

Water Resources



Tuesday, January 12, 2016

Steven D. Drew, Director

Water, Sewer and Stormwater

Steven Drew
Director of Water Resources
 345.375 FTE

Mike Borchers, PE
Deputy Director

Barry Parsons
Water Supply Manager
 54 FTE

Virginia Spillman, PE
Engineering Mgr
 17 FTE

Elijah Williams, PE
Water Reclamation Mgr
 54.625 FTE

David Phlegar
Stormwater Manager
 14 FTE

Adam Conn
Operations Manager
 147.75 FTE

Jeff Kimel
Customer Service Mgr
 44 FTE

Kristine Williams
Business Mgr
 12 FTE

- Operations
- Treatment
- Maintenance
- Laboratory Services

- Engineering
- Mapping
- Plan Review

- Operations
- Treatment
- Maintenance
- Laboratory Services
- Industrial Waste

- Billing
- Operations Management
- Compliance
- Water Quality

- Water Distribution System Maintenance
- Sewer Collections System Maintenance
- Sewer Lift Stations
- Equipment Services
- Dispatch

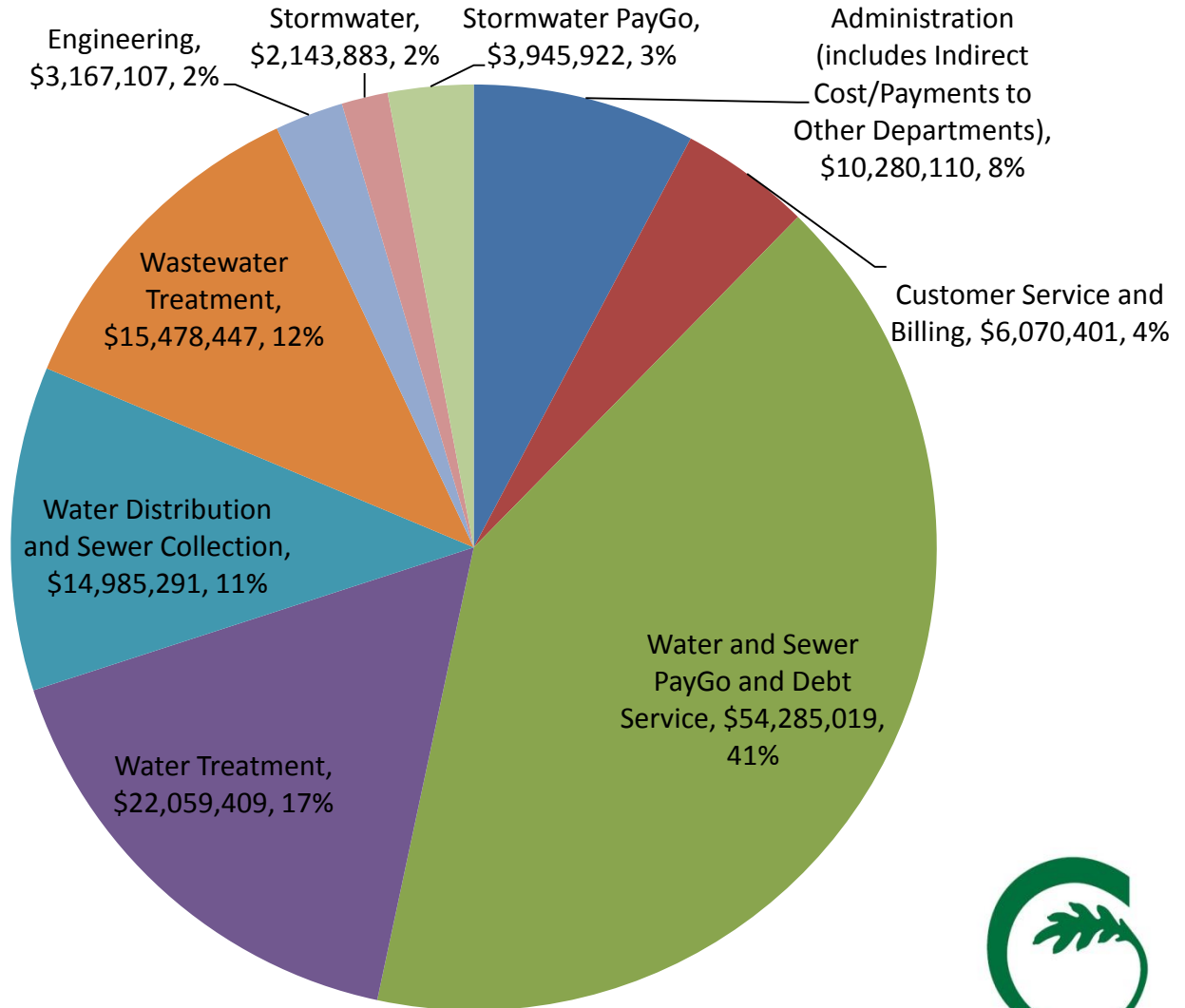
- Billing
- Meter Reading
- Utilities Services
- Meter Services

- Information Technology
- Public Education
- Finance
- Human Resources
- Safety



Water Resources, FY 15/16 Budget

Total Budget \$132,415,589



Customer Service and Billing

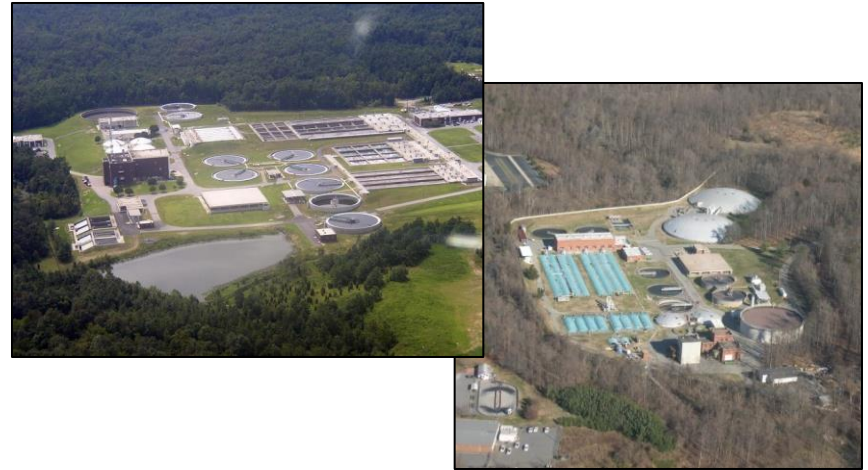
- Meter Reading & Maint.
 - Meter reading, maintenance, cross-connection program, investigations, cut-offs
- Customer Assistance
 - Service availability, fees, disconnections, water cut on, delinquent issues
- Billing
 - Bill preparation, edits, mailing, liens
- Technology
 - Billing/meter reading software, Web/IVR payments



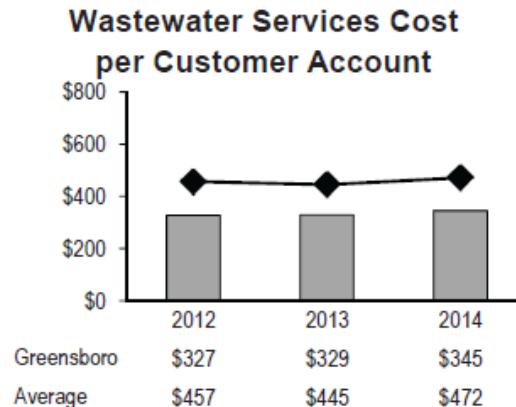
Measures	FY11-12	FY12-13	FY13-14	FY14-15
Billing Accuracy Rate	99.98%	99.95%	99.95%	99.96%
# of Bills Generated	1,207,118	1,196,983	1,203,592	1,209,855

Water Reclamation

- Lab Services
 - Permit & Process control sampling and testing, Industrial User Pre-treatment & Permitting
- Operations
 - Operation of two advanced treatment facilities with 56 MGD permitted flow
- Maintenance
 - Maintain all mechanical
- Electrical & Instrumentation
 - Install, calibrate, and maintain all instrumentation and electrical components



Measures	FY11-12	FY12-13	FY13-14	FY14-15
Compliance Rate	100%	99.36%	100%	98%
Maximum Flow Treated (MGD)	99	94	100	74



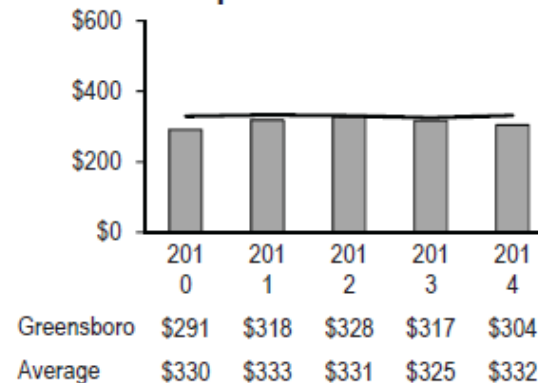
Water Supply



- Reservoir Management
 - Lake protection and management
- Drinking Water Treatment
 - Plant operations and maintenance
- Laboratory Facilities
 - Treatment process and distribution system monitoring and sampling, regulatory compliance
- Distribution
 - Maintenance of booster stations, tanks, interconnects

Measures	FY11-12	FY12-13	FY13-14	FY14-15
Compliance Rate	100%	100%	100%	100%
Billed water as a percentage of finished water	87%	81%	84%	86%

Water Services Cost per Meter



Stormwater

- Operations
 - Drainage complaints, inventory collection, liaison with Field Ops maintenance crews
- Water Quality
 - Water quality monitoring, inspection programs, NPDES permit coordination and compliance
- Fats, Oil & Grease (FOG)
 - Restaurant inspections, collection system investigations



Measures	FY11-12	FY12-13	FY13-14	FY14-15
# of restaurant inspections for fats, oils, grease compliance	284	274	262	289
# Best Management Practice (BMP) Inspections	165	285	263	452

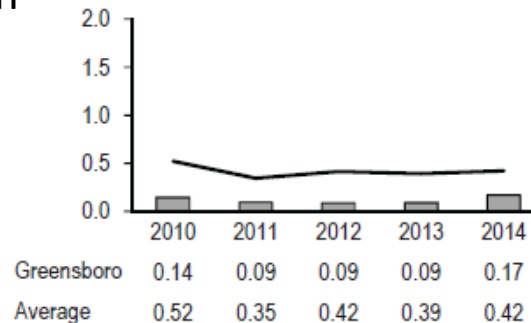
Operations



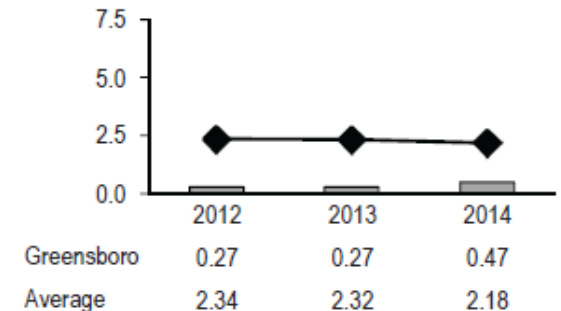
- Sanitary Sewer Collection
 - Gravity and Force mains, system connections, blockages, root control
- Lift Stations
 - Station operations, aerial line and ROW maintenance
- Water Distribution
 - Water Mains, Valves, connections,
- Equipment Services
 - Warehouse, Construction Equipment
- Operations Support
 - Second Shift, Dispatch, TV Inspection

Measures	FY11-12	FY12-13	FY13-14	FY14-15
# of water and sewer maintenance requests	8,591	8574	8,653	9,096
% of Sewer Lines Cleaned by Vactor/Rodder	12.70%	15.18%	15.50%	14.87%
% of Water Main Breaks Repaired Within 24 Hours	78%	72%	74%	64%

Breaks and Leaks per Mile of Water Main Line Pipe



Sewer Overflows per 100 Miles of Main Line Pipe

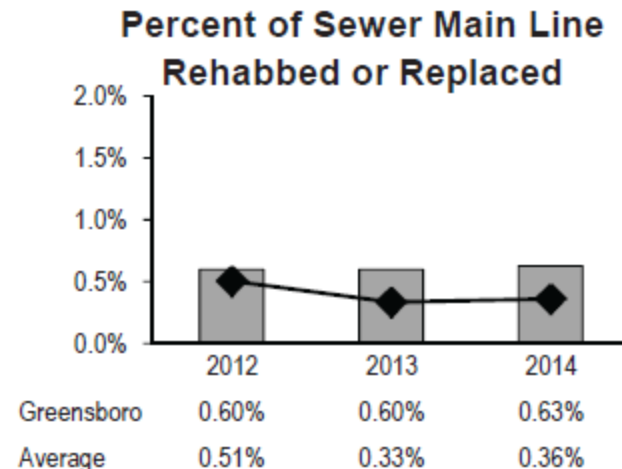


Engineering

- Project Management
 - Water, sewer, and stormwater design and construction project management, floodplain management, watershed protection
- Capital Improvement Program
 - Long range water, sewer and stormwater capital project planning
- GIS and Infrastructure Modeling
 - Utility mapping, service feasibility, inventory management
- Water and Sewer Rehabilitation
 - Collection/distribution system rehab and capacity improvements
- Development Services
 - Plan review, permitting, utility connections and extensions

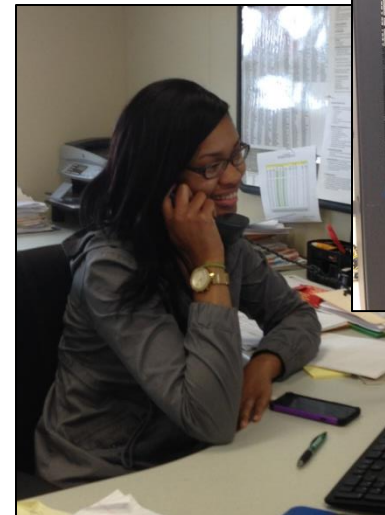
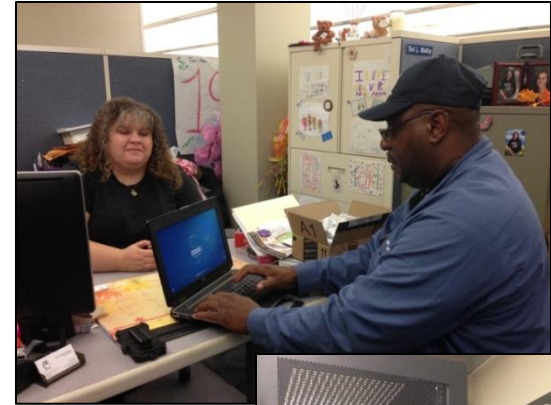


Measures	FY11-12	FY12-13	FY13-14	FY14-15
# of water or sewer feasibility studies requested	25	38	37	28
% of Plan Reviews Completed Within Time Commitments	98.00%	97.20%	96.70%	96.40%



Business

- Human Resources
 - Employment, Employee Relations, etc.
- Public Education
 - Annual Reports, Volunteer Programs, Advertising, Presentations, etc.
- Finance
 - Departmental Budget Prep., Contracting, Capital Project Funding, Accounting, Inventory, etc.
- Information Technology
 - Computer and Printer Leasing, Help Desk, Application Development, etc.
- Safety
 - PPE and Procedures, Training, Job Site Inspections, etc.



NC A&T Student Chapter

- NC A&T involvement in Water and Wastewater through the creation of a Student Chapter



Project/Partnership Highlight

- **WETTEC**
- **Water Environment Technology, Training, and Education Center**
- Partnership with NC A&T State University College of Engineering



Water Reclamation Biological Nutrient Removal Project

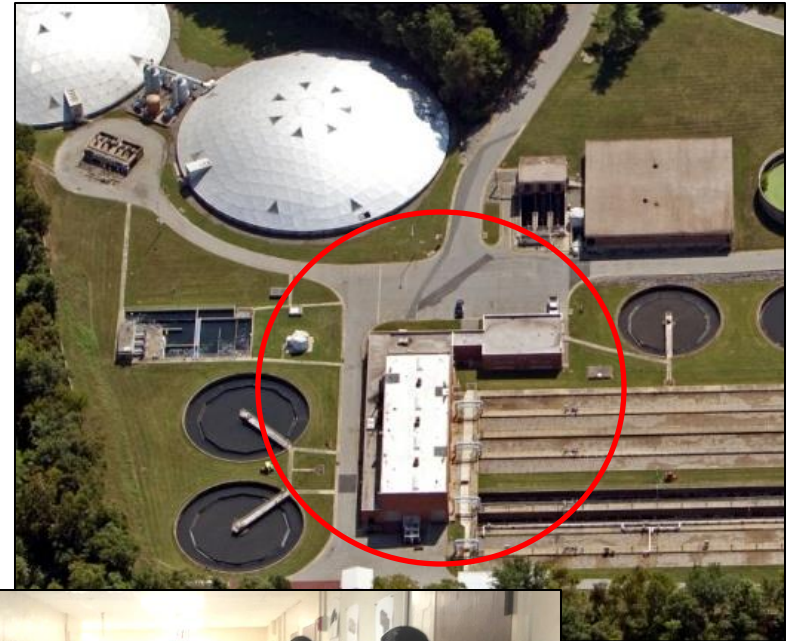
- Phase I, currently underway, calls for the decommissioning of the North Buffalo Plant.



NC A&T Architectural and Civil Engineering Design Project

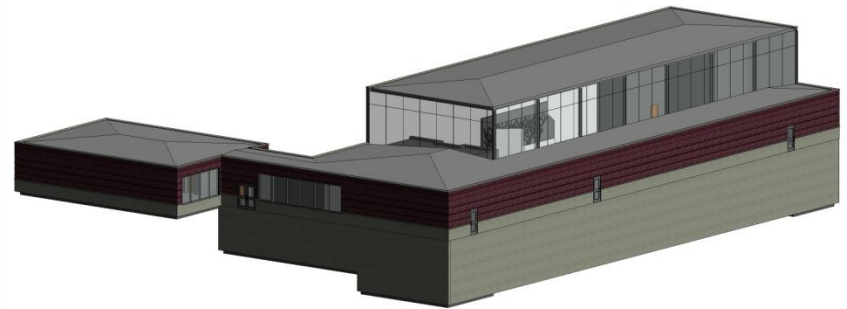
Vision:

To create a multipurpose water and environmental training center benefitting the City of Greensboro, water professionals, universities, and the community.



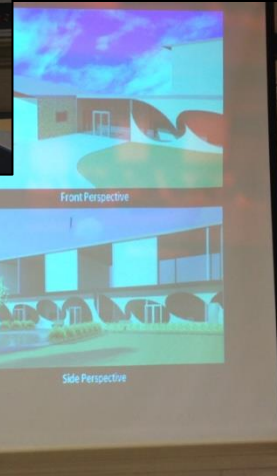
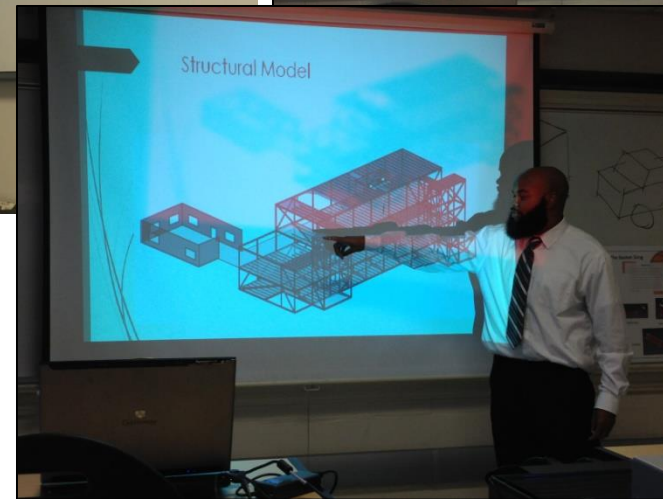
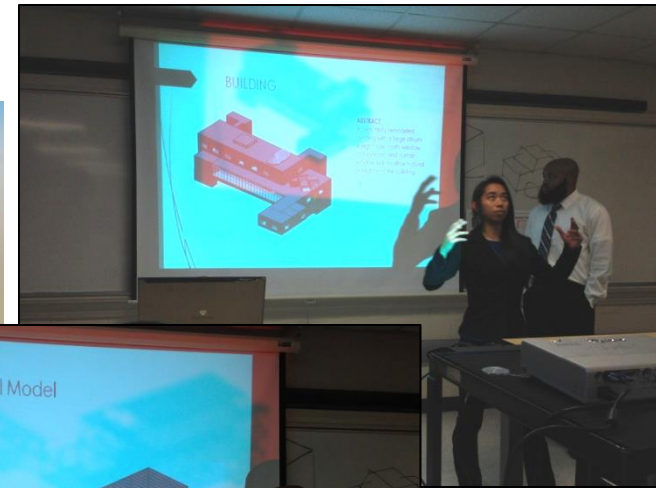
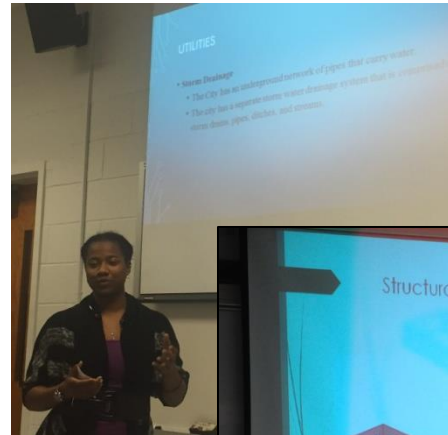
NC A&T Architectural and Civil Engineering Design Project

- Uses two existing buildings that will remain after decommissioning.
- Infrastructure Department Training
- Higher education enrichment for the promotion of water science professions
- Professional Organization use, such as AWWA, WEF, and State Regulatory Agencies



NC A&T Architectural and Civil Engineering Design Project

- A&T Professor Bob Powell appreciates having the opportunity for students to work on a real world project.
- Project is in preliminary phase to evaluate feasibility.



Questions?

