

The Department of Public Works and Utilities

City of Petersburg

VIRGINIA



Utility Operations - 2019 Annual Report

February 4, 2020

Rebuilding Our Foundation for a Brighter Future



The Department of Public Works and Utilities Utility Operations (Water & Sewer)

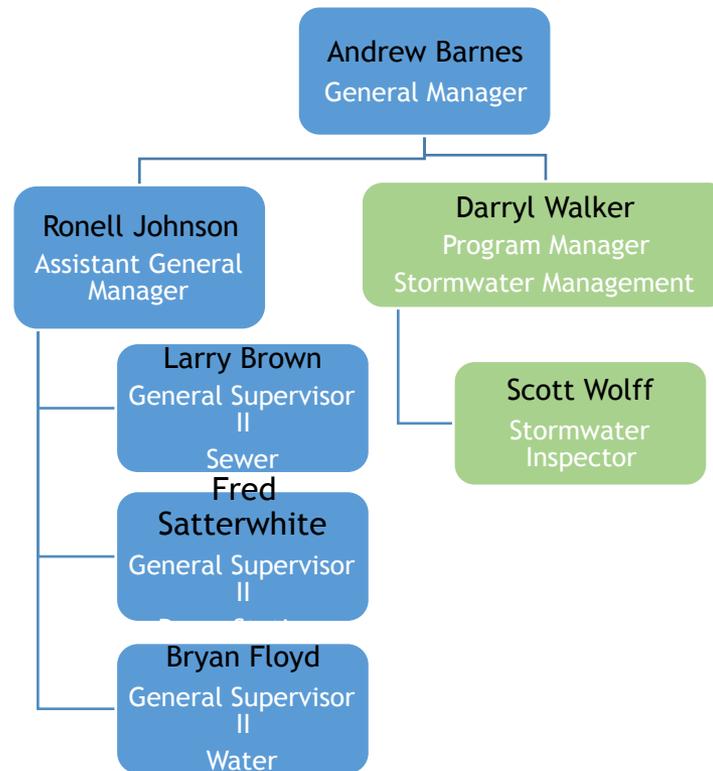
2019 Annual Report

Andrew J. Barnes, P.E.
General Manager of Public Utilities/City Engineer

Public Utilities - Overview



The Public Utilities Division is charged with the task of providing water transmission, distribution, and storage; wastewater collection and conveyance; and Stormwater Management administration.





Public Utilities Division - Water

- ~225 miles (1.2 Million Feet) of water mains (from 2” to 20”)
- ~1,500 Fire Hydrants
- 2 Pressure Zones
- 6 Storage Tanks (11.3 MG)
- 2 Pump Stations
- Estimated Total Infrastructure Replacement Cost = **\$500,000,000** (min.)

Public Utilities Division - Sewer

- ~200 miles (1.0 Million Feet) of sewer mains (from 4” to 48”)
- 3,000+ Manholes
- 18 Pump Stations
- 2 MG Equalization Basin
- Estimated Total Infrastructure Replacement Cost = **\$300,000,000** (min.)

Public Utilities – Accomplishments (Water)



- Fully compliant with all EPA and VDH regulations
 - Completed all sampling (monthly, quarterly, and UCMR4)
 - Published Annual Water Quality Report
 - Completed Triennial Lead & Copper Testing (no exceedance)
 - Regular/Routine interactions with VDH officials

- 684 Work orders
- 28 Hydrants repaired or replaced
- 8 Lead Services Replaced
- 9 new water service connections

- 27 Water Main Repairs
- **No Boil Water Notices**

- In-house Hydrant flow testing



City of Petersburg
2018 Water Quality Report



City of Petersburg
Department of Public Works and Utilities
103 W. Tabb Street
Petersburg, VA 23803

804-733-2355
Utilities@petersburg-va.org
www.petersburg-va.org

Public Utilities – Accomplishments (Sewer)



- Overflow (spill) reports submitted to DEQ in a timely manor
- 18 sewer connections
- 1,324 Work orders
- Major Repairs
 - Old Wythe Street
 - 330' of 8" sewer main (contractor assisted)
 - Oklahoma Avenue
 - 50' of 8" sewer main
 - Walnut Blvd
 - 70' of 8" sewer main
- Numerous point repairs for cave-ins, slipped joints, and failed laterals.

Public Utilities – Accomplishments (General)



- Average Household Utility Cost = \$0.013/ gallon (1.3 cents/gallon)
 - Includes water, sewer, and capacity fees
- All Field staff received Trench Safety and Confined Space Training
- 70% of field staff have work zone safety and flagger certification
- Upgraded SCADA system at all sites
- 6,572 Utility Location Requests (811/Miss Utility)
- Utility Map Books (GIS) for field staff supervisors and locators
- Begun purchasing AWWA Manuals of Practice
- Two new Utility trailers for the work crews

Public Utilities – Current Events



- Winter Preparation
 - Winter has been mild and main breaks have not been a major issue.
 - Performing an inventory of all parts to ensure material and parts are available.
 - Weatherizing all heavy equipment

- Getting training lined up for the next few months

- Assessing new Maintenance/Workorder Management System

- Material Contracts

- Reviewing website content

- Fire Hydrant Inspection/Maintenance Program
 - Pre-planning, inspection, minor maintenance, documentation, record keeping, digital asset inventory
 - 1500 hydrants in 250 working days will be a full-time job (about 1.5 FTE, actually)

Public Utilities – Current Projects



- Locks Water Main Replacement
 - 7,650+ LF of 20” ductile iron pipe.
 - VDH has issued a construction permit
 - Still requires additional external approvals
 - Historic/Cultural Resources through VDHR
 - Floodplain due to CDBG/HUD funding
 - Looking to reimburse and reprogram funding

- Prince George County Interconnection
 - 450’ of 8” waterline to connect with PG.
 - Consultant request for task order in the next few weeks
 - Design by Spring.
 - Construction IFB by summer (funding through current O&M budget)
 - Scheduling contingency for permitting and approvals.

- Flow Meters at Pump Stations for I&I monitoring underway

- Poor Creek Force Main Replacement/Realignment
 - Will begin design this calendar year

- Working on Project Priorities and Needs Assessment for future CIP

Public Utilities – Prince George Interconnect



Rebuilding Our Foundation for a Brighter Future

Public Utilities - Infrastructure Work



Public Utilities – Moving Forward



- Vehicle Purchases
- New CCTV equipment (sewer inspection)
- Continuing to build and maintain professional relationships with neighboring municipalities, vendors, and officials.
- Updating GIS
- Developing Standard Operating Procedures and mapping workflows
- Prioritizing Preventive Maintenance
- Developing Asset Management Plans and Asset Registries
- EPA revising the Lead and Copper Rule this year
 - Likely to need a full survey of services (beginning 2021)
 - Replacement “quota” will be likely

Public Utilities - Challenges



- Staff Retention
 - Vacancies for Pump Station Mechanic, Motor Equip. Operators, Crew Supervisor II.
- Corrective (reactive) maintenance vs. preventive (proactive) maintenance
 - PM not fully supported at existing staffing levels
- Aging Infrastructure (and getting older)
 - Lots of “Band-Aids”
 - Need to better understand what we have
 - Replacement projects impact businesses and residents
- Major projects require planning, engineering, funding, inspection, and project management.
- Records Management (project/staff needed)
 - GIS missing key attributes
 - Not accessible to field crews
 - Old plans require research at CH Annex.
- Lacking internal Technical Capacity



Questions



Andrew J. Barnes, P.E.
General Manager of Utilities/City Engineer
103 W. Tabb Street

804-733-2356
abarnes@petersburg-va.org

