**SUMMARY OF THE WASTEWATER ASSET MANAGEMENT PLAN**

**(completed by Wooten Engineering, September 2022)**

**WASTEWATER COLLECTION AND TREATMENT SYSTEMS-**

**ASSET MANAGEMENT PLAN** *pages 1-4*

* The downtown area of sewer pipes is mostly clay pipes which have deteriorated
* Inflow and Infiltration accounts for approximately 38% of the wastewater sent to the County for treatment
* The improvements that are identified as most important are:

1. Mulberry Branch Wastewater Capacity Increase $30,451,306

2. Wastewater Asset and Inventory Assessment $ 400,000

3. Inflow and Infiltration Reduction $ 9,835,000

4. Downtown Sewer Replacement $10,812,107

5. Pump Station Rehab & Replacement $ 2,800,000

$54,298,413

* The secondary recommended improvements are:

1. Wastewater System Improvements $ 100,000

(Yearly Maintenance and Upkeep) (0.1 million annually)

**WASTEWATER COLLECTION AND TREATMENT SYSTEMS-**

**INVENTORY OF ASSETS** *pgs 1-62*

* 35 miles of gravity sewer lines, 14 miles of force main, and 891 manholes
* Majority of force mains are in good working condition
* Force mains associated with the oldest pumping stations were installed in 1974 and are in need of replacement.
* Of the 891 manholes, 23% are in poor condition (177 manholes)
* Of the 891 manholes, 20% are brick or block built which is more prone to inflow and infiltration
* Southport has (34) pumping stations. Five (5) of them are in poor condition. All five of these were constructed in 1974 and contain much of the original equipment.
* (1) triplex pump station, (21) duplex stations and (11) simplex grinder stations
* Nine of the pumping stations do not have a back-up power source

**WASTEWATER COLLECTION AND TREATMENT SYSTEMS-**

**CAPITAL IMPROVEMENT PLAN** *pages 1-27*

* Average infiltration into Southport’s sewer system is 220,000 gallons per day
* This amount is not considered excessive according to the State’s guidelines, but it is above the average amongst most US cities. (782.95 gallons per day/per inch-mile.
* Mulberry Branch Expansion: design and construction to add approximately 0.75 MGD of wastewater capacity to the Brunswick County system.
* The Pre-construction, Planning, Sewer Rehabilitation and Replacement Study will identify and prioritize portions of the sewer system that need rehabilitation or replacement, which includes pump stations, force mains and the collection system. Work will include 36,000 linear feet of cleaning and CC TV, 30 pump station draw down tests, and system wide hydraulic modeling.
* Once the study is complete, the FIFI and Inflow and Infiltration Reduction Project will commence. This project should reduce the amount of wastewater that the City is paying the County to treat. The project should also add sewer capacity.
* The sewer in the downtown area is the oldest and most deteriorated. All rehabilitation and replacement of sewer lines will be with like sized replacements other than upsizing to meet the 8-inch diameter per the NCDEQ Minimum Design Criteria.
* Pump station rehabilitation and replacement includes replacement of 8,000 linear feet of force mains, pump station rehabilitation and pump station replacement.
* All replacement lines will be with like-sized replacements, and the same capacity
* Secondary priority (long term goals for the next 6-15 years) includes: CC TV and regular cleaning gravity sewer, manholes, force mains, and point repairs.
* The City will need to continue to actively pursue funding to cover the cost.

**WASTEWATER COLLECTION AND TREATMENT SYSTEMS-**

**OPERATIONS AND MAINTENANCE MANUAL** *pages 1-45*

* This section describes the roles and responsibilities of City employees, safety precautions, reporting, maintenance schedules, performance standards, and state permits that are required for collection systems.