



## **Enterprise Fund**

A fund established to account for operations that are financed and operated in a manner similar to private business where the services provided are funded directly through user charges.



# SEWER UTILITY FUND



**GOAL 4 ENVIRONMENTAL STEWARDSHIP AND COMMUNITY PROSPERITY:** Protect natural resources and support and promote community and economic vitality for all residents of Durham County.

## Description

The Utility Division is responsible for the operation of the County-Owned Triangle Wastewater Treatment Plant (TWWTP) and reclaimed water system, associated collection system, Wexford subdivision collection system, and the Rougemont Water System. The Utility Division's primary purpose is to provide wastewater services to Research Triangle Park and surrounding areas to support the Durham County portion of the Research Triangle Park Economic Engine. The Utility Division provides water service to a portion of Rougemont. Support for these services are provided through utility charges to users of the system. The Utility Division Office is located at 5926 NC Hwy 55 East, Durham, North Carolina, 27713. Office hours are Monday – Friday, 8:00 AM – 5:00 PM, Telephone: 919-560-9033; Fax: 919-544-8590

## Budget

Category	FY 2019-20 Actual	FY 2020-21 Original	FY 2020-21 Estimated	FY 2021-22 Requested	FY 2021-22 Approved	% Change Orig. v. Appr.
<b>Expenditure</b>	<b>\$10,127,428</b>	<b>\$11,492,100</b>	<b>\$11,203,436</b>	<b>\$11,994,081</b>	<b>\$11,994,081</b>	<b>4.37%</b>
Personnel	\$1,948,460	\$2,355,740	\$2,034,244	\$2,575,878	\$2,681,236	13.82%
Operating	\$3,842,262	\$4,067,843	\$4,078,559	\$4,291,654	\$4,294,514	5.57%
Capital	\$636,191	\$600,000	\$622,116	\$615,000	\$615,000	2.50%
Other Expenditure	\$1,809,935	\$1,798,416	\$1,798,416	\$1,778,970	\$1,778,970	-1.08%
Transfers Out	\$1,890,580	\$2,670,101	\$2,670,101	\$2,732,579	\$2,624,361	-1.71%
<b>Revenue</b>	<b>\$12,020,668</b>	<b>\$11,492,100</b>	<b>\$13,046,472</b>	<b>\$11,994,081</b>	<b>\$11,994,081</b>	<b>4.37%</b>
Licenses and Permits	\$53,937	\$10,000	\$57,151	\$22,000	\$22,000	120.00%
Investment Income	\$362,011	\$300,000	\$300,000	\$300,000	\$300,000	0.00%
Sewer Connection Fees	\$1,370,914	\$793,500	\$2,300,721	\$795,500	\$795,500	0.25%
Service Charges	\$683					
Enterprise Charges	\$10,225,522	\$10,388,600	\$10,388,600	\$10,876,581	\$10,876,581	4.70%
Other Revenues	\$7,600					

FY 2019-20 Actual FTE	FY 2020-21 Original FTE	FY 2020-21 Estimated FTE	FY 2021-22 Requested FTE	FY 2021-22 Approved FTE
27.00	29.00	29.00	31.00	32.00

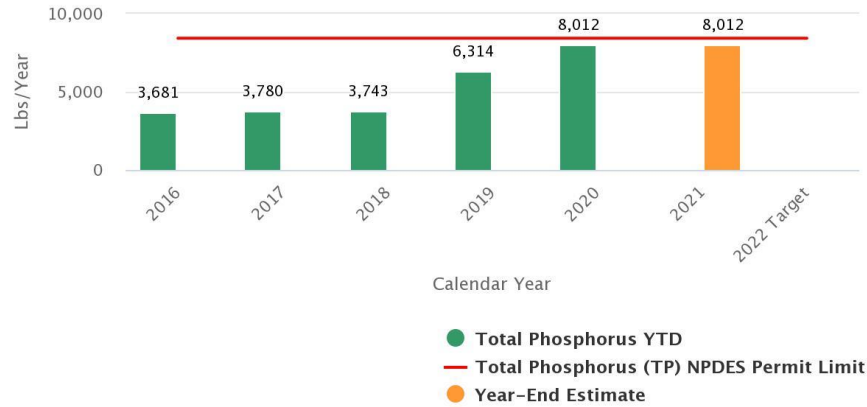
Payments for Sewer Utility Debt Service		
	FY 2020-21	FY 2021-22
<b>PRINCIPAL</b>	\$1,456,146	\$1,471,146
<b>INTEREST</b>	\$337,270	\$302,824
<b>Bond Agency Fees</b>	\$5,000	\$5,000
<b>TOTAL</b>	<b>\$1,798,416</b>	<b>\$1,778,970</b>

## Budget Highlights

- Sewer consumption rates will be increased by 4.76% to address anticipated re-investments as well as costs related to operations to continue to ensure our high level of operational readiness and environmental protection. (listed in the fee schedule).
- Three new FTEs are being funded in the FY 2021-22 budget:
  - **Utility Locator:** An essential function of the Project Management and in accordance with North Carolina General Statute, Durham County is required to respond to NC811 Utility locate tickets within mandated timeframes and mark all Durham County infrastructure. The County Utility Division does not currently have the means to perform locates with County staff and contracts this work on an annual basis.
  - **Office Assistant:** The position that would be able to assist Utility Administration, Compliance, Project Management, Superintendent, and the Deputy Director. This position would assist the Compliance Manager as needed to research materials pertaining to industrial chemicals and users, assist Compliance and Project Management in tracking manufacturing and industrial tenants within the Durham County sewer basin, assist the Deputy Director and Project Manager with maintaining sewer lateral spreadsheets, assist Superintendent with work order data entry, and assist with maintaining a new asset management software program. This position would be funded by the Enterprise Fund.
  - **Project Manager:** An essential function of Project Management is to manage the expansion of the Durham County Utilities through Development Review and Capital Improvement Projects. The Division manages a significant number of capital projects throughout the County. The current staffing is not enough to support rapid development and growth in the County's residential and commercial areas. The Division is seeking a Project Manager dedicated to the Sewer Utility Division to assist with capital projects improvement plan and managing capital projects. Historically, the Division has been contracting out with a consultant, but hiring a full-time Project Manager would have significant financial savings. The Project Manager position would be funded through fees for services in the Enterprise Fund.

## Performance Measures

**Measure: ANNUAL POUNDS OF TOTAL PHOSPHORUS (TP) DISCHARGED FROM TRIANGLE WWTP**



**Measure description:** This measure shows the amount of total phosphorus being discharged into Northeast Creek from the Triangle Wastewater Treatment Plant (WWTP). Per the National Pollutant Discharge Elimination System (NPDES) permit, the WWTP can discharge a certain quantity of phosphorus per year. The limits are strict and were incorporated into the NPDES permit to fulfill the Jordan Lake Nutrient Rules requirements. Phosphorus in the right amount is needed to sustain life but too much can make water harmful. Levels fluctuate based on concentrations discharged by users, concentrations discharged by the POTW from chemical use in the system to reduce odor complaints, types and population of organisms at that time, and temperature changes. Total phosphorus removal occurs through some biological treatment, but the biggest reduction is through chemical treatment. A larger reduction can occur but the WWTP must account for higher chemical cost. Typically, we average lower numbers during the first half of the year by feeding more chemical but there was an error by the operational staff in communicating feed rates. The results are also higher this year because we completed the upgrades to Train 2 and when this train was put online, running three trains resulted in longer detention times, in turn causing phosphorus to re-release into the system. We are now only operating two trains and seeing improvement each month. For 2020, the TWWTW was below the permit limit. The target is to be below 8,432 lbs./year, which is the current NPDES permit limit.

**Measure: ANNUAL POUNDS OF TOTAL NITROGEN (TN) DISCHARGED FROM TRIANGLE WWTP**



**Measure description:** This measure shows the amount of total nitrogen being discharged into Northeast Creek from the Triangle Wastewater Treatment Plant (WWTP). Per the NPDES permit, the WWTP can discharge a certain quantity of nitrogen per year. The limits are strict and were incorporated into the NPDES permit to fulfill the Jordan Lake Nutrient Rules requirements. Nitrogen in the right amount is needed to sustain life but too much can make water harmful. Levels fluctuate based on concentrations discharged by users, concentrations discharged by the POTW from chemical use in the system to reduce odor complaints, types and population of organisms at that time, and temperature changes. Total nitrogen removal occurs through biological treatment. There has been an increase in total nitrogen since the completion of Train 2 using diffused air. Staff is still trying to learn how to operate the new system in Train 2 and continue the operation of Train 3 with the rotor system for aeration. TWWTW was below the permit limit and in compliance for 2020. The target is to be below 111,207 lbs./year, which is the current NPDES permit limit.

---

# STORMWATER ENTERPRISE FUND

---



**GOAL 4 ENVIRONMENTAL STEWARDSHIP AND COMMUNITY PROSPERITY:** Protect natural resources and support and promote community and economic vitality for all residents of Durham County.

## Description

The purpose of the Stormwater and Erosion Control program is to protect water quality through enforcing compliance for development activity with state regulations and County ordinances. The Stormwater Enterprise Fund consists of revenues from plans review and permitting fees as well as the Durham County Stormwater Utility Fee.

The Durham County Stormwater and Erosion Control Division is tasked with finding ways to manage the ongoing challenge of stormwater impacts to the unincorporated areas of the County and meet state requirements (Jordan Lake and Falls Lake Rules) to reduce pollutants, especially nutrients like phosphorous and nitrogen, in our waterways. As the County continues to grow, the need to address increasing stormwater runoff and the pollutants it carries is a necessity. Nutrient management for both existing and new development is mandated by the North Carolina Department of Environmental Quality.

In order to pay for the projects that will be needed to address nutrient loading from existing development and meet state stormwater requirements, Durham County has implemented a Stormwater Utility Fee, to go into effect in FY2021. It is a fair, equitable, and stable way for Durham County to collect revenue to help fund the activities required to meet the nutrient rules. It is estimated that it may cost Durham County more than \$70 million dollars over the next 20 years to reduce pollutants in our waterways to meet the state requirements.

Previously, the Stormwater and Erosion Control Division were included as part of the General Fund in the Engineering and Environmental Services. However, with the adoption of the Durham County Stormwater Utility Fee, the entirety of the Division was moved to its own Enterprise Fund. Revenues for existing activities including stormwater and erosion control plans reviews, land disturbance permits, stormwater permits and annual inspection fees, and reinspection fees associated with enforcement actions, will be combined with revenues from the Stormwater Fee to fund water quality protection programs throughout the County.

## Programs

### Erosion Control

The Erosion Control Program administers and enforces the sedimentation and erosion control sections of the Durham City-County Unified Development Ordinance. A state-delegated local program, it includes all privately funded, non-agricultural land-disturbing activities of more than 12,000 square feet in both the City of Durham and the unincorporated areas of the County. The Program conducts plan reviews, issues land disturbance permits & inspects permitted projects for compliance.

### Stormwater

The Stormwater Program is responsible for administering the Durham County Stormwater Ordinance, which applies to all unincorporated areas of Durham County, and for enforcing the Neuse River, Falls Lake, and Jordan Lake nutrient management new development rules through development reviews including flood control, water quantity, and water quality control measures. It is also responsible for maintaining the County's compliance with the rules through stormwater retrofit identification, illicit discharge detection and elimination, and education and outreach activities.

### Stormwater Utility

The Stormwater Utility Fee is charged to all properties in the unincorporated areas of Durham County with development. The fee is based on the amount of impervious surface area on a property. It is divided into residential and non-residential charges, with residential properties paying one of three flat rate tiers. Non-residential properties pay per the total amount of impervious area with no maximum charge. Revenues from the Stormwater Utility Fee fund compliance actions required by the Neuse River, Falls Lake, and Jordan Lake nutrient management strategies.

## Budget

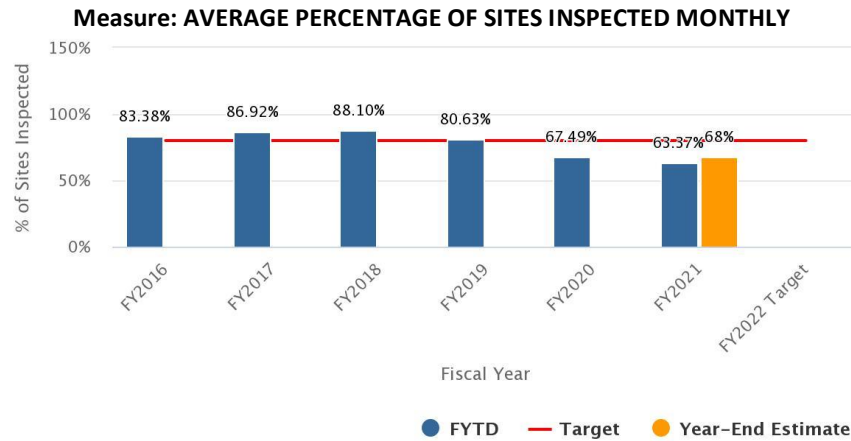
Category	FY 2019-20 Actual	FY 2020-21 Original	FY 2020-21 Estimated	FY 2021-22 Requested	FY 2021-22 Approved	% Change Orig. v. Appr.
<b>Expenditure</b>		<b>\$1,413,936</b>	<b>\$1,416,091</b>	<b>\$1,413,936</b>	<b>\$1,413,936</b>	<b>0.00%</b>
Personnel		\$692,396	\$692,396	\$758,460	\$758,460	9.54%
Operating		\$487,540	\$493,695	\$386,890	\$386,890	-20.64%
Capital		\$4,000				-100.00%
Transfers Out		\$230,000	\$230,000	\$268,586	\$268,586	16.78%
<b>Revenue</b>		<b>\$1,413,936</b>	<b>\$1,413,936</b>	<b>\$1,413,936</b>	<b>\$1,413,936</b>	<b>0.00%</b>
Licenses and Permits		\$594,500	\$594,500	\$594,500	\$594,500	0.00%
Sewer Connection Fees		\$5,000	\$5,000	\$5,000	\$5,000	0.00%
Enterprise Charges		\$813,936	\$813,936	\$813,936	\$813,936	0.00%
Other Revenues		\$500	\$500	\$500	\$500	0.00%

FY 2019-20 Actual FTE	FY 2020-21 Original FTE	FY 2020-21 Estimated FTE	FY 2021-22 Requested FTE	FY 2021-22 Approved FTE
	8.00	8.00	8.00	8.00

### Budget Highlights:

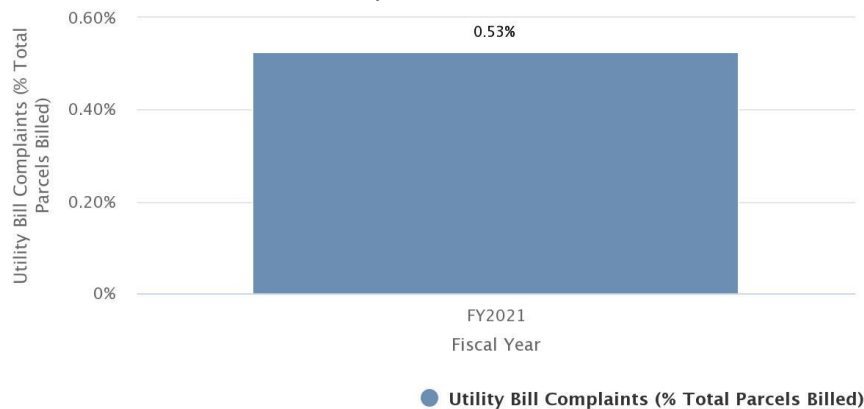
- At the currently approved 1/3 rate, the Stormwater Utility Fee is projected to generate \$813,936 by the end of FY 2020-21. The Sedimentation & Erosion Control program is projected to receive \$594,500 in land-disturbing plan review, permit, and related fee revenue by the end of FY 2020-21. Along with a few other very minor revenues, these two numbers comprise the \$1.4 million that represents the total of the revenue side for this new Stormwater Utility Enterprise Fund.
- The Budget table above doesn't show a budget in FY 2019-20 due to Stormwater being budgeted in the General Fund. In FY 2020-21, Stormwater was moved to an Enterprise Fund.

## Performance Measures



**Measure description:** This measure shows the average percentage of permitted sites inspected monthly. Monthly inspections are critical in maintaining compliance with land disturbance permits and erosion control plans. Maintaining compliance is the best way to keep sediment out of Durham County streams and rivers, thus protecting the environment. COVID-19 limited staff time in the office and thus inspection time throughout FY 2021. An extremely wet winter also hampered site accessibility, further limiting inspections. However, construction did not slow down, resulting in a net gain of 30 new permitted projects versus completed projects. Staff were already stretched thin managing the all-time high number of permits. Staff shifted focus to newer sites, larger sites, and those with a history of noncompliance, while smaller sites were inspected less frequently. Eighty percent (80%) of sites are still inspected every 6-8 weeks and compliance remains high. The addition of an Erosion Control Supervisor, approved in the FY 2021 budget, has increased the number of boots on the ground, and thus inspection frequency, since the position was filled in January, which should continue through the remainder of FY 2021. Better weather, vaccinations, a relaxing of COVID restrictions, and most importantly the addition of staff should increase inspection frequency over the remaining months of FY 2021. Staff will continue to prioritize new sites, larger sites, and those with a history of noncompliance in FY 2021-22. With full staffing, the Division will seek to return to the previous goal of 80% of all sites inspected monthly.

**Measure: UTILITY BILL COMPLAINTS (AS A PERCENTAGE OF TOTAL PARCELS BILLED)**



**Measure description:** This measure shows the number of Stormwater Utility Bill complaints as a percentage of the total number of parcels billed. This gives an idea of the accuracy of billing as well as a general acceptance of the utility fee overall. This is the first year of the Stormwater Utility, so no trends can be identified at this time. In FY 2021, only 82 complaints were received by Stormwater staff from the over 15,000 properties billed. As the fee was billed on the tax bill, due in January, few new complaints are expected. Stormwater staff will continue education efforts to further acceptance of the Stormwater Utility Fee, but as with any fee, some complaints can be expected. With no increase to fees, a similar number are anticipated for FY 2021-22 (around 0.55%).