

Atlanta City Council | City Utilities Committee Department Quarterly Report

Mayor Keisha Lance Bottoms | Kishia L. Powell, Commissioner September 11, 2018





Reports to Council

DWM-AIM Cyber Incident Rebuild Efforts



90% of Server Infrastructure/ File shares Restored 100% of DWM Applications Restored 75% of Desktops/Laptops Reimaged 100% Network/Firewall Connections Restored

(*pending major upgrades)

50% of VPN Users Restored

6 Critical Servers

4 Print Servers

130 Application/

Database Servers

7 Rebuilt (Vendors)

33 Recovered

3 Migrated to Cloud

2 Rebuilt (Internal Team)

6 Interface Reconfigurations/ Initiated

> 12 Non -Impacted

892 Devices Reimaged & Validated Allowed access to DWM applications and interfaces, including vendor access.

Implemented
Palo Alto VPN
Solution,
migrated off
NetMotions

Onboarded 200+ Users

Restored 3 of 4 File shares

3

DWM Cyber Update



Overall Restoration Efforts & Impacts:

- 100% of DWM specific applications restored and available to end-users and customers
- Anticipate reporting functions will normalize between August and October 2018
- Currently assessing impacts of encrypted documents on DWM file share systems
- No impacts to water and wastewater treatment operations or water quality
- No impacts to water and wastewater emergency services response
- No impacts to incident response time for major water incidents

Business Functions:

- Currently working through operational backlogs generated as a result of manual processes implemented during the rebuild efforts
- Significant impacts to data utilized for reporting within operational systems due to system limitations from March 22 - July 16 and manual tracking during the rebuild efforts
- Metering and Billing Services restored April 2018 for 20 users; all users restored July 2018
- Cash Applications/Operations restored at all locations as of July 16, 2018
- Collections Operations restored and within current SLAs as of 4/10/2018
- DWM Websites fully restored as of June 2018
- Metal Plate tracking restored as of June 2018
- New Service requests processing time improving from 10 days to 2 4 days (within SLA)

Lead and Copper Rule Compliance Monitoring

Lead and Copper Rule (LCR)

- Lead and copper enter drinking water primarily through plumbing materials
- In 1991, EPA published a regulation to control lead and copper in drinking water. This regulation is known as the Lead and Copper Rule
- The treatment technique for the rule requires systems to monitor drinking water at customer taps; If lead concentrations exceed an action level of 15 ppb or copper concentrations exceed an action level of 1.3 ppm in more than 10% of customer taps sampled, the system must undertake a number of additional actions to control corrosion.

LCR Sampling

- DWM performs triennial sampling (every three years) for the LCR; Samples collected between June 1st and Sept 30th
- Required to submit at least 50 tap water samples from Tier 1 residences (single family with copper pipes/lead solder installed 1982 -1989 or connected with lead service pipes)

2018 Sampling and Analytical Results

- Final analytical results received for 31 samples
- Awaiting results of 15 samples from EPD
- Of the 31 final analytical results received to-date, there were 11 sites with detections of lead; 5 locations had detections above the Lead Action Level (AL) of 15 ppb (parts per billion) (67, 110, 210, 440 and 140 ppb)

Environmental Compliance

- DWM has called, hand delivered and sent via certified mail the required notification, sample results and public information to each of the 10 sites
- DWM is providing re-sampling of these locations
- An action plan summary has been provided to EPD which summarizes steps to further investigate the four sites that exceeded the Lead AL
- DWM will continue to monitor results and follow required protocols for notifications







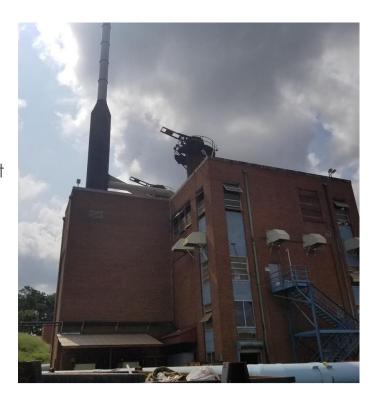
RM Clayton WRC Incinerator Compliance Title V (Part 70) Operating Permit No. 4952-121-0268-V-02-0



- **Title V of the Clean Air Act** Amendments of 1990 requires that all major stationary (nonmoving) sources of air pollutants obtain a permit to operate.
- Proposed Consent Order DWM received a proposed Consent Order for sludge incineration activities at RM Clayton WRC. The conditions of this Order are as follows:
 - Pay \$31,760 to Georgia EPD
 - Revise Annual Compliance Reports for 2016 and 2017 as required by Condition 6.2.19 of the Permit
- Meeting With EPD In June, DWM staff met with EPD to discuss the Order given several letters of No Further Action was received following attempts to cure reporting concerns.

Compliance

- DWM has engaged an Air Specialist to assist with required corrections to the Annual Reports as requested by EPD; the scheduled completion dates for the Reports is October 20, 2018.
- Several repairs have been made to improve the operations of the incinerators
- Implementation of the GESPC biosolids project will decommission the incinerators in 2-3 years



Proposed Draft Consent Order - R.M. Clayton Part 70 Operating Permit No. 4952-121-0268-V-02-0



EPD Consent Order for Title V Air Permit Violations as follows:

Condition	Explanation of Violation
1	4.1.1 - Failing to submit test results within the time period required
2	6.2.19 - Failing to submit an annual compliance report for 2016 for Subpart MMMM within the time period required
3	6.2.20 - Failing to calculate and maintain 12-hour and 3-hour block average records
4	8.17.1 - Operating SSI units and their associated scrubbers outside of acceptable operating parameter levels in the first and second halves of 2016 and much of 2017
5	3.4.12 - Allowing visible emissions of combustion of ash from the ash handling system for more than 5% of the hourly observation period
6	6.2.20 - Failing to submit a Subpart MMMM Semiannual Report for the first half of 2017 within the time period required
7	8.9.2 - Failing to furnish the Division information that the Division requested to determine compliance with the Permit
8	8.14.1 - Failing to accurately certify the Facility's compliance status in the 2017 Annual Compliance Certification

Corrective Actions

- DWM's Compliance section is presently going through an internal Quality Assurance/Quality Control review in an effort to properly track all projects
- These violations are currently being addressed

Summary of NPDES Violations



EPD typically consolidates multiple violations over an extended period of time into a single, consolidated Consent Order

Consent Order	Period	Туре	Number	Total	Penalty Paid	Average Penalty per Violation
Consolidated	APR 2008 to	Unpermitted Discharges Limit Exceedences**	6 18			
Violations September 5, 2012	MAY 2009	Failure to Report Failure to Sample Major Spills		24	\$ 98,000	\$ 4,803
Consolidated Violations May 31, 2016	JAN 2009 to SEP 2015	Unpermitted Discharges* Limit Exceedences** Failure to Report Failure to Sample Major Spills	34 131 25 8 15	213	\$ 378,136	\$ 1,959
		Unpermitted Discharges* (Sep 2015 – Dec 2017) Limit Exceedances** (Sep 2015 – May 2018)	20			
Consolidated Violations Pending	SEP 2015 to MAY 2018	Failure to Report (Sep 2015 – May 2018) Failure to Sample (Sep 2015 – May 2018)	5	188	\$365,513 Pending	\$1,944 Pending
		Major Spills (Sep 2015 – Dec 2017)	33			

^{*} Per incident circumstances, major spills can also be included as unpermitted discharges - 1 incident, 2 violations

^{**} Per incident circumstances, major spills can also be included as effluent limit exceedences - 1 incident, 2 violations

Summary of NPDES Violations



Pending Consent Order from EPD

- September 2015 through May 2018
- Includes all Combined Sewer System (CSS) Facilities and Water Reclamation Center (WRC) Facilities
- Compliance incidents:
 - Unpermitted discharges 20
 - Other major spills (Sanitary Sewage Overflows (SSOs) and facilities) 33
 - Permit limit exceedences 130
 - Other 8
- 188 violations
- Three factors account for 72% of the violations:
 - Intrenchment Creek WRC 16 Major Spills (0.08%) 16 unpermitted discharges; none since February 2016
 - RM Clayton WRC 106 (86 Permit Violations; 20 Major Spills)* (56%) Violations include 42 Phosphorus exceedances; 41 Total Suspended Solids (TSS) exceedances. Headworks upgrades complete; Sand Filter media replacement completed in June 2018, and there have been no more TSS violations for June or July, 2018.
 - Combined WRC 38 Permit Violations (20%); 34 of the violations are for Phosphorus exceedances, which are still occurring.
 - * 1 Incident can result in up to 11 violations including a major spill

Proposed Draft Consent Order – Water Reclamation Centers and East Area and West Area Combined Sewer Systems NPDES Permit Nos. GA0039012, GA0037168, and GA0038644



EPD Consent Order primarily for unpermitted discharges and effluent limit exceedances; covers violations from September 2015 through May 2018:

Condition	Explanation of Conditions
1	Within ninety (90) days of the execution date of this Order, pay to the Georgia Department of Natural Resources \$365,513 for the violations listed in this order (unpermitted discharges, outfall spills, fish kill, effluent permit limit exceedances, and other narrative violations.
2	Within ninety (90) days of the execution date of this Order, address all comments in the Division's March 10, 2015 letter to the Respondent regarding the Design Development Report (DDR).
3	Within 180 days of execution date of the order, submit an approvable scheduled for substantial completion of the decommissioning of Intrenchment Creek WRC and upgrades at South River WRC.
4	Submit to the Division semiannual progress reports on the decommissioning of Intrenchment Creek WRC and upgrades at South River WRC within thirty (30) days of the end of the semiannual periods.
5	Within 90 days submit a summary of improved operational and control measures implemented at RM Clayton to optimize phosphorous removal
6	Within 90 days the RM Clayton WRC must be in compliance with the phosphorous and Total Suspended Solids effluent permit limitations.

Corrective Actions

- DWM met with EPD Representatives on August 2, 2018 to address the conditions
- A response letter was sent to EPD on August 6, 2018 to address the conditions in the order
- The violations (Total Suspended Solids and Total Phosphorus) are currently being addressed with operational as well as short and long-term capital improvements

Proposed Consent Order – East Area and West Area Combined Sewer Systems - NPDES Permit Nos. GA0037168 and GA0038644



An EPD Consent Order is proposed in response to DWM's request for an extension to complete required permit sampling for metals as follows:

Condition	Explanation of Conditions
1	The Respondent shall make every reasonable effort to perform the sampling required in Part 1.C.11 of their NPDES Permits when the climate allows, and submit their results as soon as a statistically adequate number of samples have been obtained, no later than March 1, 2020 (expiration date of NPDES Permit). The Respondent shall submit a report of progress towards this goal to the Division within thirty (30) days of the semiannual periods ending June 30 and December 31 of each year, until the required sample reports have been submitted.
2	Within sixty (60) days, submit to the Division both the instream Water Quality Control Feature (WQCF) laboratory monitoring data for all three metals that the Respondent requested removed (cadmium, lead, and nickel), as well as data for TSS and hardness, in electronic format with PDF copies of the laboratory reports.
3	Within ninety (90) days, submit a study plan indicating where, when, how, and what monitoring will be performed in the Respondent's use of the Biotic Ligand Model (BLM) analysis for zinc and copper, to be reviewed and approved by both the Division and EPA Region 4 for a change in the water quality standards.

Actions

- DWM met with EPD Representatives on August 2, 2018 to discuss the conditions of the Consent Order.
- A contractor has been re-engaged to update and execute the Sampling Plan
- Historical data for the five metals, TSS and hardness from 2013 2016 has been retrieved

Hemphill WTP Reservoir I Evaluation and Recommendations







Authorized Planning Budget (Projects): \$1.2M Ongoing – Infrastructure Stability

Highlights: Water system includes two raw water reservoirs located in NW Atlanta with a combined storage capacity of ± 525 million gallons, providing ± 5 days of storage for water treatment and distribution. Reservoir east of Howell Mill Rd, Hemphill Reservoir No. 1, provides ± 1/3 of the reservoirs' total storage capacity, but is currently not in service.

Updates

May 2018 Level 1 Event:

- Upon receipt of notification, an A/E performed an immediate inspection
- Reservoir was lowered to elevation of 945 feet
- Seepage stopped

Further Progress:

- NTP was issued to Arcadis/BPA, JV in June 2018 to commence investigation work
- Historical data has been collected from EPD, dating back to 1978
- Based on historical data review and trends from visual inspections, there is a need to raise the level of Reservoir No. 1
- Meeting with EPD is pending to obtain approval to raise the elevation so that an accurate assessment can be performed to identify the root cause of the problem
- July 2018 meeting held with EPD and Office of Water Treatment and Reclamation staff to review all records for both reservoirs
- Continuous bi-weekly reporting to the EPD



Financings



Issue	Par Amount	Purpose	Status
Series 2018A	\$106,795,000	Refund Series 2008 Bonds saving \$2M in annual debt service	Closed – June
Series 2018B	\$289,730,000	Refund Commercial Paper and Secure Funds for Priority Projects	Closed – July
Series 2018C	\$328,000,000	Refund Series 2013 Bonds Projected savings of \$3M in annual debt service	Closing – Sept.
2018 EIB (Environmental Impact Bonds)	\$13,500,000	Secure Innovative Funding for Green Infrastructure Projects	Closing – Dec.

SWAP Update

- In May, DWM terminated one of two SWAP agreements with UBS and anticipates terminating the second SWAP in September
- The transactions have a projected annual savings of approximately \$3M





Administrative Highlights

Water Policy



Policy	Description	Dollar Amount	DWM Impact
Water Resources Development Act (WRDA) House Resolution 8 Bill Shuster (R-PA) Senate Bill 2800 John Barrasso (R-WY)	Authorizes water resource studies and projects and sets Army Corps of Engineers policies for water supply	Sewer Overflow grant - \$225M/yr	 FY18 - \$3M Proctor Creek Project Anticipated project cost \$7.4M \$26M available in Continuing Authorities Program and WRDA Section 219 for CIP projects (e.g., RM Clayton Levee Improvements and Lakewood Fairgrounds)
Senate Water Workforce Bill Senate Bill 2346 Cory Booker (D-NJ)	Included in the Senate WRDA bill; to provide support for public water and wastewater utilities addressing high retiring workforces	Water utility workforce development grant - \$1M/yr.	DWM has obtained support from GA Delegation, GAWP, the Metro District, and other local utilities to get Bill in WRDA. Provides resources for DWM's workforce programs
Water Infrastructure Finance and Innovation Act (WIFIA)	Accelerates investment in water infrastructure with long-term, low-cost supplemental loans for regionally/nationally significant projects. Funds a maximum of 49% of eligible project costs.	FY18 - \$70M	In July, DWM submitted letters of interest for WIFIA loans for projects totaling \$295M
US Water Alliance Equity Taskforce	Six city network (Atlanta, GA; Buffalo, NY; Camden, NJ; Cleveland, OH; Louisville, KY; Milwaukee, WI) developing equitable water policies /practices locally and nationally	N/A	 Development of Water Equity Roadmap – Nov 2018 Development of policy and implementation of equity taskforce action items – Dec 2019
The Water Affordability Act Senate Bill 3015 Kamala Harris (D-CA)	Establishes a pilot Low Income Sewer and Drinking Water Assistance grant program	To be determined	Grants to 10 municipalities that operate drinking water systems and are subject to a consent decree
Water Sector Affordability Project	Congress has mandated that EPA revise framework for determining clean water (wastewater) affordability	N/A	Commissioner Powell is a member of the national industry Steering Committee developing household affordability criteria/making recommendations to EPA 15

Bill Disputes



Bill Dispute Work Orders



Open Bill Dispute Work Orders by SLA Status

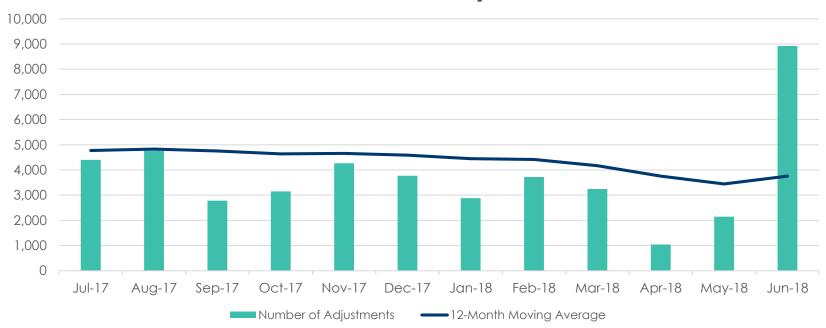


- Due to limited system access, both created and completed bill dispute work orders fell significantly in the quarter
- Existing work orders that could not be completed fell outside of the 90-day SLA

Bill Adjustments



Number of Bills Adjusted



- Due to limited system access, the number of bills adjusted fell considerably following the Cyber Incident
- The large increase in June 2018 reflects DWM's effort to catch up on outstanding work

Customer Assurance & Satisfaction Team (CAST)



Escalations:

Issues that are outside of SLA that are sent to CAST for handling

• Opened: 174

Closed: 232

Robo Calls: Suspended; will resume in Sept.

Robo calls were being used a proactive measure to contact customers when there is a significant increase in consumption. This feature was put on hold due to limited access to the enQuesta system. These calls will resume in September.

• **New Service:** 3,343 **Disconnect Service:** 2,913 Requests from Walk-in Centers, the online portal and fax.

Proactive Calls: Suspended; will resume in Sept.

Calls made to customers after a reported issue is inspected (Call to Inspection) and completed (Inspection to Completion). These calls allow DWM to set expectations for customers and to ensure customer satisfaction with the service. This feature was put on hold so that the employees of this group could be utilized to assist with other manual functions due to the Cyber Incident. These calls will resume in September.

Customer Assurance & Satisfaction Team (CAST)



High/Low Bill Calls: 2,333

Customers contacting DWM to inquire about a high or low bill, account analysis conducted and customer contacted to thoroughly discuss billing inquiry. All customers from April – June have been contacted and resolution has been reached or in progress.

Council District	High/Low Bill Calls Received	Closed and Resolved	Customers awaiting meter investigation or account review	
1	121	79	42	
2	60	38	22	
3	92	61	31	
4	92	82	10	
5	117	72	45	
6	101	62	39	
7	92	58	34	
8	147	88	59	
9	123	81	42	
10	141	114	27	
11	119	98	21	
12	148	103	45	
Outside City	980	691	289	
Grand Total	2,333	1,627	706	

- 515 accounts had one time spikes in consumption
- 48 accounts had increased consumption caused by a register change
- 16 accounts had a work order for a leak repair on the outlet side of the meter

Customer Mapping Workshop



- 2-day workshop
 - 20 participants

Journey Map Stage	1.Request new service	2. WS sets up new service	3. Receive 1st water bill	4. Question the water bill	5. Resolve/ Appeal bill	6. Pay Bill	7. Get Help	8. Close out water servic
Touchpoints	Call 311, Walk In or request on portal.	Customer not home for WS Inspector	Bill shows many ways to pay	Call to 311 to query bill	CAST F/U with Appeal status	7 or 8 ways to pay	Call 311 or 501 - 24/7	"System" notifies billing
Annoyances	Walk-in: Bring in Documents - Forgets/didn't know I had to bring it with me	Inspector finds problem delays turn-on - leaves door knocker	98% pay bill - but hard to understand Bill	I need to talk to someone but I have to keep calling	WSB listens to appeal/resolu- tion goes well	Local channels: WU. Kroger, some- times down	Don't know who to call or how to describe my problem	When Bill/ Collections no adjusted in timely manne
Pain Points	Purchase new meter-(walk in only)-wait 15 wks. To install	New customer doesn't see door knocker from Inspector	Irrigation and Domestic on different bills	Long time to communicate back to customer	Told the date of appeal-no choice. Not open after hrs.	Renters not aware of online payment	311 answers not correct	Don't realize need to close the account
Moment	Upload info on portal. Receive confirmation on portal	Customer calls 311 or goes to Walk-In to get Info on turn-on delay	Don't know how to read bill and fees. Opportunity for welcome kit	Meter is misread and not on their property.	Unfriendly bldg. Bad parking, security escort experience	Misapplied payment: crossed meters call 311for help	Get shuttled back and forth to different depts.	I didn't realize have to bring documentati n to C/O
of Truth	CAST sends F/U email or phone w/just account number . No other info	Deal with other depart's. No single POC. Escal. to CAST	Surprised by back-billing, I don't want to pay Nobody told me	Don't understand 3 Tiers on bill and other charges	I have to take off work to Appeal.	311 has no access to Dept. of Finance Info. Can't resolve	Different Depts have different answers	Meter not T.C before new turn on – bac billing to form occupant
	Not informed of Irrigation, Dom, Sewer, Sr Discs,	CAST updates: 1.Research 2.Status 3.Decision F/U	I don't understand separate bills/ accounts	CAST clearly explains the bill	Problem with billing can take 12 months	Can't pay by phone through rep only IVR	No feedback- what's been done about my problem?	No clear explanation Turn-on/Turn- processes
ants – Thinking	Don't understand different WS Departments	CAST knows how to get things done	The bill is wrong Something is wrong with the meter	I have to escalate this again	This is taking too much of my time	It should be easier to pay	Not confident my issue will be resolved	I did everythi I was suppos to do
leeds - feeling	Angry, no one told me what to expect, bring with me.	Except for CAST, one hand doesn't know what the other is doing	Feel like DWM just wants more money from me	Disenchanted with 311 lack of knowledge	Anxiety: What is DWM Hiding?	Just be done with it.	DWM is hiding the ball. I'll be sent again to another department	WS will think I stealing



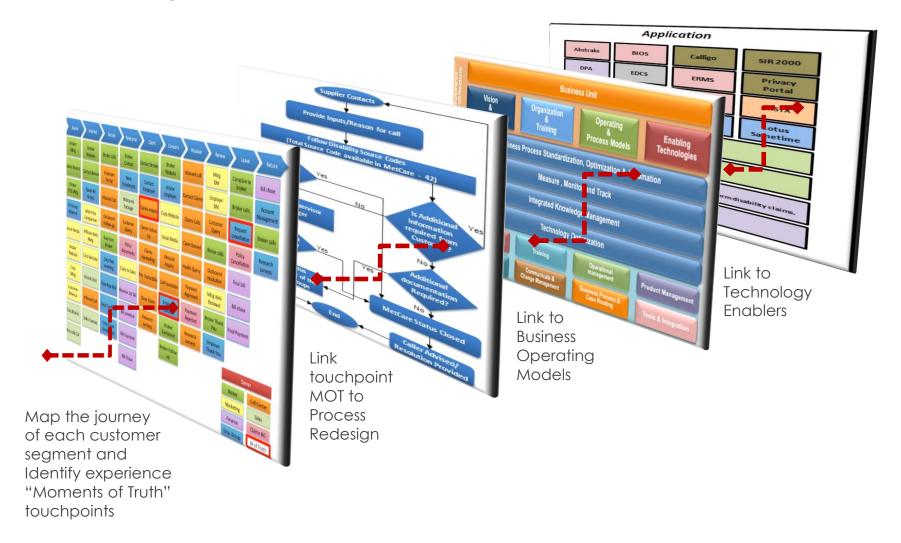
Next steps:

Customer 1-on-1
interviews
Customer
Moments of Truth
(MOT)

Journey Maps Can Guide Consistent Delivery of Exceptional DWM Experiences

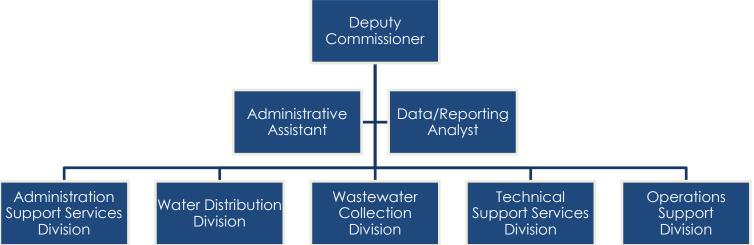


How Customer Journey Maps can integrate people, process, business models and technology



Office of Linear Infrastructure Operations (OLIO) Reorganization and Competitive Pay Initiative





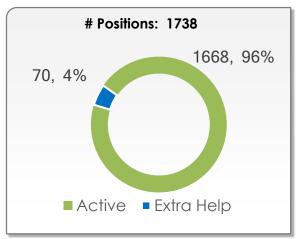
Purpose

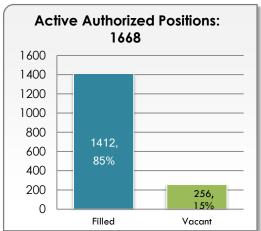
- Reduce layers of Management; improve accountability
- New operations support division
- Create more consistency in work practices between the Distribution and Collections divisions
- Position crews to promptly respond to emerging issues and better serve customers (geographic focus)
- Organize crews to work more efficiently; Maximize productivity on all shifts
- Strengthen leadership structure; improve accountability
- Clarify job responsibilities and reporting relationships
- Boost the competitiveness of pay for hard to fill positions; improve recruiting and retention; increase potential for salary growth

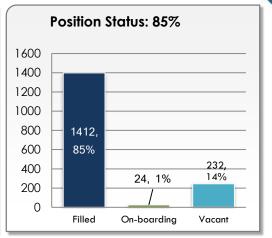
Timeline

- June Personnel Paper adopted by Atlanta City Council creating desired structure (new titles, grade amendments, reclassifications, etc.)
- August Posting key openings, conducting training
- September Complete shift in structure, make raises effective

Positions: Filled & Vacancy Report





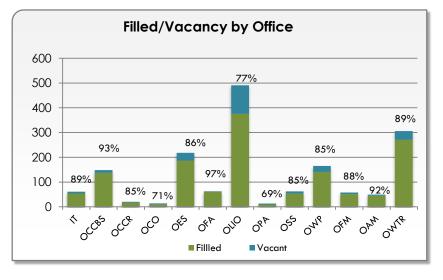


Notes

- 85% → 86% occupancy rate w/on-boarding (candidate identified/selected)
- 44.9% of the vacancies are within OLIO

Recruitment Efforts:

- Lincoln Technical, Atlanta Technical, Emory and Georgia Tech College Career Fair
- Mailed list of job opportunities within 25-mile radius for Crew Supervisors, Treatment Plant Operators, and Electrician Non-Restricted License holders for positions within operational offices



<u>Key for Offices:</u> IT=DWM Info Mgmt; OCCBS=Customer Care/Billing Servs; OCCR=Communications/Community Relations; OCO= Commissioner's Office; OES=Engineering Servs; OFA=Financial Admin.; OLIO=Linear Infrastructure Operations; OPA=Performance /Accountability; OSS=Safety/Security/Emergency Mgmt; OWP=Watershed Protection; OFM=Facilities Mgmt; OAM=Asset Accountability Mgmt; OWTR=Water Treatment/Reclamation

Water Distribution Operator & Collection System Operator Training & Certification









Distribution: 4

Collection: 3



Passed
Certification Exam

Workforce Development Framework



Workforce Planning Process Workforce Development Components Identify Gaps **Job Analysis Analyze** & Position Workforce Requirements Close the Gap: Supply & Workforce Recruitment, **Demand Development** Screening, & **Supervision & Components** Selection Performance Management eadership Vision, Mission, **Values Gather Data: Environmental Professional** Community **Assessment Monitor & Development** Outreach **Evaluate** & Training **Organizational** Culture **Identify Need: Organizational Assessment**

Workforce Development Focus



Challenges	Improvements
Lengthy Recruitment & Selection Process	 Established external partnerships: Atlanta Technical College, Atlanta Public School System; Wells Spring; Construction Education & Foundation of Georgia (CEFGA) & Atlanta Department of Correction Competitive Pay Added Associate Recruiter position Created a Recruitment Plan Revised recruitment workflow process Revised internship program to focus on STEM majors Creating Apprenticeship Program (Process Control Technicians) certified via Department of Labor
Lack of alignment between business units and job categories assigned to business unit	 Designing competency framework per job category Conducting Position and Job Analysis Updating job descriptions per business unit
Sub-optimal use of information technology	 Creating Information Technology Plan Assessment of current technical being used by each business unit Developing training classes for all software being used department-wide
Lack of technical training program and lack of use of available training resources	 Creating DWM University Centralizing training resources under single business unit
No programs for transferring knowledge to new staff	 Developing Succession Plan Developing electronic knowledge transfer system
Lack of professional growth	 Designing career development tools to foster career grown and retention: career paths and internal career fairs Employee Experience Mapping





Financial Highlights

Fiscal Year 2018 – Key Figures



Historical Operational Results

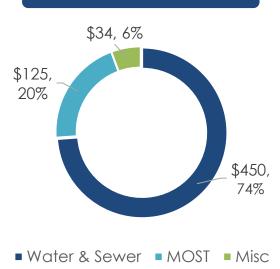
	FY18 YTD*	FY17	FY16
Operating Revenues	\$627.7	\$621.9	\$614.6
Water/Sewer	451.4	462.6	455.7
MOST	144.5	131.7	132.7
Other	19.7	27.6	36.3
Operation and Maintenance Expenses	\$239.4	\$224.9	\$228.4
Debt Service	\$202.6	\$203.2	\$211.6
Coverage Ratio	1.92	1.93	1.84
Contributions to Capital Budget	\$135.8	\$129.2	\$144.9
Capital Budget	\$121.8	\$324.6	\$459.0



FY 2018 Budget

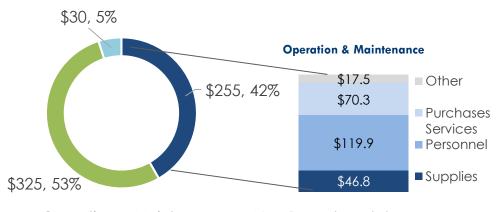






 Miscellaneous: IJ Revenue, tap meter sales, stormwater charges, interest earnings, administrative services

Appropriations (\$610M)



- Operation & MaintenanceNon-Departmental
- Other Departments
- Non-Departmental (Debt Service, indirect costs, PILOT/franchise fees, OPEB, GEFA payments/reserve, bad debt reserve, fundwide reserve)

	OPERATION & MAINTENANCE (O&M) Personnel Non-Personnel			
FY18 Budget	\$119.0	\$134.7		
Through 4th QTR of FY18	\$115.1	\$94.1		
% Spent	97%	70%		

FY18 Operational Results





Fiscal Year 2018					
Month	Revenues	Expenses			
771011111	Projected	Actual	Actual		
Jul '17	\$52.2	\$50.9	\$24.7		
Aug '17	\$106.4	\$104.0	\$49.3		
Sep '17	\$154.9	\$157.6	\$74.6		
Oct '17	\$205.3	\$216.3	\$232.4		
Nov '17	\$254.1	\$265.5	\$260.7		
Dec '17	\$298.9	\$313.0	\$293.8		
Jan'18	\$345.8	\$366.2	\$322.9		
Feb '18	\$385.5	\$413.9	\$347.3		
Mar'18	\$433.8	\$457.4	\$445.6		
Apr'18	\$478.8	\$513.1	\$472.3		
May '18	\$527.3	\$554.6	\$506.6		
Jun '18	\$575.2	\$606.8	\$531.7		

^{*} Does not include miscellaneous revenues

Collections Efforts



Commercial Accounts

- **\$7,634,448.85** collected
- 3,379 delinquent payments collected

Next Steps

- Continue to maximize collection efforts with site visits by collections staff for larger commercial water users
- Increasing cuts from 50 to 85-100 per week starting October 2018

Vacant Accounts

Commercial

- \$2,836,519.12 collected
- 226 new service accounts enforcement

Residential

- \$110,302.85 collected
- 574 new service accounts enforcement

Next Steps

 New service policies and procedures currently under review to identify best practices, process efficiencies, and controls

Multi-Family Accounts

- \$7,858,145.75 collected
- 2,854 delinquent payments collected
- Top 50 delinquent accounts isolated for collection efforts

Next Steps

- Execute disconnection strategy with stakeholders to coordinate essential services - September 2018
- Work with Law
 Department on
 suggested code
 changes to enhance
 City's legal position and
 collection abilities





CSTAT Performance – June 2018

Jun/18 Burst Pipe (Private) - Turn Off Request Of	Office The OCCBS	On-Time	Total	% On-Time
	CCBS	6		
Jun/18 Close Account - Vacant - Turn Off			6	0 100.0
		512	512	0 100.0
Jun/18 Meter Reset O	CCBS	23	23	0 100.0
Jun/18 Missing/Damaged DW Meter Lid O	CCBS	39	39	0 100.0
Jun/18 New Account Request - Not Vacant (Move In / Move Out)	CCBS	649	649	0 100.0
Jun/18 New Account Request - Vacant O	CCBS	445	445	0 100.0
Jun/18 Pay Bill/Request Turn On O	CCBS			n/a
Jun /40 Punkan Drinking Water Camina Lina Danain	OLIO			/-
State	OLIO			n/a
	OLIO			n/a
	OLIO	64	68	n/a
tan, as a series of the series	OLIO	64	80	94.1
,	OLIO			n/a
., and an analysis of the second seco	OLIO	22	27	n/a
	OLIO	32	37	86.5
meter zeak repair	OLIO	20	40	n/a
	OLIO	30	40	75.0
,	OLIO	58	62	93.5
	OLIO	48	58	82.8
	OLIO	42	50	84.0
and the second s		38	42	90.5
nearly 20 median control of the cont	0110	11	19	57.9
	OI10	9	10	90.0
career rooming autility of arter a runn creater, otto mocine, such op	0110	79	91	0 86.8
varie (e. appartenance) zear nepar	OI10			n/a
vali, 20	0110	4.44	470	n/a
	OLIO	141	172	82.0
	OWP OWP	2.5	27	n/a
34.1, 25		36	37	97.3
	OWP	28	30	93.3
	OWP	114	137	83.2
zan, za	OWP	28	29	96.6
saily 20	OWP	123	160	76.9
	OWP	8	8	100.0
	OWP	2	2	100.0
	OWP			n/a
Jun/18 Sewer Overflow/Spill Clean Up DWM Monthly SLA On-Time %	OWP	2,565	2,726	n/a 94.1%



CSTAT Performance – July 2018

	ildiice – July 2010				
Date	SR-WO Type	Office	On-Time	Total	% On-Time
Jul/18	Burst Pipe (Private) - Turn Off Request	OCCBS	18	18	100.0
Jul/18	Close Account - Vacant - Turn Off	OCCBS	910	910	100.0
Jul/18	Meter Reset	OCCBS	45	45	100.0
Jul/18	Missing/Damaged DW Meter Lid	OCCBS	96	96	100.0
Jul/18	New Account Request - Not Vacant (Move In / Move Out)	OCCBS	1090	1090	100.0
Jul/18	New Account Request - Vacant	OCCBS	750	750	100.0
Jul/18	Pay Bill/Request Turn On	OCCBS			n/a
Jul/18	Broken Drinking Water Service Line Repair	OLIO			n/a
Jul/18	Broken Sewer Line Repair	OLIO			n/a
Jul/18	Clear Storm Drain/Catch Basin	OLIO			n/a
Jul/18	Hydrant Complaint (Leaky Hydrant, Hydrant Knocked Off / Damaged)	OLIO	48	51	94.1
Jul/18	Hydrant Leak Repair	OLIO			n/a
Jul/18	Hydrant Repair/Replace	OLIO			n/a
Jul/18	Low Water Pressure	OLIO	34	34	100.0
Jul/18	Meter Leak Repair	OLIO			n/a
Jul/18	Missing/Damaged WW Manhole Lid/Cover	OLIO	38	56	6 7.9
Jul/18	No Water - Infrastructure Related	OLIO	59	62	95.2
Jul/18	Possible Sewer Cave In	OLIO	55	62	88.7
Jul/18	Possible Sewer Main Back Up / Blockage	OLIO	58	64	90.6
Jul/18	Possible Sewer Overflow/Spill	OLIO	68	70	97.1
Jul/18	Readjust/Replace Street Plate	OLIO	22	24	91.7
Jul/18	Sewer Odor	OLIO	9	10	90.0
Jul/18	Street Flooding during or after a rain event / Storm Sewer Back Up	OLIO	117	128	91.4
Jul/18	Valve (or appurtenance) Leak Repair	OLIO			n/a
Jul/18	Water Main Break Repair	OLIO			n/a
Jul/18	Water visible in street, sidewalk, etc. / Check for leak or break	OLIO	208	235	88.5
Jul/18	DW Quality Complaint	OWP			n/a
Jul/18	Erosion Complaint	OWP	48	48	100.0
Jul/18	Erosion Control Final Inspection (Commercial)	OWP	2	3	66.7
Jul/18	Erosion Control Final Inspection (Residential)	OWP	106	133	9 .7
Jul/18	Erosion Control Pre-Construction Inspection (Commercial)	OWP	24	24	100.0
Jul/18	Erosion Control Pre-Construction Inspection (Residential)	OWP	124	145	85.5
Jul/18	Existing Grease Trap Inspection	OWP	12	12	0 100.0
Jul/18	Illegal Grease Dumping	OWP	1	1	0 100.0
Jul/18	New Facility Grease Trap Inspection	OWP			n/a
Jul/18	Sewer Overflow/Spill Clean Up	OWP			n/a
	DWM Monthly SLA On-Time %		3,942	4,071	96.8%



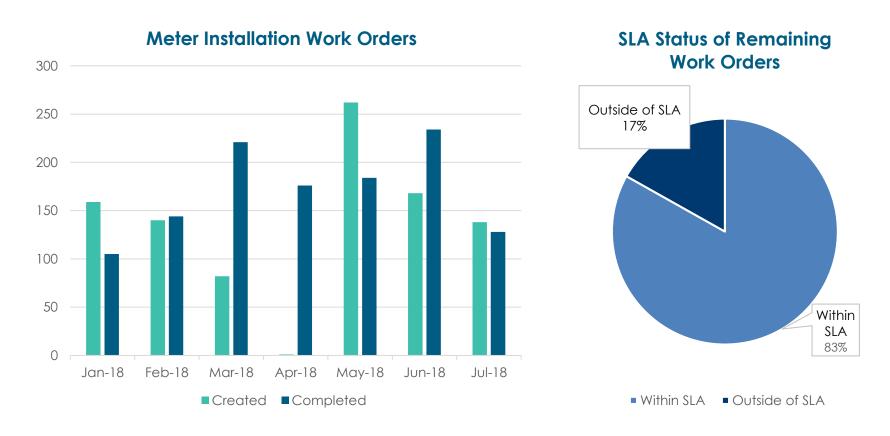
FORAtlanta Metrics

Metric Description	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18
Call volume per 1,000 accounts	159.17	146.53	113.83	60.33	94.56	111.81
Customer Service Complaints per 1,000 accounts	12.2	12.3	9.7	2.2	4.2	4.1
Technical Service Complaints per 1,000 accounts	24.5	16.5	12	10.6	14.6	15.1
Estimated Bills as a percent of Bills Issued	2.70%	2.73%	2.58%	2.24%	2.28%	3.14%
12-month O&M cost per million gallons of drinking water treated	518.97	516.88	488.30	517.75	530.77	626.86
12-month O&M cost per million gallons of wastewater treated	854.04	844.27	813.29	868.73	869.62	884.96
12-month Purchased power per million gallons of water treated (drinking water)	2,148	2,149	2,173	2,176	2,187	2,190
12-month Purchased power per million gallons of water treated (wastewater)	3,038	3,020	2,995	2,986	2,990	2,994
Drinking Water Compliance Rate as a percent of prior 365 days in compliance	100%	100%	100%	100%	100%	100%
Wastewater Treatment Compliance Rate as a percent of prior 365 days in compliance	99%	99%	99%	99%	99%	99%
# of Sewer Spills per 100 miles of sewer pipe (Annual)	9.2	9.3	8.5	7.4	7.1	6.7
# of Main Breaks per 100 miles of drinking water pipe (Annual)	14.83	15.38	16.30	15.77	15.52	15.87
# of Completed Bill Adjustment work orders	311	357	214	28	44	62
# of Delinquent Accounts	27,796	27,829	31,685	31,536	31,118	31,579
12-month New Leak Work Orders per 100 miles of drinking pipe	91.90	91.47	89.57	85.33	80.34	80.05
% of Total Hydrants Functional	98.75%	98.46%	98.75%	99.05%	99.07%	99.03%

Initial impact of Cyber Incident reflected in March and April, but infrastructure service remained stable while impacted areas show a return to normal at the end of the quarter

Meter Installations

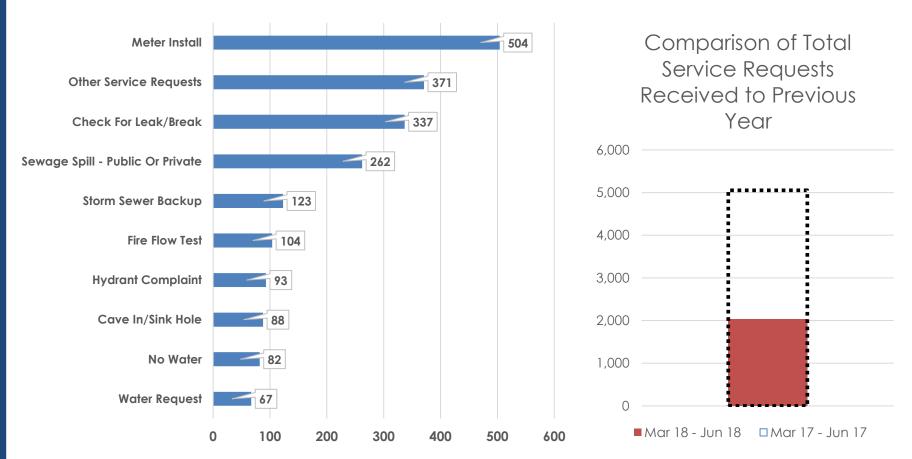




Due to system limitations, DWM was unable to create meter installation work orders for some time, but DWM staff focused attention on completing existing work orders before catching up later in the quarter

OLIO Recorded Service Requests: April 2018 - June 2018



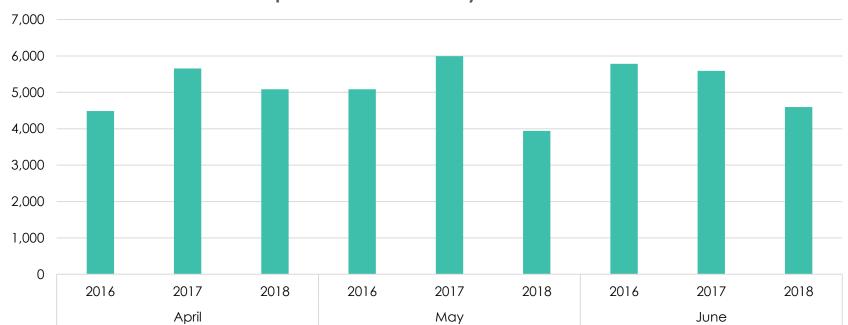


OLIO Service Requests for the quarter totaled **2,031**. For the same quarter last year, OLIO received **5,053**. This represents a **60%** decrease due to system limitations as a result of the Cyber Incident.

OLIO Completed Work Orders



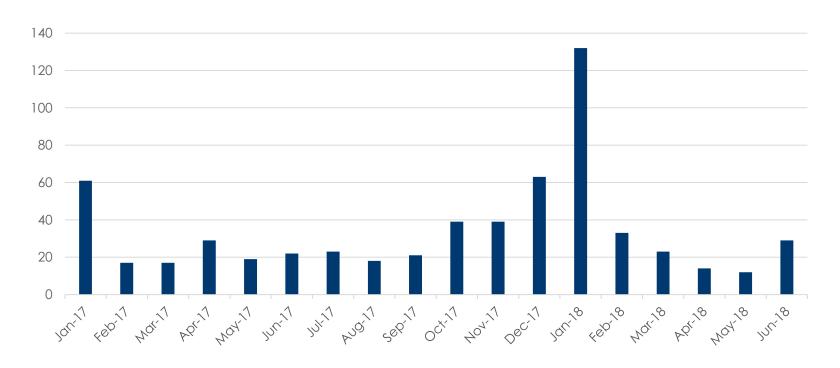




- Data represents the number of completed work orders in the system of record (Hansen) for the same quarter in 2016, 2017, and 2018
- 2017 represented a 12% increase over the same period of 2016 with increased production and data cleansing
- 2018 production represents 88% of the more normal 2016 workload even with challenges to data collection and work order management systems.

Main Breaks by Month





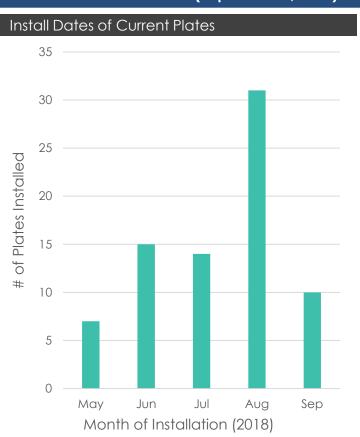
- Main Breaks are slightly lower for the fourth quarter of fiscal year 2018 as compared to the same time period in fiscal year 2017
- Improperly conducted underground work by other utility contractors poses a threat to mains and may be reflected in the most recent increase in breaks

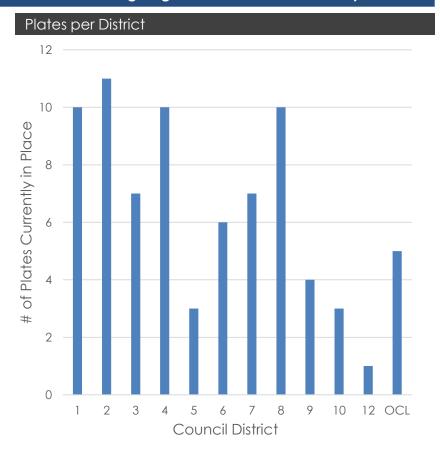
Metal Plate Tracker





Average Age of Current Plates: 43 Days

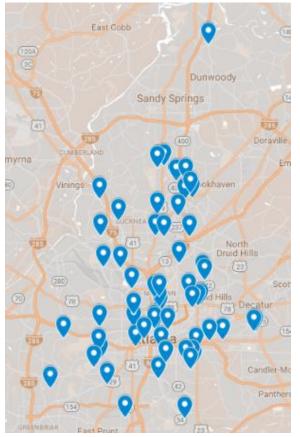




Metal Plate Tracker

Number of Plates in Place (Aug 23, 2018): 98 Average Age of Current Plates: 38 Days

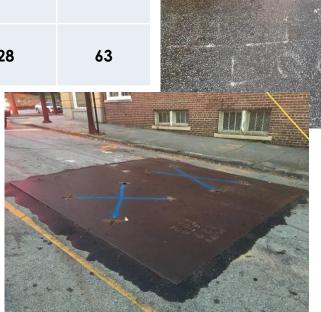




Quadrant	Number of Plates	Average Age (days)	Oldest Age (days)
Northeast	41	40	98
Northwest	27	33	90
Southeast	18	49	90
Southwest	12	28	63

Improvements

- DWM-marked plates
 - Easily identify DWM plates
- Plate border system
 - Prevents plate shifting
 - Easier installation and removal







Compliance

Spill Data



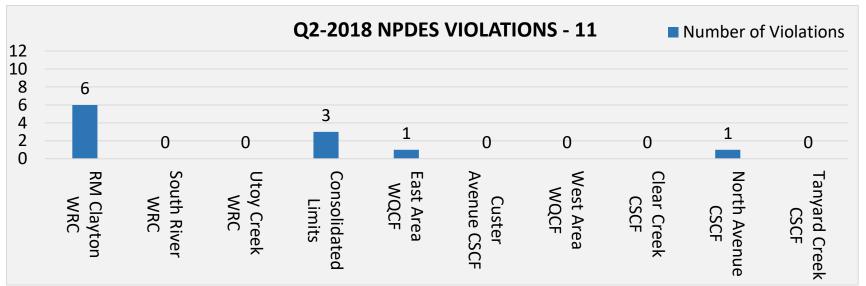
All Spills

Quarter	2015	2016	2017	2018
Q4	76	32	35	-
Q3	39	28	28	-
Q2	47	41	58	42
Q1	32	88	56	37
Total	194	189	179	79
YTD Major Spills (> 10,000 Gallons)	17	9	15	3
YTD Spills Prevented (Flow Monitoring Alert Program)	14	21	21	25

Major Spills for the Quarter = None

National Pollutant Discharge Elimination System (NPDES) Permit Compliance Status





Facility	Cause	Mitigation	
RM Clayton WRC	Operational – 6	RM Clayton Facility Headworks construction is	
	 Phosphorous Limits – 3 Total Suspended Solids Limit – 3 	complete; Post-construction operational optimization in	
Consolidated Limits	Operational – 3	progress	
	 Phosphorous Limits – 3 		
North Avenue CSCF	Operational – 1		
	• Fecal Coliform Limits – 1		
East Area WQCF	Administrative – 1		
	 Failure to Follow MOMs Plan – 1 		





Capital Improvement Plan Updates

DWM Capital Improvement Plan Program/Summary Report



5-YR Total: \$1.253 B; 76 Projects (8 Planning, 13 Design, 16 Procurement, 19 Construction, 9 Complete, 7 Inactive, 4 On-Hold)



\$9.3 M Water Facilities Projects: 2



\$344.7 M Water Supply Program Projects: 3



\$126.1 M Water Distribution Projects: 8



\$56.0 M Green Infrastructure Projects: 6



\$355.6 M Wastewater Facilities Projects: 28



\$45.6 M Upper Proctor Creek Projects: 3



\$163.4 M Wastewater Collection Projects: 14



\$31.0 M Watershed Protection Projects: 2

\$121.4 M in GENERAL Capital Improvements (10 Projects)





Peachtree Creek Trunk Sewer Stabilization

Cost: \$36.9M

Economic Impact: 571 jobs

Highlights: Cleaning and trenchless rehabilitation of approx. 11,000 LF 90" diameter 80 year old sewer to reduce inflow and infiltration, safeguard against future breaches, and ensure long-term structural integrity of sewer

Updates

Construction commenced May 2018



Rodney Cook Sr. Park-Historic Vine City

Cost: \$22M

Economic Impact: 341 jobs

Highlights: Collection of innovative stormwater practices designed to redirect surface runoff away from the combined sewer system

- GA Power Transmission line relocation began April 2018
- Project completion scheduled November 2018









Downtown Water Storage Tank & Upgrades at Hemphill Pump Station

Authorized Budget (Projects): \$39M

Highlights: The tank will provide a short-term backup water supply to feed the water distribution network in the event of a major disruption at the Hemphill Pump Station or a major break in one of the key distribution lines. The tank will provide reliable pressure in the system, thus protecting the system against contaminants and providing pressure for firefighting activities. Improves reliability of drinking water pressure and fire flows. Adds redundancy to maintain water pressure and reduce potential boil water advisories. Increases the volume of water available for fire flows.

- DWM has identified two alternate locations for project site
- Modeling is currently being performed to confirm the required capacity and sizing information that would be required in addition to the overall feasibility of constructing the tank and pump station on these sites
- Site previously identified for this project is still an option pending the results of the aforementioned modeling effort
- Upgrades at the Hemphill Pump Station reached 60% design May 16, 2018







Water Supply Program

Authorized Budget: \$342M Economic Impact: 5,301 jobs

Highlights: Securing Atlanta's water future. Increasing water supply from 3 days to 30 days. Protecting \$100M in daily economic activity.

- Quarry and Hemphill Pump Stations (PS) Completion by December 2018
- Conveyance tunnel: 10' dia.; 17,154 of 23,800 feet excavated by Driller Mike
- Construction Authorization #15 Issued June 25, 2018 for tunnel from Chattahoochee construction shaft to the proposed River Intake PS Shaft
- Cleaning of debris in raw water mains at Hemphill WTP completed - April 2018
- Hemphill PS 5 Shafts completed March 2018
- 90 MGD Chattahoochee PS design Construction Plans completed

Water Supply Program, Cont'd

Quarry Pump Station Time Lapse Video









RM Clayton Nutrient Recovery Project

Authorized Budget (Projects): \$11.6 M

NTP: May 9, 2018

Substantial Completion: May 9, 2019 **90% Design – Pending Construction**



Highlights:

Installing Ostrava's Pearl® Nutrient Recovery process, a patented process designed to selectively extract Phosphorus and Nitrogen from wastewaters and convert these into a slow release fertilizer that can be used in a variety of agricultural applications. Application will reduce the amount of Phosphorous and Nitrogen treated in the RM Clayton WRC reducing chemical usage and biosolids production.



- Land Disturbance Permit and Building Permit have 80% approval.
- Design to include reuse of abandoned digester tank for centrate storage and equalization.
- Final Completion June, 30, 2019







FC-8047A-1 Noresco Guaranteed Energy Savings Performance Contract

Authorized Budget (Projects): \$77.9 M

NTP: December 29, 2017

Substantial Completion: November 30, 2020

Updates

ECM 1- Water Distribution System Optimization Cost: \$3.2M, Annual Benefit: \$0.89M

- Pumping Optimization will save 1.7B gallons of drinking water per year
- Completed meetings with key OLIO staff

ECM 2 – Biosolids Beneficial Reuse Cost \$66.4M, Annual Benefit: \$3.84M

- Biosolids dryers reduce RM Clayton annual landfilled waste up to 1.5M wet tons
- Decommissioning of RM Clayton incinerators eliminate Major Source Air Permit
- Placed order for Suez Biosolids Dryer Equipment April 2018 (critical path item)

ECM 3 – UV Disinfection System Replacement Cost: \$8.3M, Annual Benefit: \$0.46M

- RM Clayton upgrade to energy efficient UV system, similar to South River WRC and Utoy Creek WRC
- System installation across four (4) channels scheduled November 2018 - November 2019

S

FC-8047A-2 Schneider Guaranteed Energy Savings Performance Contract

Authorized Budget (Projects): \$32.6 M

NTP: January 29, 2018

Substantial Completion: September 30, 2019

| Phesors | Structure | Physics | Ph

PowerLogic ION7650 Remote Display

Updates:

A total of 17 ECMs are included in the project

- South River WRC Ammonia Based Aeration Control,
 - Cost: \$1.44M, Benefit: \$0.17M Annual Benefit
- Utoy Creek WRC Operating 2 of 4 Basins & Low Energy Channel Mixing
 - Cost: \$1.73M, Benefit: \$0.07M Annual Benefit
- Utoy Creek WRC Low Energy Thickening Equipment;
 - Cost: \$1.90M, Benefit: \$0.06M Annual Benefit
- South River WRC Anaerobic Digestion & Solids Optimization
 - Cost: \$18.41M Benefit: \$1.14M Annual Benefit
 - Cleaning and restoring mixing for two digesters (started/critical path)
- Utoy Creek / South River WRC UV System Upgrade
 - Cost: \$6.47M Benefit: \$0.56M Annual Benefit
- Chattahoochee WTP Chemical Feed Optimization
 - Cost: \$0.28M, Benefit: \$0.05M Annual Benefit
- Lighting Upgrades Multiple Sites, Total Cost: \$3.13M, Benefit: \$0.23M Annual Benefit (Work underway)
- Utoy Creek / South River WRC Energy Demand Management Cost: \$0.99M, Benefit:
 \$0.02M Annual Benefit
- Hemphill / South River WRC Dewatering Electrical Switchgear Cost: \$1.09M, Benefit: Annual savings to be determined
- Utoy Creek WRC Administrative Building Seal Leaking Roofing Cost: \$0.78M Benefit: \$0.01M Annual Benefit (Work almost completed)



RetroFlex LED Lamp



PowerLogic ION7650







Clean Water Atlanta Consent Decree Program – General and Sewer Group 3 (SG3)

Authorized Budget (Projects): \$78.1M

Economic Impact: 1,209 jobs Compliance Milestone July 2020

Highlights: Projects to comply with 1999 Sanitary Sewage Overflow

Consent Decree for Clean Water Act compliance

Updates

General:

- Completed design of one remaining capacity relief project (Lower PRC Trunk)
- Initiated procurement for one remaining SG3 small rehab contract (SG3 Contract D)
- Submitted Quarter ("Q") 1 2018 Combined Sewer Overflow report to EPA/EPD

SG3 Small Diameter Rehabilitation:

 Construction began Q2 2018(Contracts B and C); Q3 2018 (Contract D)

SG3 Capacity Relief Projects:

- Ashby-Jett Trunk Construction began May 2018
- Terrell Creek Trunk Procurement Phase; Anticipated construction start Q3 2018
- Lower Proctor Creek Trunk Pending advertisement Q3 2018

SG4 Small Diameter Rehabilitation:

Planning Phase; Configuring bid packages

SG4 Capacity Relief Projects:

Collier Rd Outfall Sewer Improvements – 100% Design complete; Pending funding approval Q4 2018 and procurement Q1 2019

MOST - Stormwater Asset Management Projects



FY 2018 - 16 Projects - Completed - 12; Under Construction - 3; Remaining - 1

Vicinity Project Address	Project #	Council District	Council Member	Status
East Paces Ferry Road NE - 647	07-134	7	Howard Shook	Constructe
Polo Drive NE - 8	06-137	6	Jennifer N. Ide	Constructe
Lawton Street SW - 381	04-135	4	Cleta Winslow	Constructe
Main Street NW - 2156	09-167	9	Dustin Hillis	Cleaned
Lakewood Avenue SE - 2085	12-151	12	Joyce M. Sheperd	Constructe
Mt Gilead Road SW- 2275	11-106	11	Marci Collier Overstreet	Constructe
Welcome All Road SW (3418/3550)	11-113	11	Marci Collier Overstreet	Under Constructi
Hillside Drive NW - 440	08-130	8	J.P. Matzigkeit	Construct
Club Drive NE - 4555	07-133	7	Howard Shook	Constructe
Monument Avenue SE - 483	05-115	5	Natalyn Archibong	Under Constructi
Lakewood Way SW - 215	12-111	12	Joyce M. Sheperd	Construct
Lakewood Park Stream Clean 2018	12-124	12	Joyce M. Sheperd	Under Constructi
Mercer Stream Restoration	01-201	1	Carla Smith	Awaiting Award
Proctor Creek Greenway Project, Design	OWP	9	Dustin Hillis	Construct
Murphy Avenue SW - 1256	12-163	12	Joyce M. Sheperd	Cleaned
Metropolitan Parkway SW - 957	12-171	12	Joyce M. Sheperd	Cleaned
	16			-

2275 Mt. Gilead Road SW *Embankment Washout*



During Construction



Opened to Traffic

Lakewood Amphitheater MOST Improvements





BEFORE



AFTER



TRASH/DEBRIS REMOVED



CLEAR STREAM

Executive Staff In-Service Observations / March Field Visits



- Review and analyze process for crews receiving daily work assignments, equipment and materials
- Need storage space for daily materials/parts on truck
- Better implementation of rolling stock concept with warehouse team
- Review additional positions' eligibility for hazardous duty pay
- Staff desire customer service training
- Crews desire to learn more about innovative technology that can assist with job performance
- Crews take pride in their work





Observations and Recommendations for Backflow Prevention Group Observations

- City has around 18,000 backflow assembly devices and 10,400 registered
- Backflow Prevention Group reviews developer plans, maintains database of accounts, inspects installations, accounts, inspects installations, evaluate and identify customers not in
- Team only has 5 staff: a manager, two inspectors and 2 admin
- Historically, team has mailed out letters to all 10,400 accounts, plus reminders Asset management software is New staff take a long time to train

Recommendations:

- Reclassify staff as everyone is a Water
- Prepare appropriate job titles
- Prepare new job descriptions Hire additional resources:
- Field Engineer Three Admins
- Scanning and filing of test results
- Update asset management software Update Customer Mailing System
- Approval of back flow assemblies should be a requirement for obtaining a Certificate of
- Provide additional training for staff involved with inspection of backflow assemblies





DWM EMPLOYEE APPRECIATION WEEK 2018

Celebrating DWM's Employees & Our SWEET 16th Anniversary







Questions & Answers