



# CAPITAL PROJECTS UPDATE

MAY 25, 2021

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PE, DIRECTOR

WATER  
MANAGEMENT  
DEPARTMENT



## SPENCER CREEK AT FRANKLIN ROAD SEWER REPLACEMENT

- Bid amount \$2.9M
- Construction start 8/3/20
- Substantial completion 5/12/21
- Project cost: \$2.58M

# CIPP (MAINS AND LATERALS)

- Main lining
  - 8,243 LF of 8" sewer
  - \$345,290 spent thus far (\$450k budgeted)
- Lateral lining
  - Lined 120 services
  - \$333,710 spent thus far (\$200k budgeted)





## HOLIDAY COURT PUMP STATION REPLACEMENT

- Demolition of can station & replace with submersible pump station.
- Bid award of \$554,057 and construction NTP of June 2020.
- Final project cost of \$538,093 (\$2,500 LDs) and completion date of February 2021.
- Upgraded station with bypass pumping connections, generator access, larger pumps.



# ADVANCED METERING INFRASTRUCTURE

- Replacement of each water meter for more accurate and reliable consumption data.
- WMD replaced ~8,400 meters and MXUs, with ~11k left to install.
- As meters are replaced, also obtaining service line material for replacement of galvanized service lines.
- Consultant:
  - Installed & tested 4 base stations (Ash Dr, Grassland, Lula Ln, Long Ln) & installed regional network interface.
  - Integrated billing system for more accurate and timely bills.



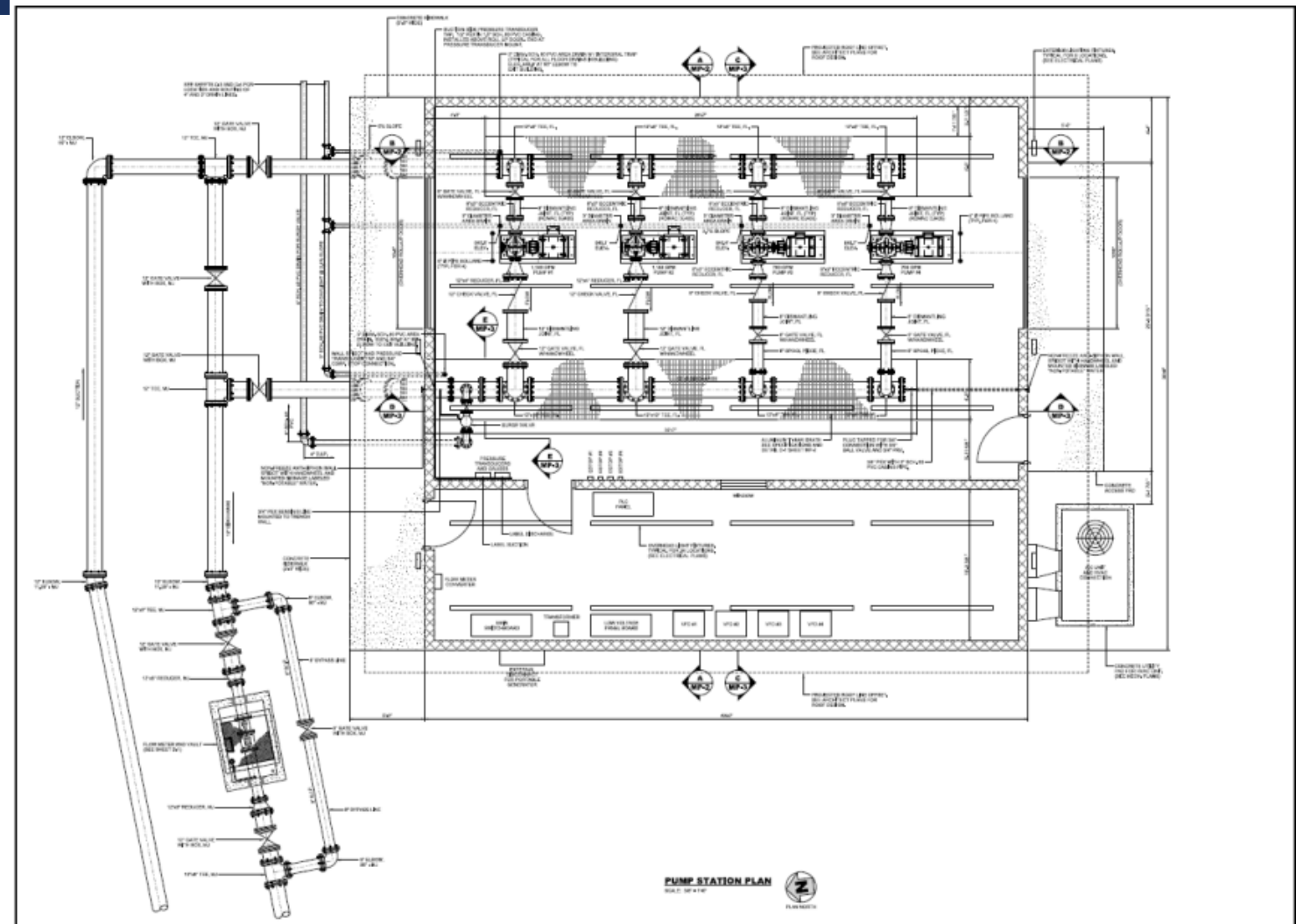
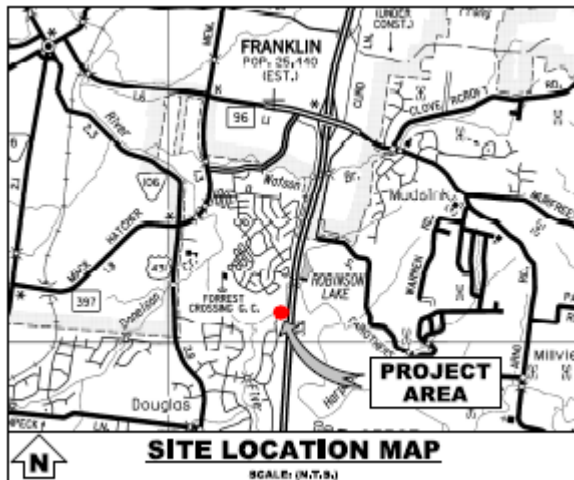
# GIST STREET IMPROVEMENTS

- Infrastructure replacement:
  - ~750 LF of 6-inch clay sanitary sewer line subject to I/I and root intrusion. Replace with 8-inch PVC.
  - ~900 LF of 6-inch CIP water line reaching end of useful life (many failures), better location for O&M. Replace with 6-inch ductile iron.
- Design cost \$42,340 (budgeted \$40k)
- Construction FY22
  - In house – budgeted \$160k



# RECLAIMED BOOSTER PUMP STATION (REDWING)

- Design 2020-2021 for \$137,261
- Construction to begin July 1, 2021



# PUMP STATION EVALUATIONS (ONGOING)

- Contract 2020-0278 approved 1/12/21 for \$50k
- Evaluation of Meadows & Goosecreek Pump Stations
  - Structural, electrical, HVAC, capacity of pumps & piping
  - SCADA evaluation for pump operations
  - Overall condition assessment to develop baseline for future inspection
  - Develop prioritization of replacement or rehabilitation
- CMOM recommendation for evaluation
- FY 22 budget includes monies for additional stations



## Goose Creek/Redwing Pump Station Evaluation

City of Franklin

AECOM Project No. 60652507

April 27, 2021



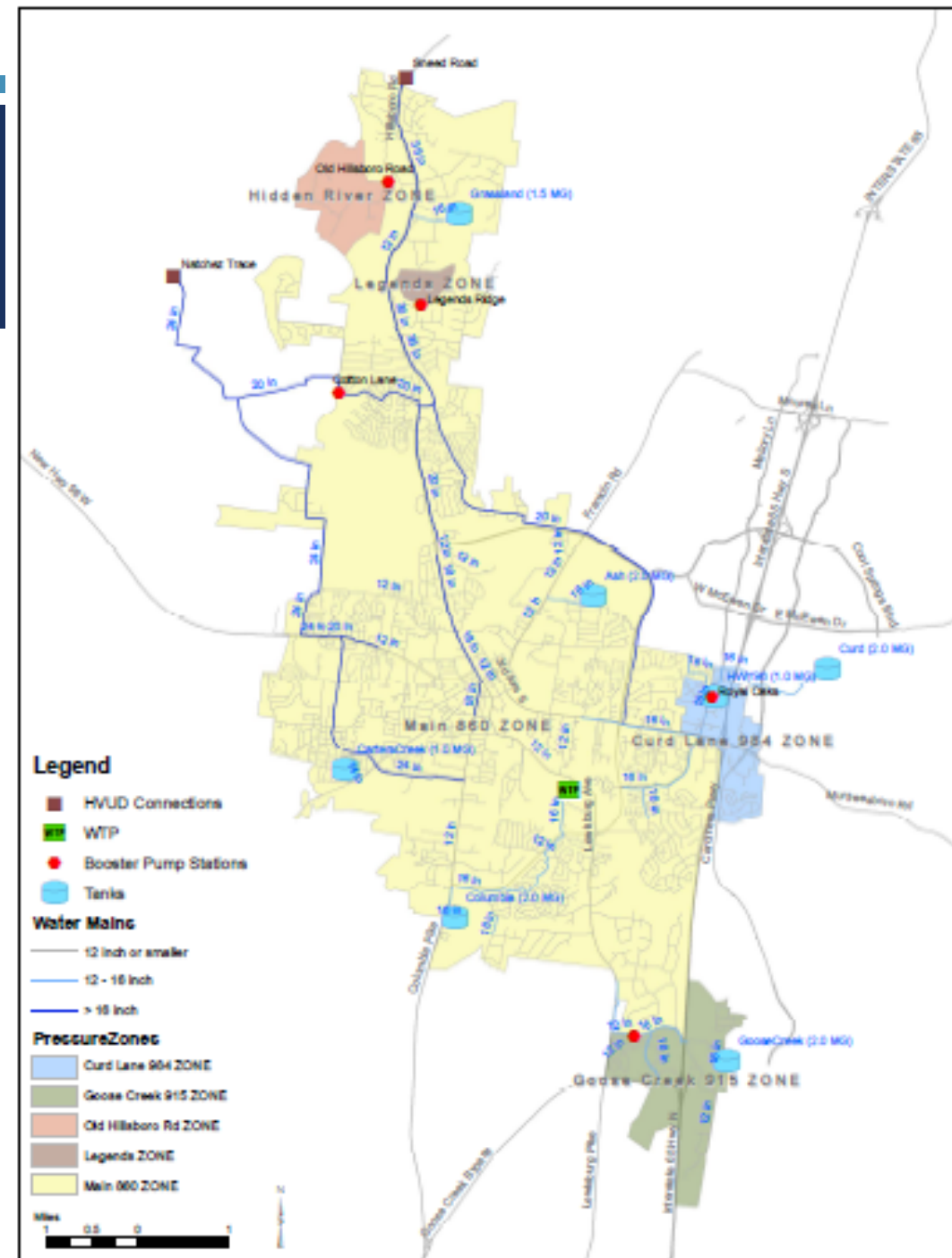
# WASTEWATER FLOW MONITORS (ONGOING)

- 27 total permanent flow monitors in the collection system
- Additional 17 temporary flow monitors for winter 19-20
- Continuous monitoring of flow during dry and wet weather
  - Alarms sent to Supervisors for immediate deployment of personnel
- Used to calibrate wastewater hydraulic model to
  - Evaluate sewer availabilities & needed infrastructure upgrades



# WATER MODEL (ONGOING)

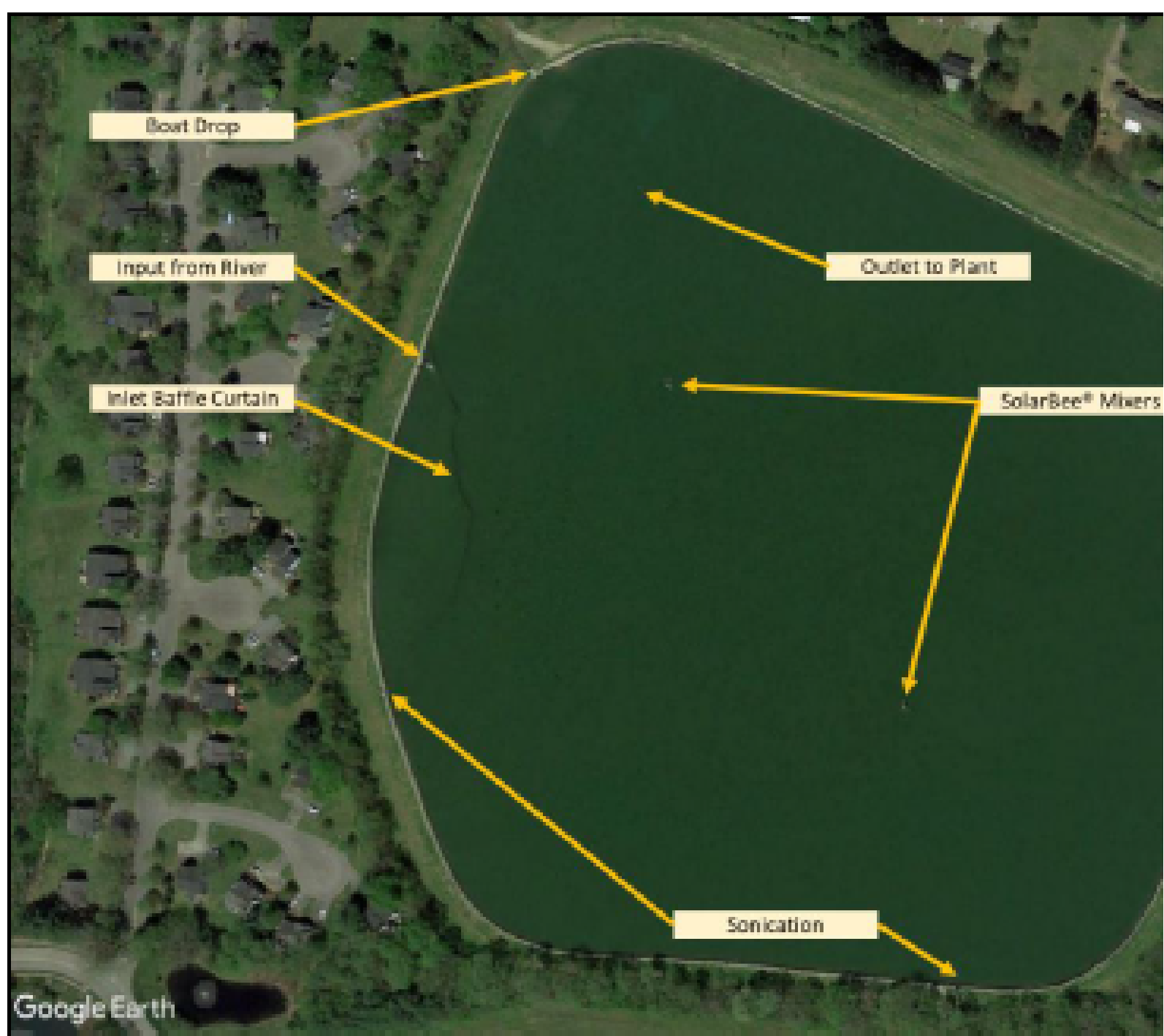
- Model distribution system to analyze capacity demand, and domestic and fire flows in system.
- Every pipe, valve, hydrant, storage tank, and pump station calibrated in system.
- Evaluate capacity demand, water age, water source, chlorine residual, DBPs, etc.
- Create scenarios to determine appropriate changes in system to benefit customers.





## RESERVOIR MANAGEMENT PLAN – PHASE 2

- Raw water reservoir pretreatment to control algae and increase water quality to membranes.
- Thus far, reduced chemical cost by 30% from 2019 to 2020 and continue to lower into 2021.
- Purchased water quality buoy to provide real-time data to operators on quality.



# ASSET MANAGEMENT ASSISTANCE (HORIZONTAL)

- Contract 2020-0273 approved 11/10/20
- Assess collection system using SL-RAT, CCTV, cleaning
- Database to pull assessment data into prioritization schedule
- Develop standards for rehab relative to Franklin infrastructure
- Better focused use of rehabilitation monies

# WATER RECLAMATION FACILITY - SUMMARY

- Bid Award:
  - NTP Awarded November 26, 2018
  - Total contract award \$132,890,000
- Currently:
  - 30 months into project
  - Spent: \$81,249,357
  - Contingency Remaining: \$2,033,850
  - Final completion: May 26, 2022





# WATER RECLAMATION FACILITY - HEADWORKS

# BIOLOGICAL NUTRIENT REMOVAL – BASIN 2





WATER  
RECLAMATION  
FACILITY –

ELECTRICAL  
DISTRIBUTION  
CENTER



# WATER RECLAMATION FACILITY – SOLIDS BUILDING



# WATER RECLAMATION FACILITY - SOLIDS



# FY 22 BUDGETED PROJECTS

- Sewer lateral, main, and manhole lining on-call work
- Adams Street Infrastructure construction
- New Hope Academy sewer line replacement
- Advanced Metering Infrastructure
- Battle Avenue infrastructure replacement
- Buckworth infrastructure improvements
- Riverview, Forrest Crossing #1 & #2 pump station replacement design
- Old Carter's Creek Pike water line replacement
- Bonsal Way water line replacement design