

# 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 mission of the Durham County Engineering and Environmental Services Department is to protect regional water quality through the administration of the sewer use, storm water, and erosion control ordinances; to improve County facilities through the management of capital projects; to improve the County's environmental management particularly related to greenhouse gas emissions; and to preserve natural and scenic lands, farms, and forests. 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. 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

|                          | FY2017-18<br>Actual | FY2018-19<br>Original | FY2018-19<br>Estimate | FY2019-20<br>Requested | FY2019-20<br>Approved |
|--------------------------|---------------------|-----------------------|-----------------------|------------------------|-----------------------|
| <b>Expenditure</b>       |                     |                       |                       |                        |                       |
| Personnel                | \$1,730,572         | \$2,147,698           | \$1,794,234           | \$2,228,017            | \$2,228,017           |
| Operating                | \$2,938,952         | \$3,760,501           | \$4,766,668           | \$3,686,733            | \$3,686,733           |
| Capital                  | \$469,173           | \$450,000             | \$953,142             | \$651,000              | \$651,000             |
| Other Expenditure        | \$1,835,966         | \$1,825,814           | \$1,822,574           | \$1,812,364            | \$1,812,364           |
| Transfers Out            | \$500,000           | \$2,196,067           | \$3,750,480           | \$1,533,486            | \$1,533,486           |
| <b>Expenditure Total</b> | <b>\$7,474,663</b>  | <b>\$10,380,080</b>   | <b>\$13,087,098</b>   | <b>\$9,911,600</b>     | <b>\$9,911,600</b>    |
| <b>Revenue</b>           |                     |                       |                       |                        |                       |
| Licenses and Permits     | \$16,350            | \$10,000              | \$8,050               | \$5,000                | \$5,000               |
| Investment Income        | \$313,465           | \$35,000              | \$0                   | \$300,000              | \$300,000             |
| Sewer Connection Fees    | \$1,482,643         | \$794,080             | \$1,532,090           | \$794,000              | \$794,000             |
| Service Charges          | \$2,018             | \$0                   | \$0                   | \$0                    | \$0                   |
| Enterprise Charges       | \$8,698,012         | \$9,541,000           | \$9,011,575           | \$8,812,600            | \$8,812,600           |
| <b>Revenue Total</b>     | <b>\$10,512,488</b> | <b>\$10,380,080</b>   | <b>\$10,551,715</b>   | <b>\$9,911,600</b>     | <b>\$9,911,600</b>    |
| <b>Net Total</b>         | <b>\$3,037,825</b>  | <b>\$0</b>            | <b>\$2,535,383</b>    | <b>\$0</b>             | <b>\$0</b>            |
| <b>FTEs</b>              | <b>26.00</b>        | <b>27.00</b>          | <b>27.00</b>          | <b>27.00</b>           | <b>27.00</b>          |

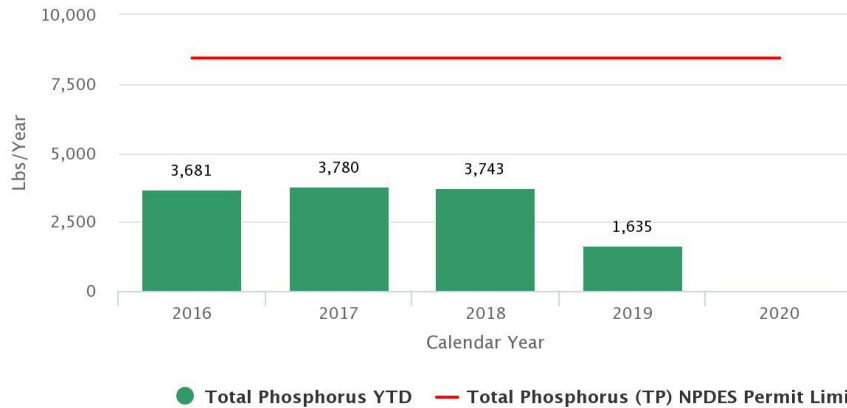
| Payments for Enterprise Fund Debt Service |                     |                     |
|---|---------------------|---------------------|
|   | 2018-19<br>Approved | 2019-20<br>Approved |
| <b>PRINCIPAL</b>                          | \$1,416,146         | \$1,436,146         |
| <b>INTEREST</b>                           | \$404,668           | \$371,218           |
| <b>Bond Agency Fees</b>                   | \$5,000             | \$5,000             |
| <b>TOTAL</b>                              | <b>\$1,825,814</b>  | <b>\$1,812,364</b>  |

## Budget Highlights

- Sewer consumption rates will be increased by 4.93% 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).
- One new improved vehicle for maintenance at (\$52,000) to allow maintenance/collection system staff an additional vehicle to handle daily workloads and emergencies more efficiently. The vehicle should help in carrying supplies and tools through muddy and slick areas especially during inclement weather and sanitary sewer overflows. This vehicle is paid for with the fees collected in this fund.

## Performance Measures

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

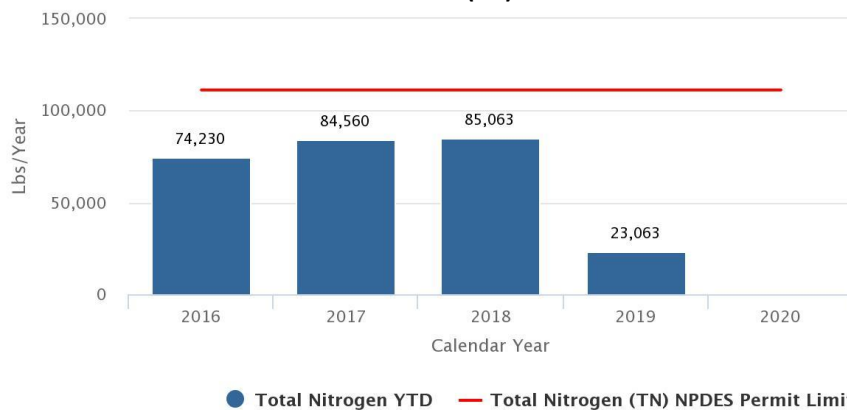


**Measure description:** This measure shows the total phosphorus discharged into Northeast Creek from the Triangle Wastewater Treatment Plant (WWTP). Under natural conditions, phosphorus is typically not found in water, but due to human activities, excessive loadings in fresh water systems occur, causing algal growth. Water quality gets further impaired when bacteria consume dead algae and use up the dissolved oxygen causing fish kills. Per 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.

**Trend explanation:** 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 microorganisms 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 the higher chemical cost.

**FY2019-20 target:** 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 total nitrogen discharged into Northeast Creek from the Triangle WWTP. Under natural conditions, nitrogen is abundant in the environment and is used in agriculture as fertilizers. Due to human activities, excessive loadings of nitrogen in fresh water systems cause over-stimulation of aquatic plants and algae. This can lead dissolved oxygen to be used up in the water from decomposition, causing fish kills, clogging of water intakes, and blocking of light deeper into water. Per 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.

**Trend explanation:** 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 microorganisms at that time, and temperature changes. Total nitrogen removal occurs through biological treatment.

**FY2019-20 target:** The target is to be below 111,207 lbs./year, which is the current NPDES permit limit.