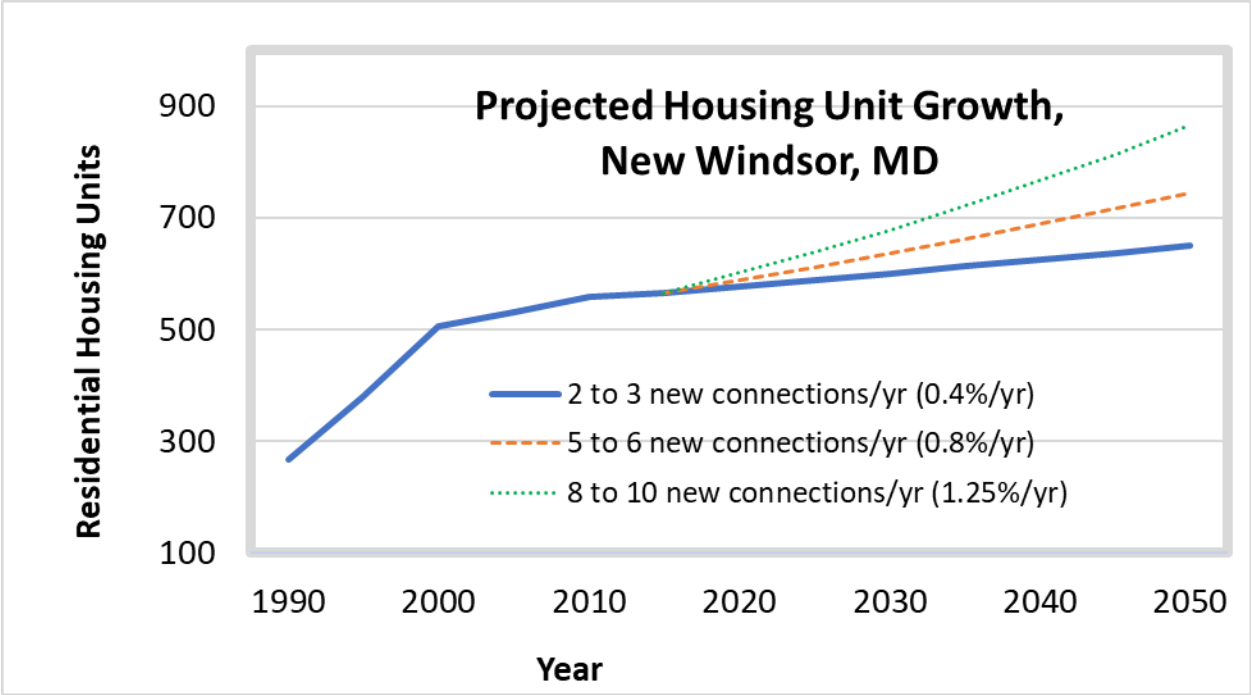
14. Water connection charges in FY 2012 and FY 2013 were $7400/EDU. The fee increased 3% annually through FY 2018.

15. Sewer connection charges began in FY 2013 and were priced at $4226.67/EDU. The fee increased 3% annually through FY 2015, then increased to $6571/EDU in FY 2016. The fee then increased 3% annually through FY 2018.

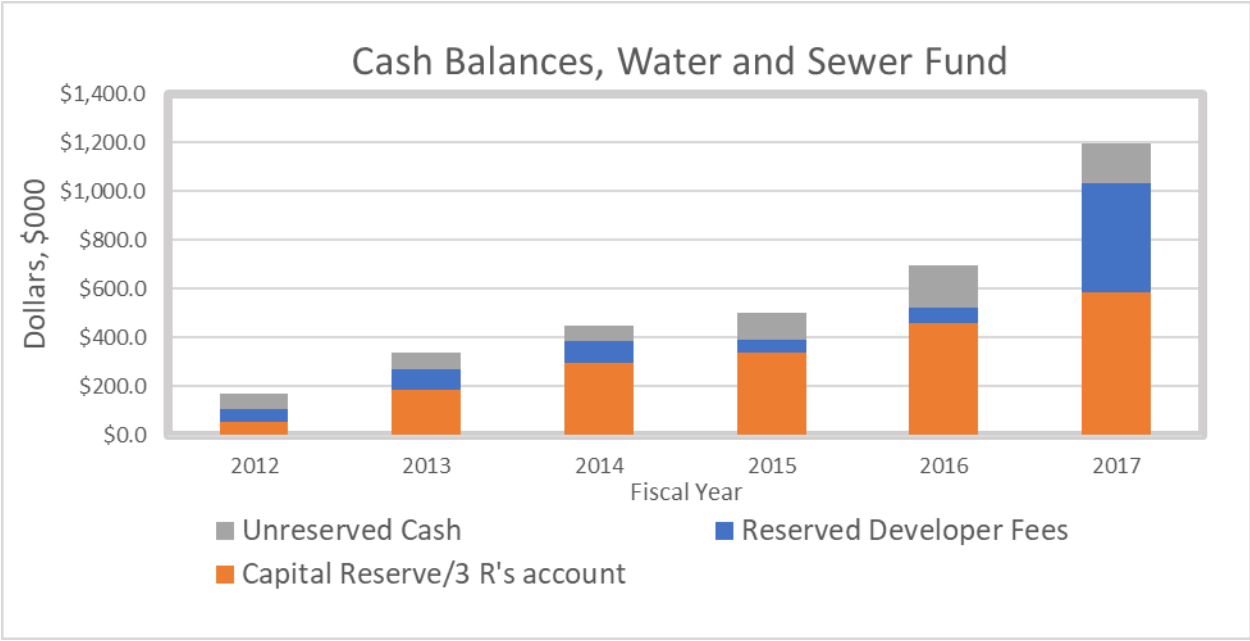


16. New Windsor's population in 2015 was approximately 1425. The number of households was about 530. Adding in nonresidential units, the number of EDUs totaled approximately 635.

17. Moderate system growth (e.g., new connections) was observed beginning in FY 2015 and peaked in FY 2017. Approximately 30 new EDUs paid to connect during that 3-year period. Growth is expected to continue at a moderate rate (5 to 6 new connections/year).



18. The cash balance at FY 2017 yearend totaled nearly $1.2 million. About $0.16 million of the cash balance was unreserved cash, $0.49 million was reserved revenues for Capital Improvements, while the other $0.45 million was reserved connection charge revenues.



19. The FY 2017 unreserved cash balance equals slightly less than 3.0 months of combined O&M, debt, and capital expenses. A minimum unreserved cash balance equal to 6 months of annual O&M and debt expenses is recommended.

20. Future rates should provide reliable, stable and adequate revenue to meet the Town's financial, operational, and regulatory requirements. Rate levels should be stable from year to year - no "rate shocks". Conservative growth assumptions and prudent financial planning are fundamental in ensuring adequate revenues to promote agency financial stability.

21. Guidelines from the Water Environmental Federation's (WEF), "Financing and Charges for Wastewater Systems" and the American Water Works Association's (AWWA), "Principles of Water Rates, Fees, and Charges" were used to develop recommended water and sewer rates and rate structures in this study.

Analyses and Recommendations

Future water and sewer rates will be heavily influenced by new debt for the $4.0 million Streetscape Project.

Future Debt – The $4.0 million Streetscape Project will require the issue of new debt. The Town has decided to up front $0.5 million for design and engineering costs for the Project using cash from Capital Reserves. The other $3.5 million for construction costs will be debt financed.

Debt for the Streetscape project will be issued as early as FY 2019, no later than FY 2020. Based on timing of debt issue, interest rates could be as low as 2.5% to 3.5% or as high as 3.5% to 4.5%. Assuming a semi-annual payment loan (40-year term, 3.5%) for the new Streetscape Project, loan payments for the $3.5 million construction loan will equal approximately $164,000 annually.

Since much of the Streetscape Project will be for water main replacements, for forecasting purposes, the Streetscape Project debt will be split 70% water and 30% sewer.

Following are summaries of future debt payments.

Future Water Debt, $						
	2018	2019	2020	2021	2022	2023
Dennings Well Connection	$7,436	$7.436	$7,436	$7,436	$7,436	$7,436
New Storage Tank	37,554	37,554	37,554	37,554	37,554	37,554
Chlorine Contact Tank	28,299	28,299	28,299	28,299	28,299	28,299
Water Tank Rehab	23,264	23,264	23,264	23,264	23,264	23,264
Streetscape Project		114,800	114,800	114,800	114,800	114,800
Total	$96,553	$211,353	$211,353	$211,353	$211,353	$211,353

Future Sewer Debt, $						
	2018	2019	2020	2021	2022	2023
WWTP Upgrades	$32,415	$32,415	$32,415	$32,415	$32,415	$32,415
Sewer Pump Stations	37,788	37,788	37,788	37,788	37,788	37,788
Streetscape Project		49,200	49,200	49,200	49,200	49,200
Total	$70,203	$119,403	$119,403	$119,403	$119,403	$119,403

Future Rate Increases – To cover the increased Streetscape Project debt, it is recommended that water base charge annual step increases of $6.00 year continue. Fortunately, annual step increases in water usage charges can be reduced to 3.0% annually.

To better cover sewer fixed expenses, it is recommended that sewer base charges be step increased $12.00 annually. As with water usage charges, annual step increases in sewer usage charges can be reduced to 3.0% annually.

Future Water and Sewer Rates				
Fiscal Year	Water Charges		Sewer Charges	
	Base, $/Qtr	Usage, $/TG	Base, $/Qtr	Usage, $/TG
2018	$133	$3.75	$85	$7.66
2019	$139	$3.86	$97	$7.89
2020	$145	$3.98	$109	$8.13
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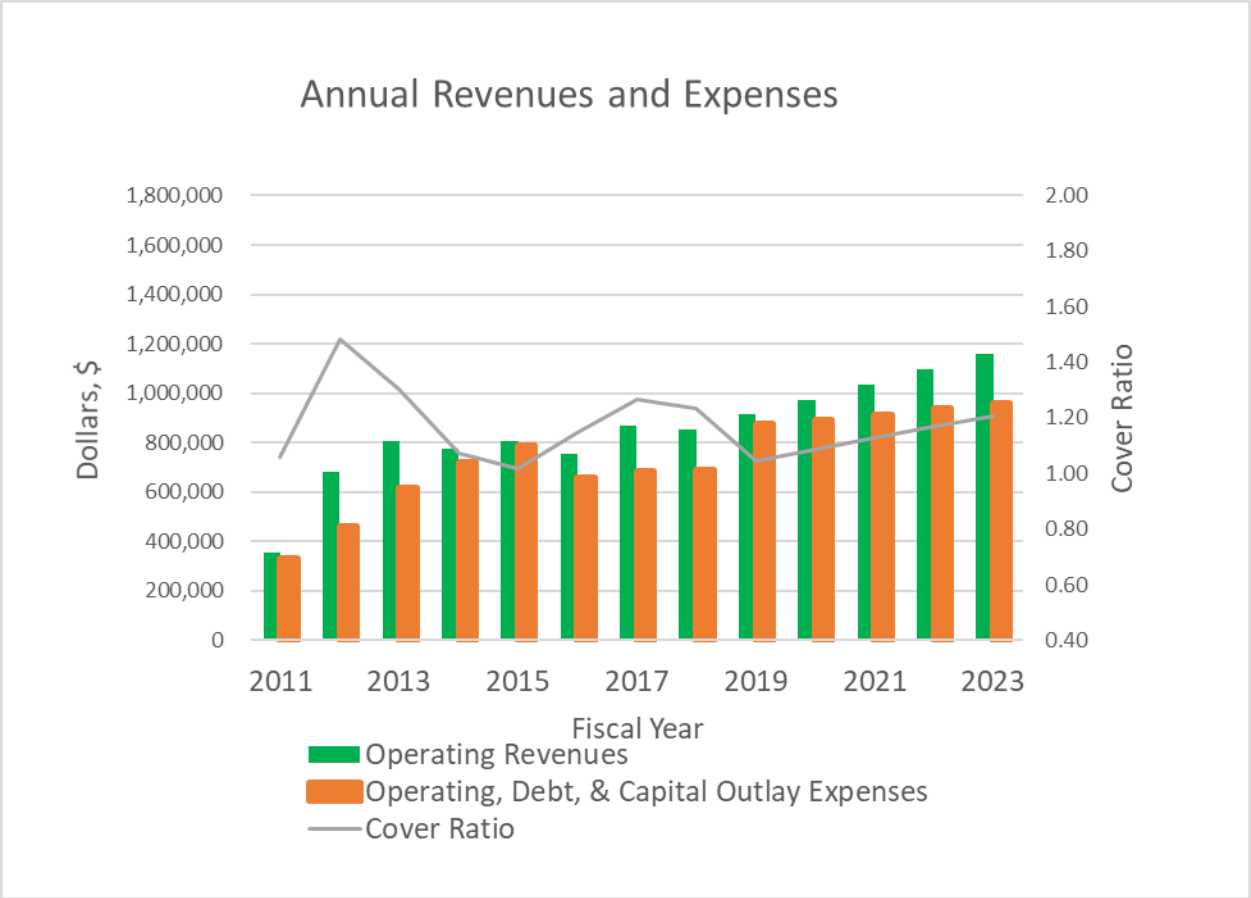
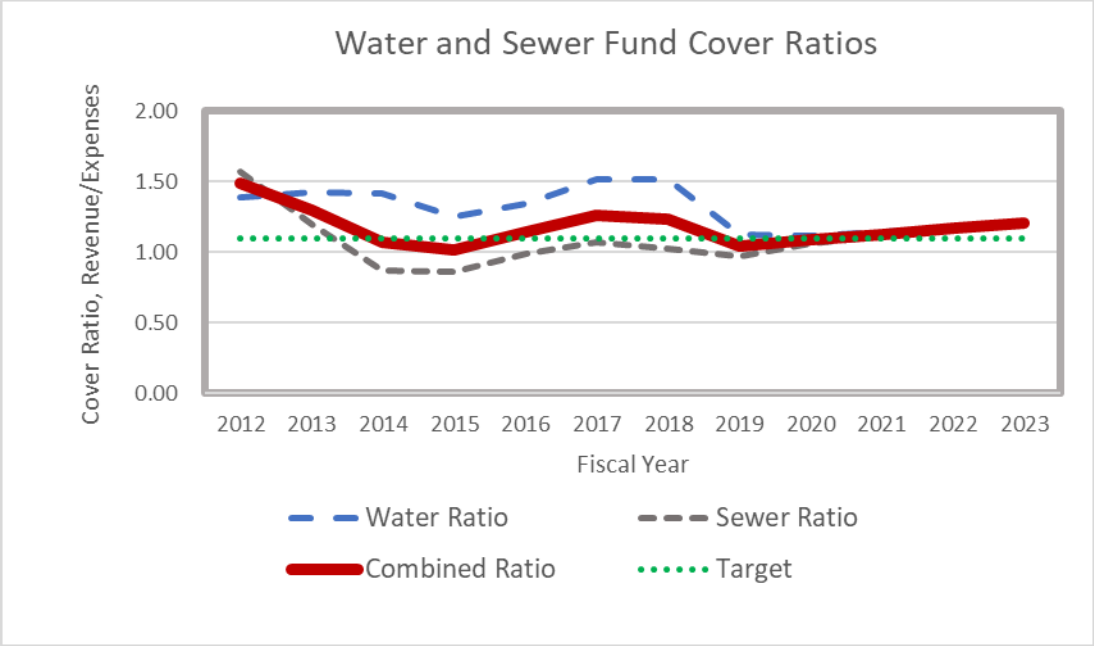
2022	$157	$4.22	$133	$8.62
2023	$163	$4.35	$145	$8.88

Coverage Ratios – FY 2019 through FY 2023 expense and revenue coverage ratios were projected based on annual expense increases observed during FY 2012 through FY 2017, assuming unit charge rates are increased as recommended.

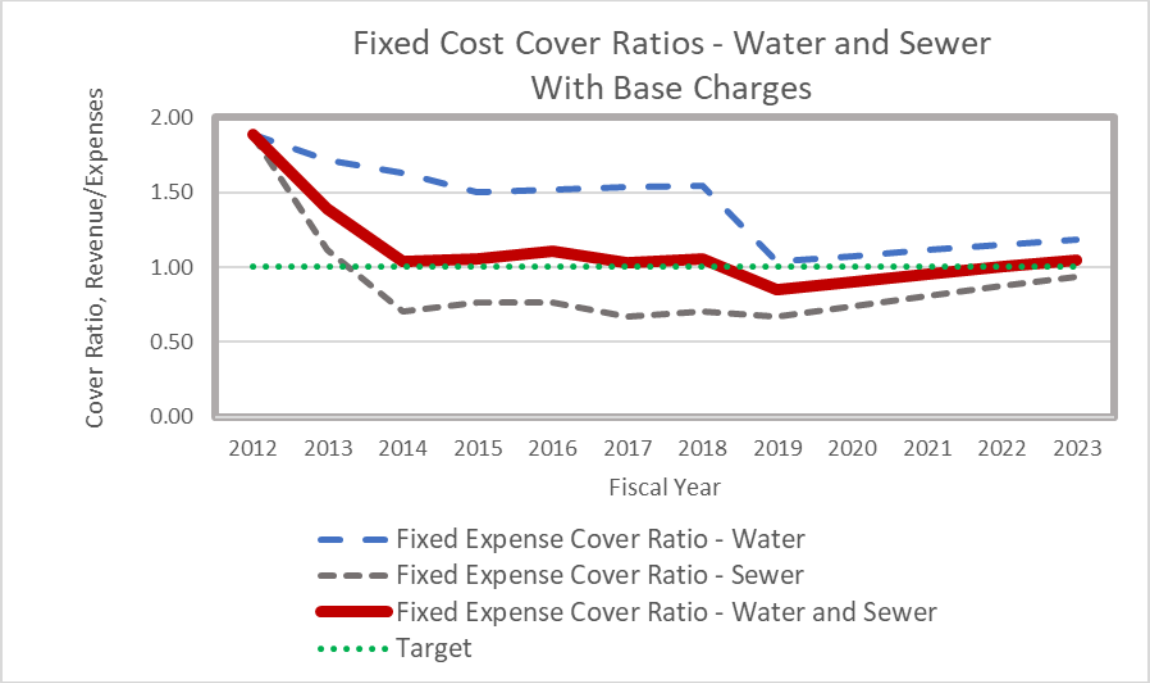
Following are graphs showing actual FY 2012 through FY 2017 Water and Sewer Fund revenues (exclusive of connection charge revenues which are set aside and reserved for capital improvements) and expenses (operating, debt, and capital outlay) along with revenue and expense projections through 2023. Coverage ratios are also plotted.



The target coverage ratio is 1.1. During FY 2012 through FY 2017, the water coverage ratio was more than adequate, but the sewer coverage ratio was not, primarily due to underpriced sewer base charges. Increasing annual step increases in the sewer base charge and decreasing both water and sewer step increases to 3% annually stabilizes both water and sewer future cover ratios.

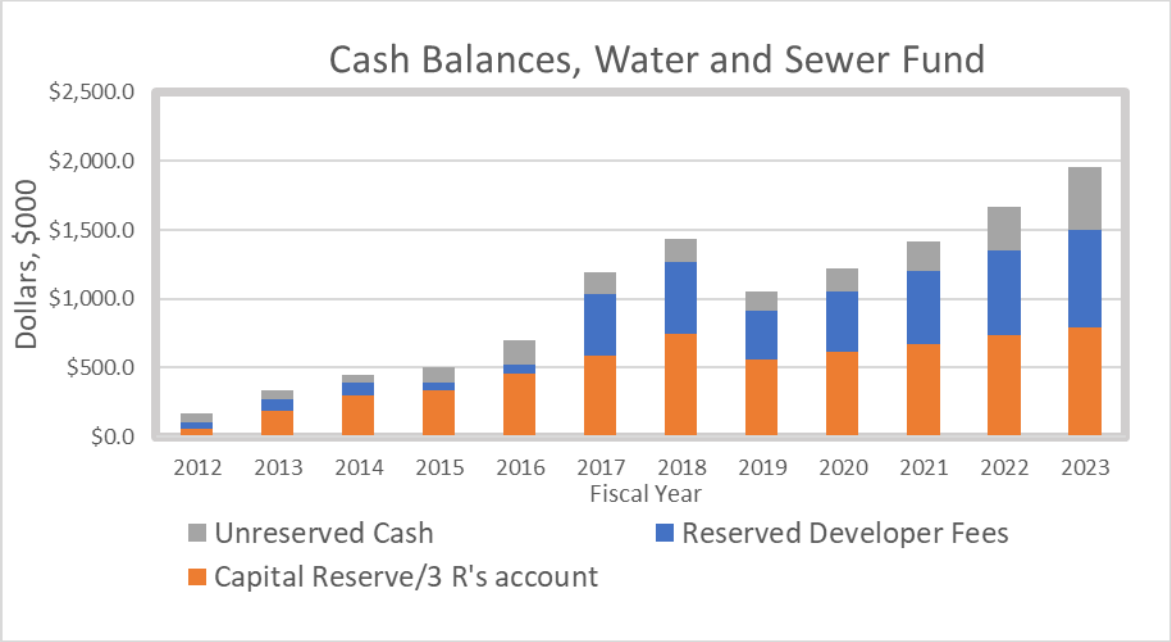


Increasing annual sewer base charge step increases to $12 annually also will help water and sewer fixed cost cover ratios converge by FY 2023.



Cash Balances –

Assuming $0.5 million of cash balance is used in FY 2019 to cash finance design and engineering costs of the Streetscape Project, the Fund cash balance will drop to about $1.0 million in FY 2019. Since the Project will benefit both existing and new customers, it is recommended that the Capital Reserve/3 R's account and the Reserved Developer Fee account be reduced by $0.25 million each. Finally, to establish a 6-month unreserved cash balance by FY 2023, it is recommended that the annual Capital Reserve/3 R's set aside be reduced to $30,000/year for Water and $30,000/year for Sewer, which will gradually replenish the Capital Reserve account and build up the unreserved cash balance.



References and Source Information

A. AWWA's, "Principles of Water Rates, Fees, and Charges", Manual of Water Supply Practices – M1
B. WEF's, "Financing and Charges for Wastewater Systems", Manual of Practice No. 27
C. Water and Sewer Ordinances – Rates and Charges – New Windsor, MD
D. Annual Financial Statements for New Windsor, MD, FY 2010 to FY 2017, Water and Sewer Fund Exhibits
E. Annual Budget Information for New Windsor, MD, FY 2012 through FY 2018, Water and Sewer Fund Exhibits
F. Descriptions of Water and Sewer Systems, provided by Town
G. New Windsor's, "2010 Comprehensive Plan", Water Resources Element
H. Carroll County's, "2010 Comprehensive Plan", Water Resources Element
I. Water production and water billed data, 2012 through 2017 provided by Town
J. Maryland's, "2010 Census Profile of General Population and Housing Characteristics" for New Windsor, MD