Fund 69000
Sewer Revenue

Focus

All Availability Charges and Sewer Service Charges associated with the Wastewater Management Program are credited to this fund as system revenues. The total receipts from all revenue sources are used to finance the following: Operation and Maintenance (Fund 69010); Construction Improvement Projects (Fund 69300); Debt Service (Fund 69020); Subordinate Debt Service (Fund 69040); and Sewer Bond Construction (Fund 69310). Any remaining balance in Fund 69000, Sewer Revenue, is used for future year requirements and required reserves.

The Program's Availability Charge and Sewer Service Charge are based on staff analysis and consultant recommendations included in the January 2017 Wastewater Revenue Sufficiency and Rate Analysis.

Availability Charges

The Availability Charge is a one-time charge to new customers for initial connection to the system. The revenue from the Availability Charge is used to offset the costs of expanding treatment facilities. In FY 2018, the Availability Charge will increase to $8,100 for single-family homes based on current projections of capital requirements. Rates are based on requirements associated with treatment plant upgrades and interjurisdictional payments that result from population growth, more stringent treatment requirements and inflation. The FY 2018 rate is consistent with the recommendations of the Department of Public Works and Environmental Services and the analysis included in the Wastewater Revenue Sufficiency and Rate Study Forecasted Period Fiscal Year 2017 though Fiscal Year 2022. Rates are expected to remain at the FY 2018 level through FY 2022. The following table displays the rates by category:

Category	FY 2017 Availability Charge	FY 2018 Availability Charge
Single Family	$7,750	$8,100
Townhouses and Apartments	$6,200	$6,480
Hotels/Motels	$1,938	$2,025
Nonresidential	$401/fixture unit	$405/fixture unit

Sewer Service and Base Charges

Sewer Service and Base Charges are revenues received from existing customers and are used to fully recover program operation and maintenance costs, debt service payments and capital project requirements attributable to improving wastewater treatment effluent quality as mandated by state and federal agencies. The five-year sewer rate plan approved by the Board of Supervisors as part of the FY 2017 Adopted Budget Plan proposed to increase the sewer charges by 2.9 percent in FY 2018. After a careful review, the Wastewater Management staff recommended no change from the FY 2018 rate, which will result in an annual increase of $16.80 to the typical household. The Sewer Service Charge will increase from $6.68 to $6.75 per 1,000 gallons of water consumed based on Fairfax County's winter quarter average consumption of 18,000 gallons.

The Base Charge will increase from $24.68 per quarter to $27.62 per quarter. The Base Charge provides for a more equitable rate structure by recovering a portion of the program's fixed costs. The industry practice for a fix charge revenue rate is 25 percent of operating revenues. In order to strive towards this level of recovery, a phased-in approach has been proposed with a fixed charge revenue rate in FY 2018 of 19.1 percent. The current system, including sewer lines, facilities, purchased capacity and equipment, is valued at approximately $2.0 billion. Based on the age and required maintenance of the system, it is imperative that reinvestment continues to be addressed. The implementation of the increases to the Base Charge will help ensure that all users of the system share in the fixed costs associated with reinvestment and operations.

Increases to both the Sewer Service Charge and Base Charge will change the annual average customer bill from $579.68 in FY 2017 to $596.48 in FY 2018, a cost increase of $16.80 or 2.9 percent. The FY 2018 average bill in Fairfax County is one of the lowest compared to the average bill in other regional jurisdictions even with the proposed increases. The increases in the Sewer Service Charge and Base Charge will partially offset the increased costs associated with capital project construction, system operation and maintenance, debt service and upgrades to meet new, more stringent nitrogen discharge limitations from wastewater treatment plants.

Year	Sewer Service Charge Per 1,000 gallons water	Base Charge Per Quarterly Bill	Sewer Charges Percentage Increase	Percent Fixed Charge Revenue
2017	$6.68	$24.68	NA	17.2%
2018	$6.75	$27.62	2.9%	19.1%
2019	$7.00	$30.38	4.9%	20.1%
2020	$7.34	$33.42	5.9%	21.1%
2021	$7.70	$36.76	5.9%	22.0%
2022	$8.08	$40.44	6.0%	22.8%

This level of revenue in FY 2018 will allow the system to meet permit conditions, meet and maintain all of the required financial targets through FY 2022, maintain competitive rates with neighboring utilities, continue to preserve its AAA bond rating, and require less debt to support capital projects.

The table below reflects the Wastewater Management Program's projected fiscal health in FY 2018 and FY 2019. The financial planning process incorporates the following indicators that are interrelated and structured to identify the adequacy of rates from a cash flow, business, and compliance standpoint. These indicators are used by the rating agencies to determine the Program's credit rating.

Calculated Financial Indicators

Financial Indicator	Target	Achieved	FY 2018	FY 2019
Net Revenue Margin	37.0% to 50.0%	Yes	49.5%	50.1%
Days Working Capital[1]	150 to 200 days	Yes	157	155
Debt Coverage Senior	Min. 3.00x	Yes	3.99x	3.88x
Debt Coverage All-in	1.80x to 2.20x	Yes	1.97x	1.81x
Affordability (% of median income spent on sewer bill)	Less than 1.2%	Yes	0.5%	0.5%
Debt to Net Plant in Service	Below 40.0% Never above 50.0%	Yes	36.2%	37.9%
Outstanding Debt per Connection	Max $3,000	Yes	$1,705	$1,900
Anticipated Sewer Bond Sales Through FY 2018				$110.0 M

(1) The Days Working Capital financial indicator is exclusive of Availability Charges in Fund 69000, Sewer Revenue, and Fund 69300, Sewer Construction Improvements. It is calculated based on Operating Expenses and 360 days.

It is anticipated that the rates in FY 2018 will support the County's ability to maintain high bond ratings (AAA by Fitch Investor Service and Standard and Poor's Corporation and Aaa by Moody's Investors Service, Inc.) from the rating agencies. These high credit ratings have enabled the County to sell bonds on behalf of the Program at interest rates lower than those obtained by most sewer authorities, thereby achieving savings throughout the life of the bonds.

Changes to FY 2017 Adopted Budget Plan

The following funding adjustments reflect all approved changes in the FY 2017 Revised Budget Plan since passage of the FY 2017 Adopted Budget Plan. Included are all adjustments made as part of the FY 2016 Carryover Review, FY 2017 Third Quarter Review, and all other approved changes through April 30, 2017.

♦ **Carryover Adjustments** **$0**

As part of the *FY 2016 Carryover Review*, the Board of Supervisors approved a decrease of $8,550,000 to the FY 2017 Transfers Out. This decrease was necessary based on a projected decline in revenue for FY 2017 and could be accommodated based on actual operational expenditures in FY 2016 and projected expenditures for FY 2017.

Fund 69000
Sewer Revenue

FUND STATEMENT

Fund 69000, Sewer Revenue

	FY 2016 Actual	FY 2017 Adopted Budget Plan	FY 2017 Revised Budget Plan	FY 2018 Advertised Budget Plan	FY 2018 Adopted Budget Plan
Beginning Balance	$113,352,458	$93,167,998	$77,112,069	$75,762,523	$75,761,614
Revenue:					
Lateral Spur Fees	$10,800	$16,800	$16,800	$16,800	$16,800
Water Reuse Charges	164,606	0	0	164,606	164,606
Sales of Service	8,982,274	10,363,067	10,363,067	7,851,209	7,851,209
Availability Charges	14,681,449	18,457,701	18,457,701	12,595,035	12,595,035
Connection Charges	460,273	34,200	34,200	34,200	34,200
Sewer Service Charges	180,554,126	194,471,344	185,198,777	193,605,508	193,605,508
Miscellaneous Revenue	261,719	250,000	250,000	250,000	250,000
Sale Surplus Property	54,777	100,000	100,000	100,000	100,000
Interest on Investments[1]	1,106,949	779,000	779,000	779,000	779,000
Total Revenue	$206,276,973	$224,472,112	$215,199,545	$215,396,358	$215,396,358
Total Available	$319,629,431	$317,640,110	$292,311,614	$291,158,881	$291,157,972
Transfers Out:					
Sewer Operation and Maintenance (69010)	$89,200,000	$101,550,000	$93,000,000	$101,440,000	$101,440,000
Sewer Bond Parity Debt Service (69020)	19,000,000	22,900,000	22,900,000	22,930,000	22,930,000
Sewer Bond Subordinate Debt Service (69040)	23,500,000	26,000,000	26,000,000	25,725,000	25,725,000
Sewer Construction Improvements (69300)	86,389,000	74,650,000	74,650,000	69,339,663	69,339,663
Sewer Bond Construction (69310)	24,428,362	0	0	0	0
Total Transfers Out	$242,517,362	$225,100,000	$216,550,000	$219,434,663	$219,434,663
Total Disbursements	$242,517,362	$225,100,000	$216,550,000	$219,434,663	$219,434,663
Ending Balance[2]	$77,112,069	$92,540,110	$75,761,614	$71,724,218	$71,723,309
Management Reserves:					
Operating and Maintenance Reserve[3]	$26,918,136	$39,841,791	$26,919,045	$26,919,045	$26,919,045
New Customer Reserve[4]	30,724,000	33,000,000	30,000,000	30,000,000	30,000,000
Virginia Resource Authority Reserve[5]	5,974,892	6,203,278	5,974,892	5,974,892	5,974,892
Capital Reinvestment Reserve[6]	13,495,041	13,495,041	12,867,677	8,830,281	8,829,372
Total Reserves	$77,112,069	$92,540,110	$75,761,614	$71,724,218	$71,723,309
Unreserved Balance	$0	$0	$0	$0	$0

Fund 69000
Sewer Revenue

[1] In order to account for revenues in the proper fiscal year, an audit adjustment in the amount of $908.91 has been reflected as a decrease to FY 2016 Interest on Investments. The audit adjustment was included in the FY 2016 Comprehensive Annual Financial Report (CAFR). Details of the audit adjustment were included in the FY 2017 Third Quarter package.

[2] The Wastewater Management Program maintains fund balances at adequate levels relative to projected debt service requirements, operation and maintenance expenses and capital improvements.

[3] The Operating and Maintenance Reserve provides for unforeseen expenses associated with sewer system emergencies. This reserve is targeted to be maintained at a level between $25 and $45 million. This level of reserve is based on industry practice to maintain existing customer reserves at a level which can support 30 and 180 days of working capital and approximately 50 percent of one year's requirements for rehabilitation and replacement of the current system's assets.

[4] The New Customer Reserve provides for debt service and administrative expenses associated with new customer debt, until such time as adjustments to availability charges can be accommodated. This reserve is based on payment expenses associated with one year of debt service and administrative expenses associated with new customer debt.

[5] The Virginia Resource Authority Reserve was established in anticipation of debt service reserve requirements for Virginia Resource Authority loans related to future treatment plant issues.

[6] The Capital Reinvestment Reserve is intended to address both anticipated and unanticipated increases within the Capital Improvement Program. This reserve will provide for significant rehabilitation and replacement of emergency infrastructure repairs. A reserve of 3.0 percent of the five year capital plan is consistent with other utilities and is recommended by rating agencies. Based on the total five year capital plan, an amount of $30 million would be required to reach 3.0 percent.