

**Item #170451**

**Update on Engineering Services for the  
Wastewater Collection System  
Assessment to Target Inflow & Infiltration  
(I&I) Reduction Measures Project**

**Water & Wastewater Systems  
Gainesville Regional Utilities**

**May 10, 2018**



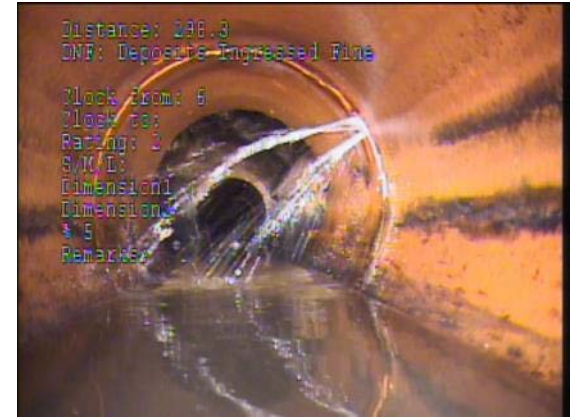
# Wastewater Collection System

- > 64,000 connections serving nearly 200,000 people
- > 800 miles of gravity and force mains
- ~ 300 miles of sewer laterals
- ~15,500 manholes
- 170 lift stations
- Over 6 billion gallons of wastewater collected and treated each year
- Beneficially return clean water to the environment



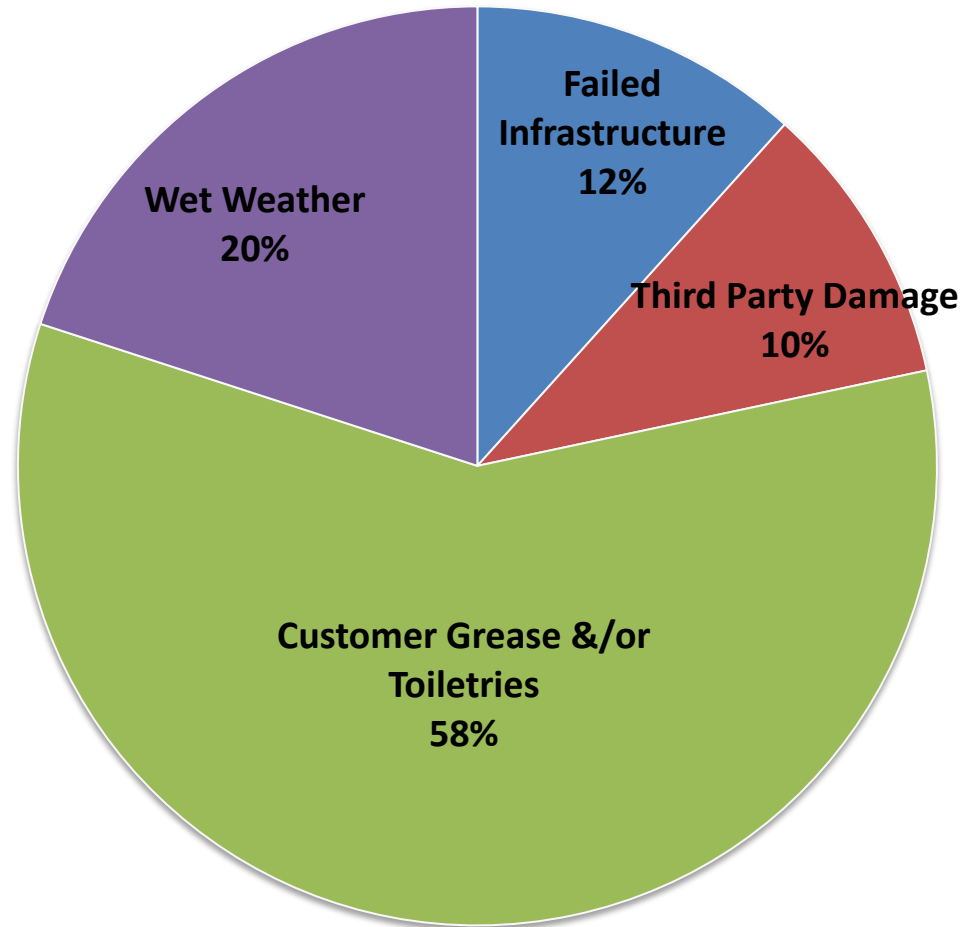
# Wastewater Collection System Challenges

- Sanitary Sewer Overflows (SSOs)
- Aging Infrastructure
  - Some infrastructure installed in the early 1900's
- Aging infrastructure leads to inflow and infiltration (I&I)
- Excessive I&I reduces capacity of the collection system and treatment plants
- Challenge for all utilities to assess and prioritize aging infrastructure



# Sanitary Sewer Overflows

- Majority of spills are caused by customer behavior
- GRU spending \$7-\$9M a year on wastewater collection system improvements
- Wet weather has a notable influence on the collection system



# Addressing the Wastewater Collection System

- Customer Education – 3Ps
- Commercial Grease Program
- Construction Design Standards
- Storm Response



**Only flush the 3 Ps**  
Paper, Pee and Poo

EVERYTHING else belongs in the TRASH—  
including “flushable” wipes

**Alachua County Hazardous Waste Collection Program**  
The Environmental Protection Department offers FREE disposal and recycling of household hazardous wastes. Call 352-334-0440 or visit [www.alachuacountyhazwaste.us](http://www.alachuacountyhazwaste.us) for a list of items.

Visit [gru.com/flushables](http://gru.com/flushables)  
for more information.



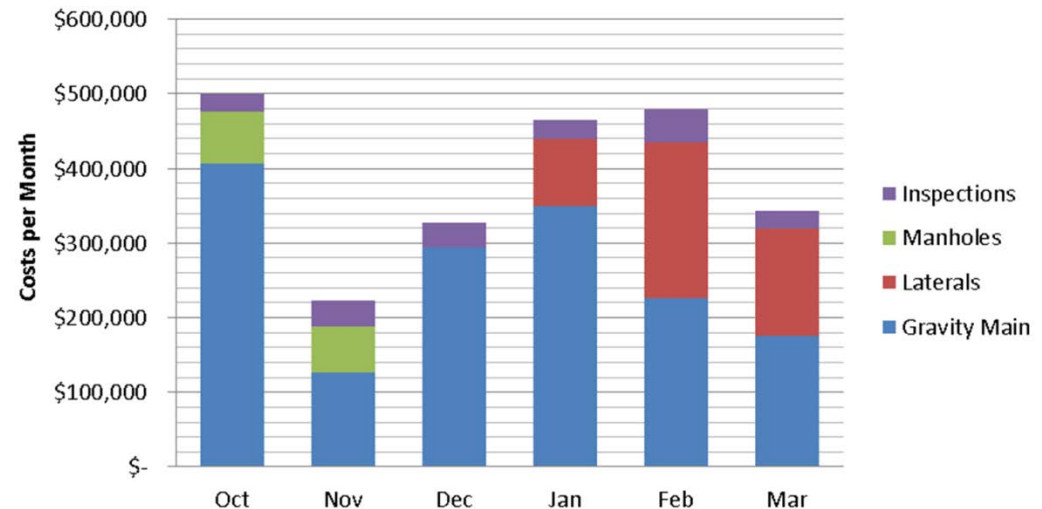
# Addressing the Wastewater Collection System

- GRU uses best utility practices
- Increased Maintenance and Assessment
  - Cleaning ~70-90 miles per year
  - CCTV Inspection ~50-70 miles per year
  - Smoke Testing
  - Flow Monitoring
  - Lift Station monitoring and maintenance
  - 24/7/365 response

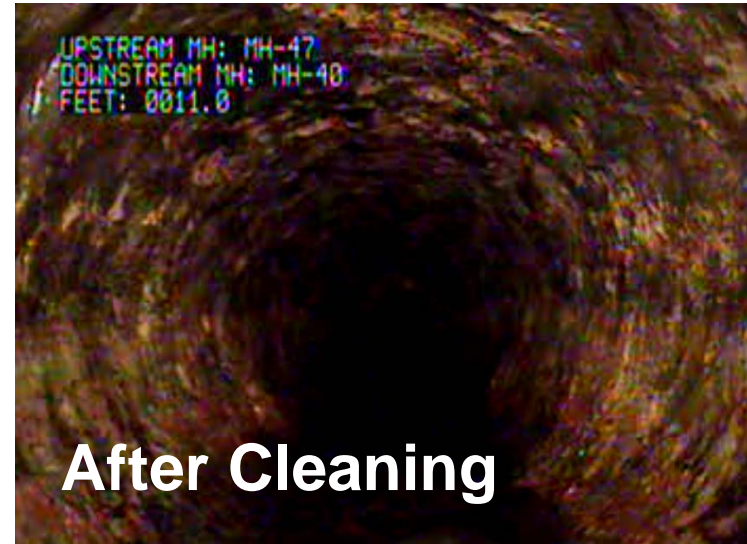
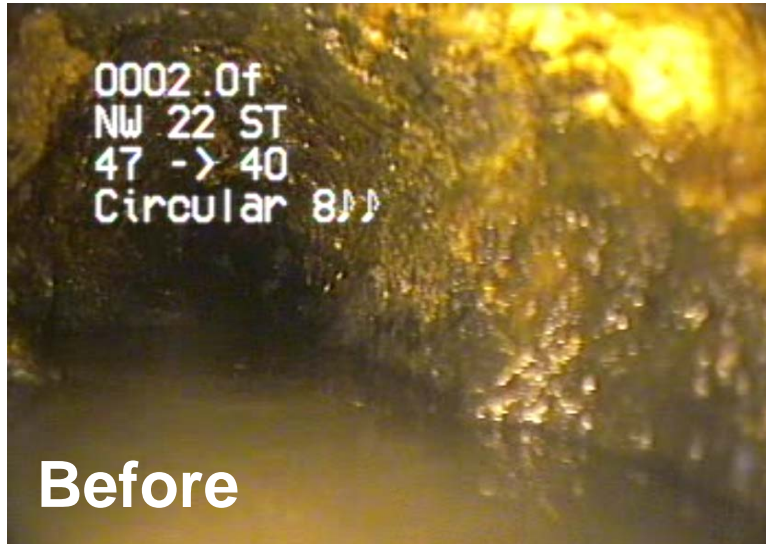


# Addressing the Wastewater Collection System

- Increased System Renewal, Replacement and Rehabilitation
  - Investing \$7 - \$9M per year in collection system
    - Lining 12-15 miles of gravity sewer and >500 manholes per year
    - Replacing critical aging force mains
  - Utilizing Risk Based Approach
- Benefits
  - Extend life of facilities
  - Recover capacity
    - collection system
    - lift stations
    - treatment plants
  - Reduce risk of SSOs



# Before and After - In-Pipe View





# Manhole Rehab: Before and After



# Need for Comprehensive Assessment

- Substantial long-term investment
- Proactively address aging infrastructure
- Spend the right amount on the right things at the right time

# I & I Assessment and Reduction

- Continued investment to reduce I&I
- Comprehensive approach to prioritize rehabilitation and replacement
- The wastewater collection system assessment project will:
  - Identify sources of excessive I&I
  - Provide recommendations for corrective actions and prioritization
  - Quantify the volume of I&I that will be reduced
  - Estimate the O&M cost savings and capital deferment



# I & I Assessment and Reduction

- Additional effort included in the project:
  - Find-and-fix program
    - Replace cleanout caps
    - Install manhole rain pans
  - Stormwater modeling to identify areas with high inflow potential
  - Determination of current and future level-of-service
  - Increased flow monitoring
  - Additional staff time
    - Field inspections
    - Hydraulic modeling



# Fiscal Impact

- Updated project cost is \$1,800,000 over FY 2018 through FY 2021
  - Effort expanded after lessons learned during Hurricane Irma and 2017 wet season
  - Effort expanded during scope of work development
    - Efficient use of resources
- The updated project cost is included in the proposed Water/Wastewater Capital Improvements budget

# Recommendation

The UAB recommend that the City Commission:

1. Authorize the General Manager, or his designee, to execute a contract not to exceed \$1,500,000 with the top ranked firm, Jones Edmunds, for professional engineering services for the Wastewater Collection System Assessment to Target Inflow & Infiltration (I&I) Reduction Measures project, subject to approval of the City Attorney as to form and legality, and final appropriation of funds for each year of the project.