

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 711 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 541 miles of sewer lines and 93 pump stations.

Utilities Department Personnel:

The Department of Public Works – Utilities Division provides 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 Department of Public Works – Utilities Division finished Fiscal Year 2019 with 37,845 billed customer accounts. The number of billed customer accounts served by the Department of Public Works – Utilities Division is expected to exceed 38,500 by the end of Fiscal Year 2020, assuming 1.5-2.0% growth. For the remainder of the planning period (FY20-FY22), accounts are projected to grow at a moderate rate of 1.5% 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 711 miles of water lines, 16 water tanks, 5,933 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 541 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

	FY2018 Actual	FY2019 Actual	FY2020 Adopted Budget	FY2021 Adopted Budget	Changes '20 to '21	
Operating Revenues						
Water & Sewer Fees	\$37,536,141	\$37,536,141	\$45,240,830	\$41,752,473	(\$3,488,357)	-7.7%
Other Charges & Fees	1,617,984	1,617,984	1,832,881	1,280,306	(552,575)	-30.1%
Availability Fees for Expansion Debt Service	0	0	0	2,031,974	2,031,974	0.0%
Use of Money & Property	723,657	723,657	1,235,203	702,500	(532,703)	-43.1%
Total Operating Revenue	\$39,877,782	\$39,877,782	\$48,308,914	\$45,767,253	(\$2,541,661)	-5.3%
Operating Expenditures					0	0.0%
Personnel	\$11,615,557	\$11,838,309	\$12,722,830	\$13,775,381	\$1,052,551	8.3%
Operating Expenditures	13,531,872	14,131,768	16,127,561	16,488,584	361,023	2.2%
Other Capital	1,840,464	1,902,390	335,000	434,500	99,500	29.7%
Debt Service	3,597,943	3,112,147	7,987,770	7,082,380	(905,390)	-11.3%
Transfer to General Fund	24,000	854,620	207,103	122,334	(84,769)	-40.9%
Transfer to Capital	700,000	0	10,928,650	7,864,074	(3,064,576)	-28.0%
Total Operating Expenditures	\$31,309,836	\$31,839,234	\$48,308,914	\$45,767,253	(\$2,541,661)	-5.3%
Capital Revenues					0	0.0%
ProRata Fees	\$2,313,489	\$2,313,489	\$1,797,250	\$336,500	(\$1,460,750)	-81.3%
Availability Fees	11,329,070	11,329,070	8,470,800	5,593,126	(2,877,674)	-34.0%
Transfer from Operating	0	0	10,928,650	7,864,074	(3,064,576)	-28.0%
Total Capital Revenues	\$13,642,559	\$13,642,559	\$21,196,700	\$13,793,700	(\$7,403,000)	-34.9%
Capital Expenditures					0	0.0%
Operating - Capital Projects	\$2,629,606	\$5,996,105	\$14,529,950	\$10,247,060	(\$4,282,890)	-29.5%
Expansion - Capital Projects	5,417,556	4,960,100	6,666,750	3,546,640	(3,120,110)	-46.8%
Total Capital Expenditures	\$8,047,162	\$10,956,205	\$21,196,700	\$13,793,700	(\$7,403,000)	-34.9%
Increase/(Decrease to Fund Balance)	\$14,163,343	\$10,724,902	\$0	\$0	\$0	-100.0%

Funded Positions						
Full-Time Positions	140	149	152	153	1	0.66%
Part-Time Positions	1	0	0	0	0	0.00%

Notable Changes

Personnel

- 1 Full-Time 3R / Service District Project Manager (50% funded through Service District Funds)

Operating

- No change to rates

Capital Expansion/Operating

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

Water & Sewer Fees

Utilities customers are billed monthly for water consumption and wastewater usage. The Department of Public Works projects 38,600 billed customer accounts by June 2020, assuming 1.5-2% growth. This increase will help the Department meet ever growing needs for infrastructure rehabilitation and replacement while continuing to effectively address customer concerns. A 1.5% water and sewer rate increase is proposed for FY 2021.

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. No bonds are planned in FY2021.

Grants

No grant revenues are projected for FY2021.

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

FY2021 Adopted Budget

Service Levels	FY2019 Actual	FY2020 Budget	FY2021 Plan
1. Billion gallons of water treated (Manual Tracking)	3.450	3.850	3.700
2. Billion gallons of wastewater treated (Manual Tracking)	3.220	3.400	3.600
3. Number of water and sewer billed accounts (Billing System)	37,845	39,150	39,150
4. Number of Miss Utility locate requests processed (Manual Tracking)	23,960	25,110	31,131
5. Number of water meters read (Billing System)	434,473	435,000	450,274
6. Number of delinquency notices (Billing System)	15,900	19,000	17,530
7. Number of delinquent water turn-offs (Billing System)	3,210	3,300	3,560
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)	\$1.46	\$1.49	\$1.59
11. Operating cost to treat wastewater (per thousand gallons) (Manual Tracking)	\$1.51	\$1.54	\$1.58
12. Inspect, Clean and Evaluate Sewer Pipe for Inflow, Infiltration and FOG (Miles)	82	86	160
13. Flush and Inspect Water System (Unidirectional Flush, Miles)	60	60	75

UTILITIES FUND BUDGET

FY2021 Adopted Budget

	FY2021		
	User Fees	Expansion Fees	Total
Operating Revenues			
Water/Sewer Fees	\$41,752,473	\$0	\$41,752,473
Other Charges and Fees	1,280,306	0	1,280,306
Availability Fees for Expansion Debt Service	0	2,031,974	2,031,974
Use of Money/Property	702,500	0	702,500
Total Operating Revenues	\$43,735,279	\$2,031,974	\$45,767,253
Operating Expenditures			
Admin	1,225,349	0	1,225,349
Customer Service/ Inspector/Engineering	5,982,585	0	5,982,585
Smith Lake	2,839,373	0	2,839,373
Lake Mooney	3,886,476	0	3,886,476
Field Operations	6,087,297	0	6,087,297
Aquia	3,301,492	0	3,301,492
Little Falls Run	2,536,705	0	2,536,705
Transfer to Capital	7,864,074	0	7,864,074
Maintenance	4,961,522	0	4,961,522
Total Operating Expenditures	\$38,684,873	\$0	\$38,684,873
Debt Service			
Existing Debt Service	5,050,406	2,031,974	7,082,380
Total Debt Service	\$5,050,406	\$2,031,974	\$7,082,380
Total Personnel & Operating	\$43,735,279	\$2,031,974	\$45,767,253
Capital Revenues			
Transfer from Operating Revenue / User Fees	10,134,500	0	10,134,500
Availabilities/ProRata Fees	0	3,659,200	3,659,200
Grants	0	0	0
Bond Proceeds	0	0	0
Use of Fund Balance	0	0	0
Total Capital Revenues	\$10,134,500	\$3,659,200	\$13,793,700
Capital Expenditures			
342-06 - 24" Main from Truslow Road/I-95 to Enon Road Water Tank	4,000,000	0	4,000,000
Hydrant Valves Replacement Program	100,000	0	100,000
LMWTP -002 Lake Mooney Thickener Tank and Equipment	0	800,000	800,000
Redundant Gate Replacement for Abel Lake and Smith Lake	80,000	0	80,000
Water Distribution Rehab - Neighborhood Systems	500,000	0	500,000
Water Distribution Rehab - Small Water Projects	300,000	0	300,000
Water Distribution Rehab - Transmission Lines	500,000	0	500,000
Water Sub-Total	\$5,480,000	\$800,000	\$6,280,000
AWWTF-002 - Aquia WWTF General Upgrades - Electrical, Headworks and Ancillary	971,000	0	971,000
Gravity Lines & Interceptor Maintenance	500,000	0	500,000
Infiltration & Inflow Maintenance	250,000	0	250,000
LFR-129 - Replace 8" with 16" Force Main from Potomac Creek Pump Station	264,000	0	264,000
LFR-209 - Replace Falls Run Pump Station	500,000	0	500,000
LWWTF-002 - Little Falls Run WWTF General Upgrades - Headworks and Effluent Filter	1,000,000	0	1,000,000
LWWTF-003 - Little Falls Run WWTF Denitrification Upgrade Solids Handling Silos and Systems	0	2,500,000	2,500,000
Pump Stations Rehabilitation and Replacement	500,000	0	500,000
Sewer Sub-Total	\$3,985,000	\$2,500,000	\$6,485,000
Vehicle and Equipment Replacement	443,000	0	443,000
Contingency Allowance	585,700	0	585,700
Other Sub-Total	\$1,028,700	\$0	\$1,028,700
Total Capital Projects	\$10,493,700	\$3,300,000	\$13,793,700

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

PROJECTED AVAILABLE CASH BALANCE

FY2021 Adopted Budget

6/30/2020 Projected Equity in Cash and Investments

\$74,274,060

FY21 Projections:	
Revenues	
Water & Sewer Fees	\$41,752,473
Availability & Pro Rata Fees	7,961,600
Other Charges & Fees	1,280,306
Use of Money & Property	702,500
Transfer from Operating	7,864,074
Revenue Bonds	0
Total Revenues	\$59,560,953
Expenses	
Personnel	\$13,775,381
Operating Expenditures	16,488,584
Other Capital	434,500
Transfer to General Fund	122,334
Transfer to Capital	7,864,074
Capital Projects	13,793,700
Debt Service	7,082,380
Total Expenses	\$59,560,953
Change in fund balance	\$0
6/30/2021 Projected Equity in Cash and Investments	\$74,274,060
Less:	
Debt Set Asides	(\$7,082,380)
Construction and Maintenance	(52,269,030)
Total Restricted Funds	(\$59,351,410)
Unrestricted	\$14,922,650

