

The Utilities Fund is a proprietary enterprise fund used to account for funds needed to operate, maintain and expand Stafford County's Water and Wastewater system. The Utilities Fund is financed and managed in a manner similar to private business industry.

Provision of Water Services:

Two reservoirs, Smith Lake and Lake Mooney, supply water to Stafford County's treatment facilities. The Smith Lake Water Treatment Facility (WTF), rated at 10 million gallons per day (mgd), provides water to the northern region of Stafford and to the Camp Barrett area of Marine Corps Base Quantico. The Lake Mooney WTF, rated at a maximum of 12 mgd, provides water to the southern region. Combined, the two reservoirs hold over 7.1 billion gallons of water. If needed, interconnecting piping in the water distribution system allows the transfer of treated water from one service area to the other. The Abel Lake WTF was taken offline December 2014; however, the water supply remains available for future use. The capacity is expected to be needed in the future.

The water distribution system is comprised of more than 665 miles of pipe ranging in size from 2 to 30 inches in diameter, with four primary pumping stations. Three ground storage tanks, two standpipes and eleven elevated tanks provide water storage of nearly 20.65 million gallons.

Provision of Wastewater Services:

Wastewater treatment is provided by the Little Falls Run and Aquia wastewater treatment facilities (WWTF). The treatment capacity at Little Falls Run WWTF is currently permitted at 8 mgd. The current treatment capacity at Aquia WWTF is 10 mgd. Both treatment facilities utilize biological nutrient removal, ultraviolet light disinfection, and the low-load aeration system that allows higher flow rates without adversely affecting treatment. The wastewater collection and transmission system consists of 533 miles of sewer lines and 88 pump stations.

Utilities Department Personnel:

The Utilities Department employees provide customer service, daily inspections, planning, administration, operation and maintenance of the systems. An on-call Field Operations crew and an on-call mechanic handle after-hours emergencies. All water and wastewater treatment facility operators are fully trained and most are licensed. The treatment facilities and field crews maintain an excellent safety record.

Projected Demand for Service:

The Utilities Department finished Fiscal Year 2017 with 36,268 billed customer accounts. The number of billed customer accounts served by the Utilities Department is expected to reach 37,740 by the end of Fiscal Year 2019, assuming 2.0% growth. For the remainder of the planning period (FY19-FY22), accounts are projected to grow at a moderate rate of 1.25% per year.

Utilities Fund Budget

Stafford County FY19 Adopted Budget

	FY19		
	User Fees	Expansion Fees	Total
Operating Revenues			
Water/Sewer Fees	42,628,721		42,628,721
Other Charges and Fees	1,352,370		1,352,370
Use of Money/Property	76,923		76,923
Total Operating Revenues	44,058,014	0	44,058,014
Operating Expenditures			
Administration	1,095,983		1,095,983
Customer Service/ Inspection/Engineering	5,350,976		5,350,976
Smith Lake WTP	2,353,876		2,353,876
Lake Mooney WTP	3,430,522		3,430,522
Field Operations	5,129,437		5,129,437
Aquia WWTF	3,445,629		3,445,629
Little Falls Run WWTF	2,300,094		2,300,094
Transfer to Capital Projects	7,079,439		7,079,439
Maintenance	5,076,312		5,076,312
Total Operating Expenditures	35,262,268	0	35,262,268
Debt Service			
Existing Debt Service	7,981,196		7,981,196
New Debt Service	814,550		814,550
Total Debt Service	8,795,746	0	8,795,746
Total Personnel & Operating:	44,058,014	0	44,058,014
Capital Revenues			
Transfer from Operating Revenue	7,079,439		7,079,439
Availabilities/ProRata Fees		10,164,960	10,164,960
Grants			0
Bond Proceeds	5,551,960	5,248,040	10,800,000
Use of Fund Balance	2,572,801		2,572,801
Total Capital Revenues	15,204,200	15,413,000	30,617,200
Capital Expenditures			
433-06 - Moncure Pump Station Distribution Upgrade	45,000	45,000	90,000
472-01 - Shelton Shop Road 8" Main 472/433 Boundary Adjustment	95,000		95,000
342-15 & 16 - 24" Main from Enon Road Tank to Centreport Pkwy, via Abel Lake and existing 16" Replacement		100,000	100,000
Hydrant/Valves Replacement Program	100,000		100,000
Water Distribution Rehab - Neighborhood Systems	500,000		500,000
Water Distribution Rehab - Transmission Lines Replacements	500,000		500,000
Water Distribution Rehab - Small Water Projects	322,200		322,200
Water Extension Projects		250,000	250,000
Smith Lake - Electrical Switchgear	500,000		500,000
Enon Road Water Tank (formerly Centreport)	3,000,000	3,000,000	6,000,000
A-40 - Aquia Drive 8" Gravity Line, Delaware Drive to Vessel Drive	60,000		60,000
A-47 - Aquia Harbour 15" Gravity Line at Voyage Drive	40,000		40,000
A-51 - Coal Landing 15" Main, Greenridge Drive to US1	40,000		40,000
A-115 - Aquia @ Bridge Force Main	150,000		150,000
A-205 - Expand Upper Accokeek Pump Station		120,000	120,000
LFR-3 - Falls Run Interceptor, Phase 2	200,000	200,000	400,000
LFR-214 - Expand Claiborne Run PS	1,500,000		1,500,000
Gravity Lines & Interceptor Maintenance	500,000		500,000
Pump Stations	500,000		500,000
Little Falls Run Wastewater Treatment Facility - Influent Structure	350,000		350,000
Little Falls Run Wastewater Treatment Facility - Influent Grit Blowers	150,000		150,000
Aquia Wastewater Treatment Facility - Generator Tiebreaker (MCC Replacment)	1,000,000		1,000,000
Infiltration and Inflow Maintenance	250,000		250,000
Sewer Extension Projects		252,000	252,000
AWWTF-001 - Aquia WWTF Upgrade - Facilities Planning	75,000		75,000
AWWTF-002 - Aquia WWTF General Upgrades - Concrete Repair, Headworks, Power Distribution	380,000		380,000
LWWTF-001 - Little Falls Run WWTF Upgrade - Facilities Planning	125,000		125,000
Claiborne Run Gravity Sewer Project Construction	1,875,000	1,875,000	3,750,000
Lower Accokeek		7,571,000	7,571,000
Falls Run Sewage Force Main 24-inch	250,000		250,000
Claiborne Run Parallel Force Main		2,000,000	2,000,000
Vehicles and Equipment Replacement	1,554,000		1,554,000
Contingency Allowance	1,143,000	0	1,143,000
Total Capital Projects	15,204,200	15,413,000	30,617,200

Mission

Our mission is to provide water and wastewater services that satisfy the current and future needs and expectations of our customers.

Thinking Efficiently

The Department of Utilities strives to be as efficient as possible to keep costs to a minimum. Staff has recently worked to replace 1,200' of 12" waterline on Courthouse Road with internal forces instead of using a contractor. By performing this work with our own crews we were able to save \$200,000.

Utilities has also found opportunities to be more efficient through sewer rehabilitation work. A portion of the Claiborne Sewer Interceptor which was slated for replacement and upgrade was re-lined. The lining extends the life of the pipe by 20 - 30 years and is much more cost effective than full replacement. Additionally, Utility Operations and Engineering have been coordinating to reroute a portion of the flows from the Interceptor line and Claiborne Pump Station, significantly extending the capacity lifespan of both assets by 20 - 30 years. In total we estimate approximately \$15M in deferred spending and savings that can be used to address more immediate issues.



Who Are We?

- The Utilities Fund is a proprietary enterprise fund used to account for funds needed to operate, maintain and expand Stafford County's Water and Wastewater system. The Utilities Fund is financed and managed in a manner similar to private business industry. The number of billed customer accounts served by the Utilities Department is expected to reach 37,740 by the end of Fiscal Year 2019, assuming 2.0% growth. For the remainder of the planning period (FY19-FY22), accounts are projected to grow at a conservative rate of 1.25% per year.

Provision of Water Services:

- Smith Lake Water Treatment Facility (WTF), rated at 10 million gallons per day (mgd), provides water to the northern region of Stafford and to the Camp Barrett area of Marine Corps Base Quantico.
- Lake Mooney provides 5.4 billion gallons of water storage and up to 12 mgd of treated water for the southern portion of Stafford.

Provision of Wastewater Services:

- Little Falls Run Wastewater Treatment Facility is currently permitted at 8 mgd.
- Aquia Wastewater Treatment Facility is currently permitted at 10 mgd.
- The wastewater collection and transmission system consists of 533 miles of sewer lines and 88 pump stations.

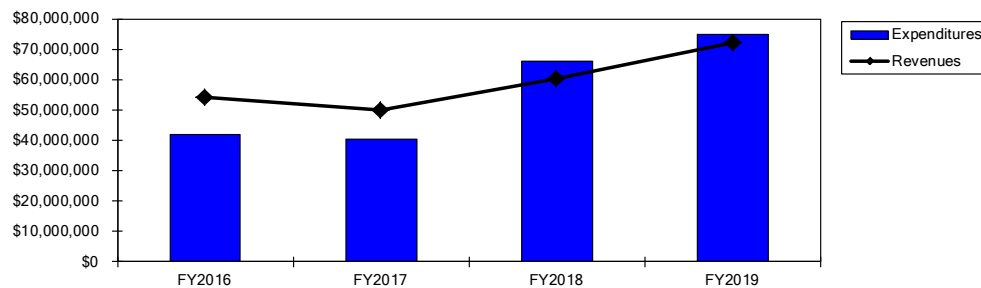
Utilities Department Personnel:

- Personnel provide customer service, daily inspections, planning, administration, operation and maintenance of the systems.
- An on-call Field Operations crew and an on-call mechanic handle after-hours emergencies.

Budget Summary

	FY2016 Actual	FY2017 Actual	FY2018 Adopted Budget	FY2019 Adopted Budget	Change '18 to '19	
Operating Revenue						
Water/Sewer Fees	\$31,027,171	\$35,852,460	\$34,765,471	\$42,628,721	\$7,863,250	22.62%
Other Charges and Fees	2,008,323	175,099	1,489,480	1,352,370	(137,110)	-9.21%
Use of Money/Property	0	371,330	0	76,923	76,923	100.00%
Total Operating Revenue	\$33,035,494	\$36,398,889	\$36,254,951	\$44,058,014	\$7,803,063	21.52%
Capital Revenue						
Availability/ProRata Fees	\$11,745,514	\$13,566,470	\$9,202,500	\$10,164,960	\$962,460	10.46%
Transfer from Operating	0	0	0	7,079,439	7,079,439	100.00%
Revenue Bond Proceeds	9,564,117	0	14,876,295	10,800,000	(4,076,295)	-27.40%
Total Capital Revenue	21,309,631	13,566,470	24,078,795	28,044,399	3,965,604	16.47%
Total Revenue	\$54,345,125	\$49,965,359	\$60,333,746	\$72,102,413	\$11,768,667	19.51%
Operating Expenditures						
Personnel	\$11,542,208	\$11,589,718	\$12,197,809	\$12,167,185	(\$30,624)	-0.25%
Operating	12,046,900	10,397,112	15,836,185	16,015,644	179,459	1.13%
Transfer to Capital	0	0	0	7,079,439	7,079,439	100.00%
Total Operating Expenditures	\$23,589,108	\$21,986,830	\$28,033,994	\$35,262,268	\$7,228,274	25.78%
Capital Expenditures						
Operating -Capital Projects	\$2,212,419	\$4,348,968	\$6,770,147	\$15,204,200	\$8,434,053	124.58%
Expansion-Capital Projects	9,328,321	6,982,189	22,034,148	15,413,000	(6,621,148)	-30.05%
Debt Service	6,755,233	7,022,497	9,014,939	8,795,746	(219,193)	-2.43%
Total Capital Expenditures	\$18,295,973	\$18,353,654	\$37,819,234	\$39,412,946	\$1,593,712	4.21%
Total Expenditures	\$41,885,081	\$40,340,484	\$65,853,228	\$74,675,214	\$8,821,986	13.40%
Inc/(Dec) to Fund Balance	(\$20,575,450)	(\$26,774,014)	(\$41,774,433)	(\$46,630,815)	(\$4,856,382)	11.63%

Funded Positions						
Full-Time Positions	139	140	140	150	10	7.14%
Part-Time Positions	1	1	1	0	(1)	-100.00%



Notes:

- (1) In September of 2013 the Board of Supervisors approved \$45 million in water and sewer revenue bonds to meet critical infrastructure demands.
- (2) FY18 Adopted Budget includes the continued improvement of the Courthouse Area Water system.
- (3) FY19 Adopted Budget includes cost savings associated with additional personnel.

Goals/Objectives

- Provide quality water and uninterrupted service by effectively managing and operating water and wastewater facilities, including water production and transmission, wastewater treatment and conveyance, and residuals disposal to meet customer demands and regulatory requirements. (Service Level: 1, 2, 8, 9)
- Prioritize and implement a capital improvement program to meet expansion, regulatory and other performance goals, while keeping within the constraints of the Utilities Funding sources and policies. (Service Level: 10, 11, 13)
- Fund maintenance and repair of water and wastewater infrastructure at a level that will provide for continued sustainability of the system infrastructure. (Service Level: 10, 11)
- Implement a 5 year Unidirectional Water System Flush and a 5 year Sewer System Inspection, Clearing and Evaluation program for Inflow, Infiltration and Fats Oils and Grease (FOG). (Service Level: 12, 13)

Total Budget

\$74,675,214

Notable Changes

Personnel

- 2.5% Salary increase
- Personnel- 9 additional staff and 1 conversion from part-time to full-time
- Over-time cost savings
- Adjusted budget to reflect to live budget
- Staff reorganization
- Retirements

Operating

- Increase of User Fees due to the previously approved rate increase of 9%
- Increase to operations for periodic equipment replacement and Repair, Replace and Rehabilitation Projects

Capital Expansion/Operating

- Operating-Capital Projects has been increased as a result of the changes to the Water and Sewer Master Plan
- Expansion-Capital Projects has been decreased as a result of the changes to the Water and Sewer Master Plan
- Debt Service has been reduced as a result of project delays and the use of available cash

Service Levels

	FY2017 Actual	FY2018 Budget	FY2019 Plan
1 Billion gallons of water treated (Manual Tracking)	3.185	3.200	3.300
2 Billion gallons of wastewater treated (Manual Tracking)	3.047	3.100	3.200
3 # of water and sewer billed accounts (HTE System)	36,268	37,000	38,463
4 # of Miss Utility locate requests processed (Manual Tracking)	20,337	22,500	25,000
5 # of water meters read (HTE System)	430,161	440,000	450,000
6 # of delinquency notices (HTE System)	37,064	38,000	39,000
7 # of delinquent water turn-offs (HTE System)	5,303	5,600	5,900
8 Wastewater treatment effectiveness rate - % of days (Manual Tracking)	100%	100%	100%
9 Drinking water compliance rate - % of days (Manual Tracking)	100%	100%	100%
10 Operating Cost to treat water (per thousand gallons) (Manual Tracking)	\$1.28	\$1.35	\$1.45
11 Operating cost to treat wastewater (per thousand gallons) (Manual Tracking)	\$1.61	\$1.70	\$1.80
12 Inspect, Clean and Evaluate Sewer Pipe for Inflow, Infiltration and FOG (Miles)	80	80	100
13 Flush and Inspect Water System (Unidirectional Flush, Miles)	0	50	100

Accomplishments

- Utility crews successfully performed the first unidirectional flushing of nearly 50 miles of water pipe in Aquia Harbour and Falmouth. The budget requests additional personnel to ensure that the unidirectional flushing program can continue.
- The Little Falls Run and Aquia Wastewater Treatment Facilities both received the NACWA Peak Performance Award. The award recognizes member agency facilities for outstanding compliance of National Pollutant Discharge Elimination System permit limits.
- Utility workers inspected and cleaned 80 miles of sewer main FY2017. The budget requests additional personnel to ensure that the inspection and cleaning program of the sewer lines can continue and identify sources of Inflow and Infiltration (I&I) and Fats, Oils and Grease (FOG).

Utilities Fund Revenue

Stafford County FY19 Adopted Budget

	FY2017 Actual	FY2018 Adopted Budget	FY2019 Adopted Budget	Changes '18 to '19	
Operating Revenues					
Water & Sewer Fees	\$35,852,460	\$34,765,471	\$42,628,721	\$7,863,250	22.62%
Other Charges & Fees	175,099	1,489,480	1,352,370	(137,110)	-9.21%
Use of Money & Property	371,330	0	76,923	76,923	100.00%
	<u>\$36,398,889</u>	<u>\$36,254,951</u>	<u>\$44,058,014</u>	<u>\$7,803,063</u>	<u>21.52%</u>
Capital Revenues					
Availability/ProRata Fees	13,566,470	9,202,500	10,164,960	\$962,460	10.46%
Transfer from Operating	0	0	7,079,439	7,079,439	100.00%
Revenue Bonds	0	14,876,295	10,800,000	(4,076,295)	-27.40%
	<u>\$13,566,470</u>	<u>\$24,078,795</u>	<u>\$28,044,399</u>	<u>\$3,965,604</u>	<u>16.47%</u>
Other Sources					
Prior Year Fund Balance	0	5,519,482	2,572,801	(2,946,681)	-53.39%
	<u>\$0</u>	<u>\$5,519,482</u>	<u>\$2,572,801</u>	<u>(\$2,946,681)</u>	<u>-53.39%</u>
Total	<u><u>\$49,965,359</u></u>	<u><u>\$65,853,228</u></u>	<u><u>\$74,675,214</u></u>	<u><u>\$8,821,986</u></u>	<u><u>13.40%</u></u>

Water & Sewer Fees

Utilities customers are billed monthly for water consumption and wastewater usage. Stafford County projects 37,000 billed customer accounts by June 2019, assuming 2% growth. The Board of Supervisors approved a rate increase of 9% that became effective July 1, 2016. This increase will help the Department meet ever growing needs for infrastructure rehabilitation and replacement while continuing to effectively address customer concerns.

Availability Fees

Customers desiring to use the Stafford County water or wastewater system pay a one-time fee per equivalent dwelling unit (EDU). Currently the availability fees are \$6,900 for water and \$3,500 for wastewater (per EDU). These fees are designated for capital expansion and are used as a source to pay debt service for expansion projects. The budget projects 832 EDUs per year for water service and 780 for sewer service based on recent trends.

Pro-Rata Fees

Developers pay a pro-rata share of the cost of constructing Stafford's water or wastewater transmission systems. Fees are based on the estimated impact the development project will have on the appropriate water pressure or wastewater zone.

Use of Money & Property

Interest is earned on the cash and investment balances of the Utility Enterprise Fund. Interest revenue is expected to decline over the next five years as cash balances are spent down relative to large capital projects that are underway.

Other Charges & Fees

This category includes all other fees that are not included in the categories listed above.

Revenue Bonds

In September 2013, the Board of Supervisor's approved \$45 million of water and sewer revenue bonds. The County issued \$17 million in bonds in 2014 and \$9.5 in 2016 to fund various water and wastewater system improvements. The remaining authorization will be issued in 2019.

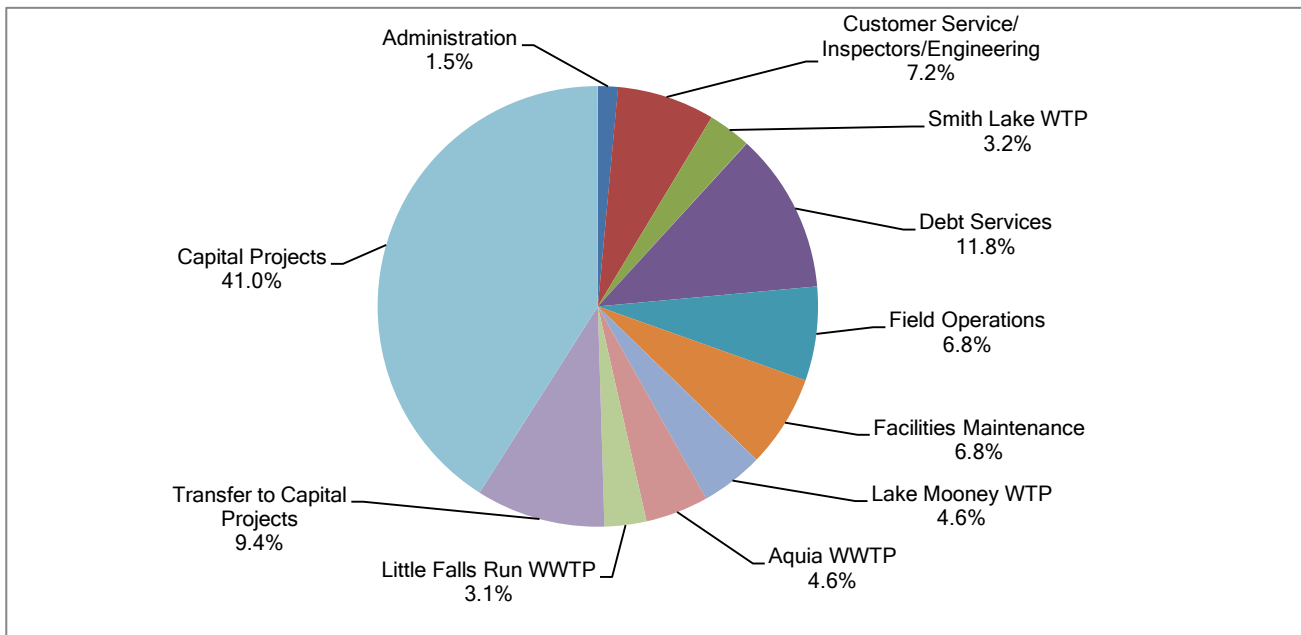
Grants

No grant revenues are projected for FY19

Utilities Fund Expenditures

Stafford County FY19 Adopted Budget

Expenditures	FY2017	FY2018	FY2019	Changes	
	Actual	Adopted Budget	Adopted Budget	'18 to '19	
Administration	\$980,647	\$1,260,700	\$1,095,983	(\$164,717)	-13.1%
Customer Service/ Inspectors/Engineering	4,787,866	6,155,182	5,350,976	(804,206)	-13.1%
Smith Lake WTP	1,739,727	2,181,948	2,353,876	171,928	7.9%
Debt Services	7,022,497	9,014,939	8,795,746	(219,193)	-2.4%
Field Operations	4,997,674	5,129,119	5,129,437	318	0.0%
Facilities Maintenance	3,908,472	4,748,939	5,076,312	327,373	6.9%
Lake Mooney WTP	2,808,910	3,373,192	3,430,522	57,330	1.7%
Aquia WWTP	3,065,575	2,897,380	3,445,629	548,249	18.9%
Little Falls Run WWTP	1,915,243	2,287,534	2,300,094	12,560	0.5%
Transfer to Capital Projects	0	0	7,079,439	7,079,439	100.0%
Capital Projects	9,666,408	28,804,295	30,617,200	1,812,905	6.3%
Total Expenditures	\$40,893,019	\$65,853,228	\$74,675,214	\$8,821,986	13.40%



Projected Available Cash Balance

Stafford County FY19 Adopted Budget

6/30/2018 Projected Equity in Cash and Investments		\$66,415,740
FY19 Projections:		
Revenues		
Water & Sewer Fees		\$42,628,721
Availability & Pro Rata Fees		10,164,960
Other Charges & Fees		1,352,370
Use of Money & Property		76,923
Transfer from Operating		7,079,439
Revenue Bonds		10,800,000
	Total Revenues	<u>\$72,102,413</u>
Expenses		
Personnel		\$13,074,186
Operating		15,108,643
Transfer to Capital Projects		7,079,439
Capital Projects		30,617,200
Debt Service		8,795,746
	Total Expenses	<u>\$74,675,214</u>
	Change in fund balance	(2,572,801)
6/30/2019 Projected Equity in Cash and Investments		63,842,939
Less:		
Debt Set Asides		(\$7,981,196)
Construction and Maintenance		(49,236,393)
	Total Restricted Funds	<u>(\$57,217,589)</u>
	Unrestricted	\$6,625,350