Project Updates



Town of Beaufort

December 20, 2021

16 Active Projects (November)

- 1 Parks & Recreation
- 5 Street and Pedestrian Improvements
- 7 Utility
 - \rightarrow 1 Water
 - \rightarrow 5 Sewer
 - \rightarrow 1 Water & Sewer
- 1 Stormwater
- 2 Building

15 **16 Active Projects (Today)**

- 1 Parks & Recreation
- 5 Street and Pedestrian Improvements
- 7 Utility • 1 Water
 - \rightarrow 5 Sewer
 - ightarrow 1 Water & Sewer
- 1 Stormwater
- **1** Building

(1 through 8)

- Cedar Street Park
- FY20 Street Rehabilitation & Construction
- Turner Street 100 Block Pedestrian Improvements
- Town Wide Sidewalks (Part 5-FY20 Street Rehabilitation & Construction)
- Downtown Parking
- Turner Street Broad Street Traffic Calming Improvements
- Campen Road Waterline Extension/Upgrade
- USDA Funded Utility Project (Water, Sewer & Stormwater)

(9 through 16)

- Wastewater Asset Inventory Assessment
- High-Rate Infiltration System Permit Reacquisition
- ECHS Sewer Pumping Issue Investigation
- Wastewater Design Unit Flow Reduction Request
- PruittHealth Sewer Service Construction
- Meeting Street Drainage Improvements
- Fire Station No. 2 Renovation
- Train Depot Ceiling Repair/Painting

USDA-Funded Utility Project (Water, Sewer & Stormwater)

25 Percent Design Meeting

• Complete (3 days)

129

- Direction provided
- New "homework" for Town staff

November

Campen Road Water Line Extension

- Essentially complete
 - Testing & disinfection complete

December

- Connected
- Pavement patching incomplete

- Goal
 - Approval to use more accurate daily sewage flow design rate
 - Obtain from NC Department of Environmental Quality

(e) The Director may determine that a disposal system shall not be deemed to be permitted in accordance with this Rule or other Permitted By Regulation rules in this Subchapter and require the disposal system to obtain an individual permit or a certificate of coverage under a general permit. This determination shall be made based on existing or projected environmental impacts, compliance with the provisions of this Rule or other Permitted By Regulation rules in this Subchapter, and the compliance history of the facility owner.

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15A NCAC 02T .0114 WASTEWATER DESIGN FLOW RATES

(a) This Rule shall be used to determine wastewater flow rates for all systems governed by this Subchapter unless alternate criteria are provided by a program-specific rule or for flow used for the purposes of 15A NCAC 02H.0105. Higher flow rates shall be required where usage and occupancy are atypical, including those in Paragraph (e) of this Rule. Wastewater flow calculations shall take hours of operation and anticipated maximum occupancies and usage into account when calculating peak flows for design.

(b) In determining the volume of sewage from dwelling units, the flow rate shall be 120 gallons per day per bedroom. The minimum volume of sewage from each dwelling unit shall be 240 gallons per day and each additional bedroom above two bedrooms shall increase the volume by 120 gallons per day. Each bedroom or any other room or addition that can function as a bedroom shall be considered a bedroom for design purposes. When the occupancy of a dwelling unit exceeds two persons per bedroom, the volume of sewage shall be determined by the maximum occupancy at a rate of 60 gallons per person per day.

Type of Establishments	Daily Flow For Design
Barber and beauty shops	
Barber Shops	50 gal/chair
Beauty Shops	125 gal/booth or bowl
Businesses, offices and factories	
General business and office facilities	25 gal/employee/shift
Factories, excluding industrial waste	25 gal/employee/shift
Factories or businesses with showers or food preparation	35 gal/employee/shift
Warehouse	100 gal/loading bay
Warehouse - self storage (not including caretaker residence)	1 gal/unit
Churches	
Churches without kitchens, day care or camps	3 gal/seat
Churches with kitchen	5 gal/seat
Churches providing day care or camps	25 gal/person (child & employee)
Fire, rescue and emergency response facilities	
Fire or rescue stations without on site staff	25 gal/person
Fire or rescue stations with on-site staff	50 gal/person/shift
Food and drink facilities	
Banquet, dining hall	30 gal/seat
Bars, cocktail lounges	20 gal/seat
Caterers	50 gal/100 sq ft floor space
Restaurant, full Service	40 gal/seat
Restaurant, single service articles	20 gal/seat
Restaurant, drive-in	50 gal/car space
Restaurant, carry out only	50 gal/100 sq ft floor space
Institutions, dining halls	5 gal/meal
Deli	40 gal/100 sq ft floor space
Bakery	10 gal/100 sq ft floor space
Meat department, butcher shop or fish market	75 gal/100 sq ft floor space

- Goal
 - Approval to use more accurate daily sewage flow design rate
 - Obtain from NC Department of Environmental Quality
- Allocations of capacity become more realistic
 - Time to a WWTP expansion lengthened

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- The Process
 - Assembled WWTP flowmeter calibration records
 - Documented past infiltration & inflow studies and corrective actions
 - Compiled daily WWTP influent flow records from 2018 to present

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- The Process
 - Determined number of sewer customers
 - > Month-by-month basis
 - > Residential vs. Non-residential
 - Deeper dive into billing records
 - > Individual usage data
 - + Heavy commercial/industrial accounts
 - Calculations

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- Results
 - 281 GPD/Residential Equivalent Unit
 - > REU = 3 Bedroom Unit
 - > 93.7 GPD/Bedroom
 - ✓ 02T Regulation @ 120 GPD/Bedroom
 - ✓ 26.3 GPD difference

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- Next
 - Formalize request to NCDEQ

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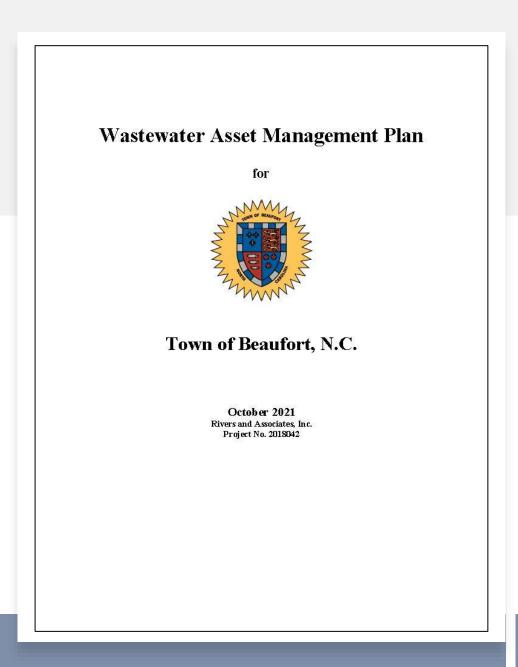
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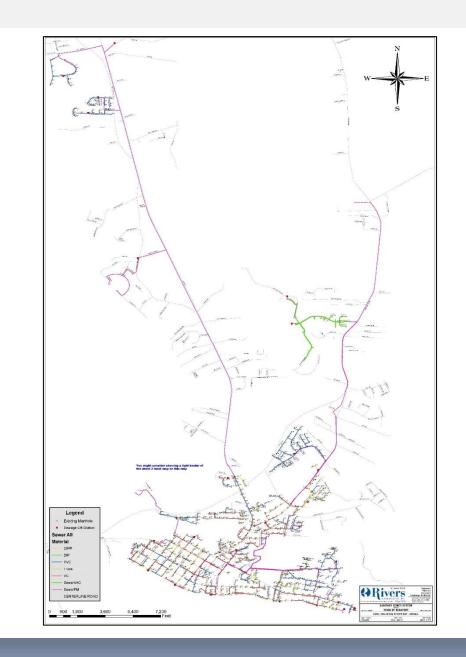
Wastewater Asset Inventory Assessment

- Final draft review complete
- Final report expected
- January presentation & adoption?



Wastewater Asset Inventory Assessment

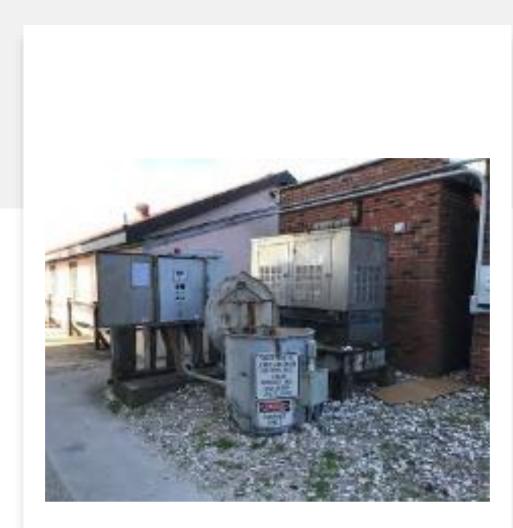
- Pressurized sewer force mains
- \rightarrow 26.3<u>+</u> miles
- Gravity sewer lines
- \rightarrow 33.2<u>+</u> miles
- Sewer manholes
- \rightarrow 832<u>+</u>
- Sewer pump stations
 → 25



Wastewater Asset Inventory Assessment

10-Year Capital Projects Recommendations

- Replacement/rehabilitation of 50+ year old stations (6 total)
- Line rehabilitation
- \$6.6 million





Turner Street – Broad Street Traffic Calming Improvements

- Plans complete
- To do
 - County permission for driveway realignment
 - Bid project

- Peeling paint
- Swollen slat boards



- Believed Cause
 - HVAC Ductwork resting on joists & attic insulation
 - Moisture-soaked insulation



- Mitigation
 - Suspend ductwork
 - Dry/Replace moisture laden insulation



- Obtain bids (January)
- Engage & Schedule Contractor
- Monitor attic through early summer
- Paint/repair summer





Project Updates

QUESTIONS?



