

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.

Mission

To ensure the Department of Public Works provides safe, efficient, and reliable water and wastewater services to satisfy the current and future needs of County water and sewer customers.

Who Are We?

The Department of Public Works, primarily through the Division of Utility Operations, operates, maintains, improves, and expands Stafford County's water and wastewater system in conjunction with properly financing and managing the Utilities Fund.

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.
- The water distribution system consists of 703 miles of water lines, 15 water tanks, 5,812 hydrants and 14 booster pump stations.

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 537 miles of sewer lines and 93 sewer pump stations.

Utilities Department Personnel:

- Personnel provide administration, customer service, planning, engineering, inspections, operations, and maintenance of the systems.
- On-call Field Operations crew and on-call Mechanics handle after-hours emergencies.

Budget Summary

	FY2017 Actual	FY2018 Actual	FY2019 Adopted Budget	FY2020 Adopted Budget	Changes '19 to '20	
Operating Revenues						
Water & Sewer Fees	\$34,387,788	\$37,536,141	\$42,447,189	\$45,240,830	\$2,793,641	6.6%
Other Charges & Fees	1,637,611	1,628,420	1,515,937	1,832,881	316,944	20.9%
Use of Money & Property	371,330	723,657	94,889	1,235,203	1,140,314	1201.7%
Total Operating Revenue	\$36,396,729	\$39,888,218	\$44,058,015	\$48,308,914	\$4,250,899	9.6%
Operating Expenditures						
Personnel	\$11,589,718	\$11,615,557	\$12,167,185	\$12,722,830	\$555,645	4.6%
Operating Expenditures	11,804,852	14,291,874	22,034,520	27,263,314	5,228,794	23.7%
Other Capital	1,169,886	1,840,464	1,060,563	335,000	(725,563)	-68.4%
Debt Service	3,752,059	3,180,444	8,795,746	7,987,770	(807,976)	-9.2%
Total Operating Expenditures	\$28,316,515	\$30,928,339	\$44,058,014	\$48,308,914	\$4,250,900	9.6%
Capital Revenues (CIP)						
ProRata Fees	\$1,814,639	\$2,313,489	\$1,694,161	\$1,797,250	\$103,089	6.1%
Availability Fees	11,751,832	11,289,697	8,470,800	8,470,800	0	0.0%
Transfer from Operating	0	0	7,079,439	10,928,650	3,849,211	54.4%
Revenue Bonds	0	0	10,800,000	0	(10,800,000)	-100.0%
State and Federal Revenue	2,160	0	0	0	0	0.0%
Total Capital Revenues	\$13,568,631	\$13,603,186	\$28,044,400	\$21,196,700	(\$6,847,700)	-24.4%
Capital Expenditures (CIP)						
Operating - Capital Projects	\$3,020,706	\$2,629,606	\$15,204,200	\$14,529,950	(\$674,250)	-4.4%
Expansion - Capital Projects	6,773,870	5,417,556	15,413,000	6,666,750	(8,746,250)	-56.7%
Total Capital Expenditures	\$9,794,576	\$8,047,162	\$30,617,200	\$21,196,700	(\$9,420,500)	-30.8%
Increase/(Decrease to Fund Balance)	\$11,854,269	\$14,515,903	(\$2,572,799)	\$0	\$2,572,799	0.0%

Funded Positions						
Full-Time Positions	140	140	149	152	3	2.01%
Part-Time Positions	1	1	0	0	0	0.00%

Notable Changes

Personnel

- 5% Salary increase
- Projected health insurance savings
- 1 Full-Time Public Information Officer
- 2 Full-Time Utilities Line Worker I

Operating

- Increase in chemical cost
- Increase in fuel cost associated with hauling sludge to the Landfill
- Increase cost for backup generators, pumps and general materials

Capital Expansion/Operating

- The CIP focuses on water system optimization, 3R projects, and system expansions

Expenditures

	FY2018	FY2019	FY2020	Changes	
	Actual	Adopted Budget	Adopted Budget	'19 to '20	
Expenditures					
Admin	\$1,006,769	\$1,095,983	\$1,113,119	\$17,136	1.6%
Customer Service/ Inspector/Engineering	4,915,399	5,350,976	5,434,639	83,663	1.6%
Smith Lake	2,151,143	2,353,876	2,409,559	55,683	2.4%
Debt Service	3,180,444	8,795,746	7,987,770	(807,976)	-9.2%
Field Operations	6,044,254	5,129,437	5,945,099	815,662	15.9%
Maintenance	3,663,633	5,076,312	5,295,216	218,904	4.3%
Lake Mooney	3,060,629	3,430,522	3,678,455	247,933	7.2%
Aquia	2,983,698	3,445,629	3,168,721	(276,908)	-8.0%
Little Falls Run	1,997,059	2,300,094	2,347,686	47,592	2.1%
Capital	9,272,473	30,617,200	21,196,700	(9,420,500)	-30.8%
Transfer to Capital	700,000	7,079,439	10,928,650	3,849,211	54.4%
Total Expenditures	\$38,975,501	\$74,675,214	\$69,505,614	(\$5,169,600)	-6.9%

Revenues

	FY2018 Actual	FY2019 Adopted Budget	FY2020 Adopted Budget	Changes '19 to '20	
Operating Revenues					
Water & Sewer Fees	\$37,536,141	\$42,447,188	\$45,240,830	\$2,793,642	6.6%
Other Charges & Fees	1,628,420	1,515,937	1,832,881	316,944	20.9%
Use of Money & Property	723,657	94,889	1,235,203	1,140,314	1201.7%
Total Operating Revenue	\$39,888,218	\$44,058,014	\$48,308,914	\$4,250,900	9.6%
Capital Revenues					
ProRata Fees	\$2,313,489	\$1,694,161	\$1,797,250	\$103,089	6.1%
Availability Fees	11,289,697	8,470,800	8,470,800	0	0.0%
Transfer from Operating	0	7,079,439	10,928,650	3,849,211	54.4%
Revenue Bonds	0	10,800,000	0	(10,800,000)	-100.0%
Prior Year Fund Balance	0	2,572,800	0	2,572,800	-100.0%
Total Capital Sources	13,603,186	30,617,200	21,196,700	(4,274,900)	-30.8%
Total Revenue	\$53,491,404	\$74,675,214	\$69,505,614	(\$24,000)	-6.9%

Water & Sewer Fees

Utilities customers are billed monthly for water consumption and wastewater usage. The Department of Public Works projects 39,150 billed customer accounts by June 2020, assuming 2% growth. 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 Stafford County's water and/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.

Pro-Rata Fees

Developers pay a pro-rata share of the cost of constructing Stafford County's water and/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.

Grants

No grant revenues are projected for FY2020.

Service Levels	FY2018 Actual	FY2019 Budget	FY2020 Plan
1. Billion gallons of water treated (Manual Tracking)	3.359	3.603	3.850
2. Billion gallons of wastewater treated (Manual Tracking)	3.204	3.304	3.400
3. Number of water and sewer billed accounts (Billing System)	37,035	38,600	39,150
4. Number of Miss Utility locate requests processed (Manual Tracking)	26,270	23,960	25,110
5. Number of water meters read (Billing System)	429,158	430,746	435,000
6. Number of delinquency notices (Billing System)	18,914	17,342	19,000
7. Number of delinquent water turn-offs (Billing System)	3,042	3,158	3,300
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)	\$1.40	\$1.46	\$1.49
11. Operating cost to treat wastewater (per thousand gallons) (Manual Tracking)	\$1.39	\$1.51	\$1.54
12. Inspect, Clean and Evaluate Sewer Pipe for Inflow, Infiltration and FOG (Miles)	73	82	86
13. Flush and Inspect Water System (Unidirectional Flush, Miles)	50	60	60

Goals/Objectives

- Provide quality, uninterrupted services 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 Levels 1, 2, 8, and 9)
- Effective and convenient services for all water and sewer customers by providing accurate and efficient meter readings and billing invoices, while continuously managing phone call and email requests associated with Public Works - Utilities Customer Service activities. (Service Levels 3, 4, 5, 6, and 7)
- Prioritize and implement a Capital Improvement Program (CIP) to meet expansion needs, improve the distribution and collection systems, and comply with regulatory and other performance goals while managing within the constraints of the Utilities Enterprise Fund. (Service Levels 10, 11, and 13)
- Continue the standards of quality maintenance and repair of the water and wastewater infrastructure for continued sustainability of the system infrastructure. (Service Levels 10 and 11)
- Continue the unidirectional water system flush, along with further inspection and cleaning of the wastewater system through the Inflow and Infiltration (I&I) and Fats/Oils/Grease (FOG) programs. (Service Levels 12 and 13)

UTILITIES FUND BUDGET

FY2020 Adopted Budget

	FY2020		
	User Fees	Expansion Fees	Total
Operating Revenues			
Water/Sewer Fees	\$45,240,830	\$0	\$45,240,830
Other Charges and Fees	1,832,881	0	1,832,881
Use of Money/Property	1,235,203	0	1,235,203
Total Operating Revenues	\$48,308,914	\$0	\$48,308,914
Operating Expenditures			
Admin	1,113,119	0	1,113,119
Customer Service/ Inspector/Engineering	5,434,639	0	5,434,639
Smith Lake	2,409,559	0	2,409,559
Lake Mooney	3,678,455	0	3,678,455
Field Operations	5,945,099	0	5,945,099
Aquia	3,168,721	0	3,168,721
Little Falls Run	2,347,686	0	2,347,686
Transfer to Capital	10,928,650	0	10,928,650
Maintenance	5,295,216	0	5,295,216
Total Operating Expenditures	\$40,321,144	\$0	\$40,321,144
Debt Service			
Existing Debt Service	7,083,770	0	7,083,770
New Debt Service	904,000	0	904,000
Total Debt Service	\$7,987,770	\$0	\$7,987,770
Total Personnel & Operating	\$48,308,914	\$0	\$48,308,914
Capital Revenues			
Transfer from Operating Revenue	10,928,650	0	10,928,650
Availabilities/ProRata Fees	0	10,268,050	10,268,050
Grants	0	0	0
Bond Proceeds	0	0	0
Use of Fund Balance	0	0	0
Total Capital Revenues	\$10,928,650	\$10,268,050	\$21,196,700
Capital Expenditures			
Redundant Gate Replacement for Abel Lake and Smith Lake	80,000	0	80,000
410-300 Construct PRV between 480/410 Zone along Warrenton Road near Sanford Drive	81,000	0	81,000
410-301: Construct PRV between 480/410 Zone along CVA Parkway near Sanford Drive	81,000	0	81,000
Hydrant Valves Replacement Program	100,000	0	100,000
SLWTP-003 Smith Lake WTP - Water Treatment optimization Studies	100,000	0	100,000
Water Distribution Rehab - Small Water Projects	150,000	0	150,000
Water Extension Projects	0	250,000	250,000
342-06 - 24" Main from Truslow Road/I-95 to Enon Road Water Tank	150,000	150,000	300,000
LMWTP-005 - Lake Mooney WTP Water Treatment Optimization Studies	500,000	0	500,000
Water Distribution Rehab - Neighborhood Systems	500,000	0	500,000
Water Distribution Rehab - Transmission Lines Replacement	500,000	0	500,000
LMWTP-001 Lake Mooney WTP - Install Second Centrifuge	700,000	0	700,000
Smith Lake Pump Station Replacement	1,200,000	0	1,200,000
342-15 24" Main from Enon Road Tank to Centerport Parkway	0	4,000,000	4,000,000
Water Sub-Total	\$4,142,000	\$4,400,000	\$8,542,000
LFR-15 - Replace 18", 15" and 12" with 24" Line along Claiborne Run from Morton Road to Kings Hill Road	103,150	103,150	206,300
Infiltration & Inflow Maintenance	250,000	0	250,000
Little Falls Run Wastewater Treatment Facility - Filter Replacement	250,000	0	250,000
LWWTF-002 - Little Falls Run WWTF General Upgrades - Concrete Repair, Headworks, UV	260,000	0	260,000
Sewer Extension Projects	262,000	0	262,000
A-47 - Aquia Harbour 15" Gravity Line at Voyage Drive	300,000	0	300,000
A-51 - Coal Landing 15" Main, Greenridge Drive to US1	410,000	0	410,000
A-40 - Aquia Drive 8" Gravity Line, Delaware Dr. to Vessel Dr.	470,000	0	470,000
Gravity Lines & Interceptor Maintenance	500,000	0	500,000
Pump Stations	500,000	0	500,000
LFR-209 - Replace Falls Run Pump Station	342,100	342,100	684,200
A-115 - Aquia @ Bridge Force Main	1,050,000	0	1,050,000
AWWTF-002 - Aquia WWTF General Upgrades - Concrete repair, Headworks, Power Distribution	1,520,000	0	1,520,000
LFR-120: Construct a 24-inch force main from Falls Run PS to Claiborne Run Parallel FM	1,821,500	1,821,500	3,643,000
Sewer Sub-Total	\$8,038,750	\$2,266,750	\$10,305,500
Vehicle and Equipment Replacement	972,200	0	972,200
Contingency Allowance	1,377,000	0	1,377,000
Other Sub-Total	\$2,349,200	\$0	\$2,349,200
Total Capital Projects	\$14,529,950	\$6,666,750	\$21,196,700

Expansion includes Availability and Pro Rata Fees, Bond Revenues and interest on investment allocated to this category

PROJECTED AVAILABLE CASH BALANCE

FY2020 Adopted Budget

6/30/2019 Projected Equity in Cash and Investments

\$66,415,740

FY20 Projections:	
Revenues	
Water & Sewer Fees	\$45,240,830
Availability & Pro Rata Fees	10,268,050
Other Charges & Fees	1,832,881
Use of Money & Property	1,235,203
Transfer from Operating	10,928,650
Revenue Bonds	0
Total Revenues	\$69,505,614
Expenses	
Personnel	\$12,722,830
Operating	16,127,561
Capital Operating Budget	335,000
Transfer to General Fund	207,103
Transfer to Capital Projects	10,928,650
Capital Projects	21,196,700
Debt Service	7,987,770
Total Expenses	\$69,505,614
Change in fund balance	\$0
6/30/2020 Projected Equity in Cash and Investments	\$66,415,740
Less:	
Debt Set Asides	(\$7,981,196)
Construction and Maintenance	(49,236,393)
Total Restricted Funds	(\$57,217,589)
Unrestricted	\$9,198,151