

Utilities Department

Master Plan 2019 – 2024



City of Phenix City, AL

Updated October 2018

Mission Statement

It is our mission to provide the citizens of Phenix City, AL with modern, dependable water and wastewater treatment services that not only meet the requirements of the residents, commercial and industrial users, but also maintain the standards imparted by the Environmental Protection Agency and the Alabama Department of Environmental Management. To facilitate a managed system of infrastructure upgrades that will ensure both the water distribution and wastewater collections systems support the growing needs of the City. To be good stewards of our water resources for the community, our adjacent communities as well as those downstream that must rely on the same source of water to supply their communities with safe, dependable drinking water.

Overview

Vision and Objectives

Both current and future growth, are dependent upon planned expansion and renewal of our infrastructure in order to meet the growing demands placed upon our water and wastewater systems. We must continually evaluate the demands that will be placed on our systems as both residential and commercial development occurs across the City. While quantity and quality of service are paramount, there comes with this growth additional and ever changing regulatory demands placed upon our systems by the EPA and ADEM. These changes will increase the need for testing and capital improvements at both our water filtration and wastewater treatment plants.

Anticipated Growth

With the intended developments on Brickyard Road, Downtown re-development, Riverchase Drive, along with ever increasing residential developments, the demands placed on our water and sewer infrastructure will require pro-active planning in order to stay ahead of this growth. A single industrial user could easily place a strain on our wastewater treatment plant, without proper planning and expansion of this plant.

For the City's Utilities Department to meet these challenges in the coming years there must be a concerted effort in budgeting for capital improvements to infrastructure, staffing for increased service needs and acquiring new field and plant equipment in order to be able to perform the work and provide water and wastewater sampling capabilities to meet permit demands. In order to encourage economic development we must have in place the services needed in supporting new retail, restaurants, hotels, industrial and residential developments. To do so will require a commitment to meet the necessary funding and training needs that will allow us to fulfill our objectives. We must also be prudent in applying rate increases as needed, maintaining small incremental changes as opposed to less frequent and larger increases.

2018-2019

Projects: The following are projects that are to commence or continue during 2019. Included are various infrastructure projects aimed at improving current services in addition to adding new services.

- Complete WWTP plant Digester 3 Roof
- Plan review meetings with the design engineers for the FY19/20 upgrade
- Complete Summerville Road/Glenwood force main
- Inspect 4,400 Sanitary Sewer Manholes
- Rehabilitate or replace Manholes as needed
- Continue enforcement of Grease Trap Ordinance with restaurants
- Clean and paint 1 MG Knowles Road Tank
- Install aeration system in the Glenwood Tank
- Continue monitoring of storm water infiltration
- Repair Storm water infiltration points
- Asset Management – Set Goals, Continue Updating Inventory & Maps

Equipment and Staffing: Noted below are equipment and personnel required to sustain ongoing operational efficiencies in addition to allowing for growth of our system due to forthcoming economic development.

Administration

- Complete Upgrade of Utility System Software
- Install Tyler Notify Software

Water Filtration Plant

- 75 HP Pump for Raw Water pump station (Insurance Covered) \$50,000

Water Distribution

- Lease one Service Truck w/Body \$115,000
- Lease one Backhoe \$150,000
- Complete Register Replacement \$150,000

Wastewater Collection

- Take Cedar Hill Lift Station out of service \$150,000
- Manhole Liner Machine \$33,000

Wastewater Treatment Plant

- Enclose Recirculation Pump Area \$ 8,720
- Replacement Belts for Belt Press \$ 4,073
- Purchase new pickup truck \$24,000
- WWTP Permit Renewal, estimated cost \$5,000
- Replace the Effluent Strainer Valve, estimated cost \$9,433 (2018 quote)

2019-2020

Projects: The following are projects that are to commence during 2020. Included are various infrastructure projects aimed at improving current services in addition to adding new services.

- Connect water plant to 18" water main at 15th & Crawford Road
- Begin Upgrade of Wastewater Treatment Plant to 10 MGD
- Continue efforts to prevent SSO's along Mill Creek
- Continue efforts in reduction of SSO's across the board
- Begin scheduled sewer main replacement plan at Bridgewater
- Eliminate and/or minimize combined storm water/sanitary lines
- Install 10" Water main along Summerville Road
- Clean and paint 2 MG Glenwood Tank
- Asset Management – Purchase Software & Hardware, Continue Updating Inventory & Maps

Equipment and Staffing: Noted below are equipment and personnel required to sustain ongoing operational efficiencies in addition to allowing for growth of our system due to forthcoming economic development.

Administration

- Improve storage facilities
- Reconfigure Dive Up layout
- Purchase meter reader truck
- Purchase Asset Management Software & Hardware (Collector for ArcGIS, tablet computers)

Water Filtration Plant

- Purchase high service pump

Water Distribution

- Purchase one crew cab truck
- Purchase walk behind Pavement saw
- Lease new backhoe w/trailer
- Lease new utility body truck

Wastewater Collection

- Hire two new Service Maintenance workers & one Equipment Operator Skilled
- Purchase new crew cab truck with utility body and air compressor
- Purchase manhole ventilation equipment
- Purchase two cut off saws
- Lease new dump truck
- Lease new backhoe

Wastewater Treatment Plant

- Pave facility drives and parking (Couldn't this be included in the construction?)
- Install power gate
- Replace (1) Grit Pump
- Continue Plan Upgrade to 10 MGD
- Replace one computer
- Rebuild (6) Clarifier Gear Boxes, estimated total \$39,600 (2018 quote)

2020-2021

Projects: The following are projects that are to commence during 2021. Included are various infrastructure projects aimed at improving current services in addition to adding new services.

- Clean and paint Bailey Hill tank
- Continue SSO reductions
- Continue monitoring of Storm water Infiltration
- Begin Review to Upgrade WFP to 20 MGD
- Continue monitoring of Mill Creek SSO's
- Continue sewer main replacement plan
- Asset Management – Purchase Software & Hardware, Continue Updating Inventory & Maps
- Replace 19th Street Lift Station
- Replace Roof on Building “B” (2018-2019 if possible) \$180,000

Equipment and Staffing: Noted below are equipment and personnel required to sustain ongoing operational efficiencies in addition to allowing for growth of our system due to forthcoming economic development.

Administration

- Hire one CSR
- Purchase Asset Management Software & Hardware (Workforce for ArcGIS, tablet computers)

Water Filtration Plant

- Continue planning to upgrade to 20 MGD capabilities
- Install plant wide security system
- Replace 450 GPM raw water pump
- Upgrade Remote Telemetry remote tank sites & pump stations
- Install VFD's at Brandywine, Glenwood & River Pump Stations

Water Distribution

- Hire 1 Equipment Operator Skilled & 2 Service Maintenance Workers Semi-Skilled
- Purchase new walk behind saw cut machine
- Purchase new tapping machine
- Lease one service truck
- Lease Backhoe

Wastewater Collection

- Purchase two Lift Station Pumps
- Lease tractor and low boy trailer

Wastewater Treatment Plant

- Upgrade SCADA system to include monitoring of lift stations
- Complete Upgrade to 10 MGD
- Clean out #2 Digester
- Replace #1 Screw Pump
- Replace (1) Grit Pump

2021-2022

Projects: The following are projects that are to commence during 2022. Included are various infrastructure projects aimed at improving current services in addition to adding new services.

- Clean and paint Glenwood Elevated tank
- Continue water main replacement plan
- Continue SSO reductions
- Continue monitoring of Storm water Infiltration
- Continue monitoring of Mill Creek SSO's
- Continue sewer main replacement plan
- Clean 2 mg clear well
- Asset Management – Continue Updating Inventory & Maps

Equipment and Staffing: Noted below are equipment and personnel required to sustain ongoing operational efficiencies in addition to allowing for growth of our system due to forthcoming economic development.

Administration

- One Meter Reading Truck
- Replace Computers on Office
- Purchase Asset Management Software & Hardware (Insights for ArcGIS, tablet computers)

Water Filtration Plant

- Install whole plant power generator
- Replace discharge valves
- Update lab equipment
- Replace one 350 GPM raw water pump
- Replace 75 hp Backwash Pump
- Install VFD on 75 hp Backwash Pump

Water Distribution

- Purchase mini excavator
- Purchase one Utility Service Truck

Wastewater Collection

- Purchase two Lift Station Pumps
- Purchase new CCTV system
- Replace grit one chamber screw

Wastewater Treatment Plant

- Purchase new lab equipment
- Upgrade trickling filters
- Acquire additional property to expand plant
- Clean out #1 Digester
- Replace #2 Screw Pump

2022-2023

Projects: The following are projects that are to commence during 2023. Included are various infrastructure projects aimed at improving current services in addition to adding new services.

- Continue water main replacement plan
- Continue capacity increase of WWTP
- Continue SSO reductions
- Continue monitoring of Storm water Infiltration
- Continue monitoring of Mill Creek SSO's
- Continue sewer main replacement plan
- Begin Filtration Plant Upgrade to 20 MGD
- Clean & paint Raw Water Storage Tanks
- Asset Management – Continue Updating Inventory & Maps

Equipment and Staffing: Noted below are equipment and personnel required to sustain ongoing operational efficiencies in addition to allowing for growth of our system due to forthcoming economic development.

Administration

- Purchase new laptops for meter readers
- Purchase new meter reader truck
- Purchase Asset Management Software & Hardware

Water Filtration Plant

- Clean 2 MG clear well
- Clean and paint raw water tanks
- Replace 350 GPM raw water pump
- Update Lab equipment

Water Distribution

- Purchase one pick-up
- Lease one utility body service truck

Wastewater Collection

- Purchase two Lift Station Pumps
- Lease one service truck

Wastewater Treatment Plant

- Replace Screw Pump #3
- Purchase a new Tractor
- Acquire Fats, Oils & Grease collection equipment for recycling purposes

2023-2024

Projects: The following are projects that are to commence during 2024. Included are various infrastructure projects aimed at improving current services in addition to adding new services.

- Clean and inspect all water storage tanks
- Continue water main replacement plan
- Continue SSO reductions
- Continue monitoring of Storm water Infiltration
- Continue monitoring of Mill Creek SSO's
- Continue sewer main replacement plan
- Replace flocculators and drives
- Clean 1 mg Clearwell
- Asset Management – Continue Updating Inventory & Maps

Equipment and Staffing: Noted below are equipment and personnel required to sustain ongoing operational efficiencies in addition to allowing for growth of our system due to forthcoming economic development.

Administration

- Purchase new PC's for CSR's
- Purchase Asset Management Software & Hardware

Water Filtration Plant

- Clean 1 MG clear well
- Replace 350 GPM raw water pump
- Replace Raw, Settled & Finished inline PH Meters
- Replace Flocculators on New Side

Water Distribution

- Purchase one pick-up
- Lease one utility body service truck

Wastewater Collection

- Purchase two Lift Station Pumps

Wastewater Treatment Plant

- Replace roof on Office building
- Replace classifier equipment
- Clean #2 Digester