DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

Board of Directors

Audit Committee

Thursday, January 28, 2016

9:30 a.m.

1. **Call to Order**…………………………………………………..Nicholas A. Majett, Chairperson

2. **External Audit Exit Conference**…………………………………………..………..……KPMG

3. **Internal Audit Update**………..……………….……............... Dan Whelan, RSM, Auditor General
   A. FY 2016 Internal Audit Plan Status Update
   B. Status Update on Audit Findings
   C. Retail Rates Implementation Progress Report
   D. Overtime Audit and Analysis
   E. Hotline Update

4. **Executive Session*** …………………………….…………….. Nicholas A. Majett, Chairperson

5. **Adjournment**……………………………….………………… Nicholas A. Majett, Chairperson

---

* The DC Water Board of Directors may go into executive session at this meeting pursuant to the District of Columbia Open Meetings Act of 2010, if such action is approved by a majority vote of the Board members who constitute a quorum to discuss: matters prohibited from public disclosure pursuant to a court order or law under D.C. Official Code § 2-575(b)(1); contract negotiations under D.C. Official Code § 2-575(b)(1); legal, confidential or privileged matters under D.C. Official Code § 2-575(b)(4); collective bargaining negotiations under D.C. Official Code § 2-575(b)(5); facility security under D.C. Official Code § 2-575(b)(8); disciplinary matters under D.C. Official Code § 2-575(b)(9); personnel matters under D.C. Official Code § 2-575(b)(10);proprietary matters under D.C. Official Code § 2-575(b)(11); decision in an adjudication action under D.C. Official Code § 2-575(b)(13); civil or criminal matters where disclosure to the public may harm the investigation under D.C. Official Code § 2-575(b)(14), and other matters provided in the Act.

DC Water FY 2015 Financial Statement and OMB Circular A-133 Audits

Exit Conference
January 28, 2016

Agenda

❖ **Responsibilities**

❖ **Significant findings or issues from the audit**

  ■ Financial Statement Audit results

  ■ Accounting policies, practices, and estimates

  ■ Summary of corrected and uncorrected misstatements

  ■ Significant deficiencies and material weaknesses in internal control

  ■ Other matters

❖ **Material written communications between KPMG and management**

❖ **Independence**

❖ **Single Audit Results**

❖ **KPMG Ethics and Compliance Hotline, and Government Institute Information**

1

Responsibilities

Responsibilities

Management is responsible for:

- Adopting sound accounting policies

- Fairly presenting the financial statements, including disclosures, in conformity with generally accepted accounting principles (GAAP)

- Establishing and maintaining effective internal control over financial reporting (ICFR), including internal controls to prevent, deter, and detect fraud

- Identifying and ensuring that the Authority complies with laws and regulations applicable to its activities, and for informing the auditor of any known material violations of such laws and regulations

- Making all financial records and related information available to the auditor

- Providing unrestricted access to personnel within the entity from whom the auditor determines it necessary to obtain audit evidence

Responsibilities (continued)

Management is also responsible for:

■ Providing the auditor with a letter confirming certain representations made during the audit that includes, but is not limited
to, management's:

– Disclosure of all significant deficiencies, including material weaknesses, in the design or operation of internal controls that could adversely affect the Authority's financial reporting

– Acknowledgement of their responsibility for the design and implementation of programs and controls to prevent, deter, and detect fraud; and

– Affirmation that the effects of any uncorrected misstatements aggregated by the auditor are immaterial, both individually and in the aggregate, to the financial statements taken as a whole

Responsibilities (continued)

The Audit Committee is responsible for:

- Oversight of the financial reporting process and oversight of ICFR

- Oversight of the establishment and maintenance of programs and internal controls designed to prevent and detect fraud

Management and the Audit Committee are responsible for:

- Setting the proper tone and creating and maintaining a culture of honesty and high ethical standards

The audit of the financial statements does not relieve management or the Audit Committee of their responsibilities.

Responsibilities (continued)

KPMG is responsible for:

- Forming and expressing an opinion about whether the financial statements that have been prepared by management with the oversight of the Audit Committee are presented fairly, in all material respects, in conformity with GAAP

- Planning and performing the audit with an attitude of professional skepticism

- Conducting the audit in accordance with professional standards and complying with the Code of Professional Conduct of the American Institute of Certified Public Accountants, and the ethical standards of relevant CPA societies and relevant state boards of accountancy

- Evaluating ICFR as a basis for designing audit procedures, but not for the purpose of expressing an opinion on the effectiveness of the entity's ICFR

- Communicating to management and the Audit Committee all required information, including significant matters

- Communicating to management and the Audit Committee in writing all significant deficiencies and material weaknesses in internal control identified in the audit and reporting to management all deficiencies noted during our audit that are of sufficient importance to merit management's attention

Responsibilities for other information in documents containing audited financial statements

- The auditors' report on the financial statements does not extend to other information in documents containing audited financial statements, excluding required supplementary information.

- We are required to:
  - Read the other information to identify material inconsistencies with the audited financial statements or material misstatements of fact, and
  - Make appropriate arrangements with management or the Audit Committee to obtain the other information prior to the report release date.

- We have performed the above with respect to required supplementary information (Management's Discussion and Analysis) and other information in the CAFR (Letter of Transmittal and Statistical Section) noting no exceptions.

Significant findings or issues from the audit

Financial Statement Audit Results

- **Opinion on the Basic Financial Statements**

  – Unmodified or "clean" opinion

- **Report on Internal Control over Financial Reporting**

  – No Material Weaknesses identified

  – Significant Deficiencies identified

- **Report on Compliance with Laws, Regulations, Contracts and Grants**

  – No instances of non-compliance noted

- **Management Letter**

  – Control Deficiencies noted

Accounting policies, practices, and estimates

Significant Accounting Policies

- Described in Note 2 of the basic financial statements

- No significant changes to accounting policies in FY 2015 as a result of implementation of new GASB standards

Significant Estimates

Accounting estimate	Management process used to develop accounting estimates	Significant assumptions used that have a high degree of subjectivity
Allowance for Doubtful Accounts	A/R aging analysis by significant customer category	None
IMA Operating Cost Accruals	Analysis of costs coded to certain Blue Plains-related Accounting Units in Lawson during the fiscal year	None
Capital Accounts Payable Accruals	Historical analysis of invoices for major vendors	None

Accounting policies, practices, and estimates (continued)

Concerns regarding application of new accounting pronouncements

- None noted as no new accounting pronouncements had a material effect on the financial statements in FY15.

Alternative accounting treatments

- None noted.

Recently issued standards

No.	Title	Required Implementation Date (Period Beginning After)	Authority Fiscal Year
72	Fair Value Measurement and Application	June 15, 2015	2016
73	Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68	June 15, 2015 and 2016	2016 and 2017
74	Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans	June 15, 2016	2017
75	Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions	June 15, 2017	2018
76	The Hierarchy of Generally Accepted Accounting Principles for State and Local Governments	June 15, 2015	2016
77	Tax Abatement Disclosures	December 15, 2015	2017

Summary of uncorrected misstatements – Fiscal 2015

$(Million)		
Description of misstatement	**Debit**	**Credit**
Difference between AP accrual estimate and actual invoices received per look-back analysis (factual) Construction in Progress (DR) Accounts Payable (CR)	$13.2	$13.2
Invoice not billed in accordance with Authority's estimation methodology (projected) Accounts Receivable (DR) Commercial Revenue (CR)	$6.5	$6.5

Note: The impact on the financial statement line items are reflected on the next slide.

Impact of uncorrected misstatements – Fiscal 2015

$(Million)				
Description of Misstatement	**Increase in Net Position**	**Net Position**	**Total Assets and Deferred Outflows**	**Total Liabilities**
Difference between AP accrual estimate and actual invoices received per look-back analysis (factual)	$ -	$ -	$13.2	$13.2
Invoice not billed in accordance with Authority's estimation methodology (projected)	$6.5	$6.5	$6.5	$ -
Total Impact of Uncorrected Adjustment	$6.5	$6.5	$19.7	$13.2
Financial Statement Line Item Balance	$179.1	$1,530.0	$6,128.7	$4,598.8
Percentage	3.6%	0.42%	0.32%	0.29%

Significant deficiencies and material weaknesses in internal control

Material Weaknesses

None noted

Significant deficiencies

Description	Identified by	Status
Improve General Information Technology access controls related to the following: • Periodic management review of Lawson user access • Validation and monitoring of privileged access to Lawson	KPMG	Significant deficiency communicated in previous audit(s) that has not yet been remediated.

All other deficiencies in ICFR noted during our audit that are of sufficient importance to merit management's attention have been communicated to management.

Other matters

Related-party transactions	No significant matters regarding transactions with related parties were noted
Litigations, claims, and assessments	No significant matters noted
Illegal acts or fraud	None noted
Noncompliance with laws and regulations	None noted
Significant difficulties encountered during the audit	None
Disagreements with management	None
Significant issues discussed, or subject to correspondence, with management	None noted
Scope limitation	None
Other findings or issues relevant regarding oversight of the financial reporting process	No matters to report

15

Material written communications between KPMG and management

Material written communications between KPMG and management

- Engagement letter
- Management representation letter(s) including summary of uncorrected misstatements

17

Independence

Independence

Nonaudit services provided during the period:

- Green bond attestation
- IT systems assessment

In our professional judgment, we are independent with respect to the Authority, as that term is defined by the professional standards.

Single Audit Results

Single Audit Results

■ **Major programs tested:**

– CFDA# 66.458, Clean Water Act Program

– CFDA# 66.468, Safe Drinking Water Act Program

■ **Opinion on Compliance For Major Programs**

– Unmodified or "Clean" Opinion

– No Questioned Costs Identified

■ **Internal Control over Major Programs**

– No Material Weaknesses Identified

– No Significant Deficiencies Identified

KPMG Ethics and Compliance Hotline, and Government Institute Information

KPMG Ethics and Compliance Hotline, and Government Institute Information

KPMG Ethics and Compliance Hotline

- Scope – To provide a confidential, non-retaliatory, and anonymous hotline to the following individuals/organizations for the good faith reporting of concerns about possible violations of law, professional and ethical standards, and KPMG policy.

- Contact information
  - Phone: 1-877-576-4033
  - Website: www.kpmgethics.com

KPMG Government Institute*

- Scope – To serve as a strategic resource for government at all levels, and also for higher education and non-profit entities seeking to achieve high standards of accountability, transparency, and performance. The institute is a forum for ideas, a place to share leading practices, and a source of thought leadership to help governments address difficult challenges such as effective performance management, regulatory compliance, and fully leveraging technology.

- Contact information
  - Jeff Steinhoff, Executive Director (jsteinhoff@kpmg.com)
  - Website: www.kpmginstitutes.com/government-institute/

*The KPMG Government Institute is a member of the KPMG Institute Network (www.kpmginstitutes.com).

KPMG

DC WATER

Audit Committee Meeting

January 28, 2016

Agenda

- FY 2016 Internal Audit Plan Status Update

- Update on Audit Findings

- Retail Rates Implementation Review Progress Report

- Overtime Audit and Analysis Report

- Hotline Update

- Executive Session

2

RSM

FY 2016 Internal Audit Plan Status Update

Audit	Status
FY 2015	
IT Vendor Risk Management*	Report Complete
FY 2016	
Retail Rates Implementation (Post)	Progress Report Complete
Overtime Audit and Analysis	Report Complete
ROCIP	Fieldwork In-Process
Training, Licensing and Certification	Planning In-Process
Business Development Plan – Rapid Assessment	Planning In-Process
Contract Monitoring & Compliance Reviews	Planning In-Process
Remediation Follow Up Procedures	On-going
Hotline Management	On-going

* Report issued during Executive Session.

3

RSM

Update on Audit Findings Prior to FY 2015

Audit Report/Subject	Report Issue Date	Corrective Actions				
		Total	Open	Closed	Pending Testing	Action Deferred*
Organizational Policies & Procedures	02/23/2010	1	0	0	0	1
Safety Program Training & Compliance	10/07/2010	1	0	0	0	1
Pumping & Storage - Water Leakage	03/01/2011	1	0	1	0	0
Human Capital Management	11/29/2011	1	0	0	0	1
Maintenance Services	04/18/2012	2	2	0	0	0
IT Helpdesk & Computer Operations	10/05/2012	1	0	0	1	0
Fleet Management	04/17/2013	2	2	0	0	0
Process Control System (PCS)	09/04/2013	7	0	3	4	0
Sewer - Emergency Maintenance	06/18/2013	2	0	1	1	0
Water Services - Distribution Maintenance Branch	10/28/2013	4	2	2	0	0
Legal Operations	02/11/2014	1	0	1	0	0
OSHA	02/18/2014	1	1	0	0	0
Disposal of Assets	02/18/2014	2	2	0	0	0
Emergency Management - Recovery	05/12/2014	2	1	1	0	0
DSS - Construction & Repair	05/12/2014	6	0	3	3	0
Emergency Management - Mitigation	06/27/2014	1	1	0	0	0
IT Asset Management	09/10/2014	2	2	0	0	0
Warehouse Operations	09/15/2014	4	1	2	0	1
GIS Mapping	06/23/2014	3	2	1	0	0
Total		**44**	**16**	**15**	**9**	**4**

*Of the 4 action deferred items, 3 items are policy and procedure related and 1 is a business process improvement.

4

RSM

Update on Audit Findings Prior to FY 2015, cont.

Status by Business Area

	DETS	Blue Plains	Customer Care & Operations	Office of the General Counsel	IT	Support Services	Finance	Office of the General Manager
Closed Since Last AC Meeting	1	3	8	1	0	2	0	0
Open Management Action Plans	2	2	4	0	2	6	0	0
Pending Testing	0	4	4	0	1	0	0	0
Action Deferred	0	0	0	0	0	1	0	3
44 Total	3	9	16	1	3	9	0	3

Corrective Action Themes

Category	# of corrective actions
Policy and Procedure:	
Policy or Procedure does not exist	4
Policy or Procedure needs to be updated	3
Policy requires union approval	4
Total	11
Employee Development / Training	4
Asset Management	9
Catch Basin Pilot Program	1
Vacant Position Dependency	2
Contractor / Vendor Dependency	6

Corrective Action by Due Date

Due Date	# of corrective actions
Past Due	0
FY 2016 Quarter 2	6
FY 2016 Quarter 3	4
FY 2016 Quarter 4	3
FY 2017 Quarter 2	1
FY 2017 Quarter 3	1
FY 2017 Quarter 4	1

RSM

Update on Audit Findings Prior to FY 2015, cont.

Current Status of Audit Findings Prior to FY 2015
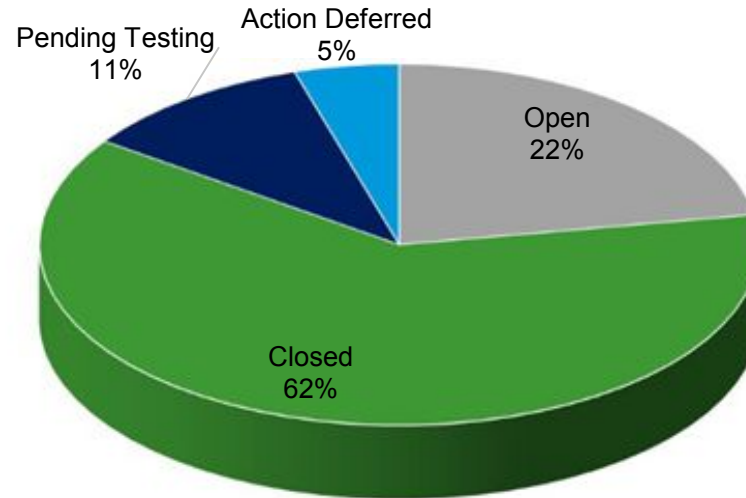
	Audit Committee Meeting				
	3/26/2015	**4/23/2015**	**6/23/2015**	**10/22/2015**	**1/28/2016**
Open	44	34	37	29	15
Closed	19	12	3	4	15
Pending Testing	14	12	6	10	9
Action Deferred	5	5	5	5	4

6

RSM

Update on FY 2015 Audit Findings

Audit Report / Subject	Report Issue Date	Corrective Actions			
		Total	Open	Closed	Pending Testing
Intellectual Property Program Assessment	01/08/2015	5	5	0	0
Timekeeping Audit	04/08/2015	4	2	2	0
Procurement – Pre-Award, Selection, and Award	05/18/2015	2	2	0	0
Total		11	9	2	0

Status by Business Area

	Support Services	Finance	Office of the General Manager
Closed Since Last AC Meeting	0	1	0
Open Management Action Plans	2	2	5
Pending Testing	0	1	0
11 Total	2	4	5

Corrective Action by Due Date

Due Date	# of corrective actions
Past Due	0
FY 2016 Quarter 2	6
FY 2016 Quarter 3	2
FY 2016 Quarter 4	1

7

RSM

Update on FY 2015 Audit Findings, cont.

Audit Report / Subject	Risk Rating of Open Items				# CAP Extensions*
	Total	High	Moderate	Low	
Intellectual Property Program Assessment	5	2	2	1	5
Timekeeping Audit	2	1	0	1	2
Procurement – Pre-Award, Selection, and Award	2	1	0	1	2
Total	**9**	**4**	**2**	**3**	**9**

*CAP Extensions are the number of corrective action plans that did not meet the original estimated completion date and was granted an extension. All extension were less than 6 months.

Corrective Actions by Risk Rating

■ Total Open ■ Total Closed / Pending Testing
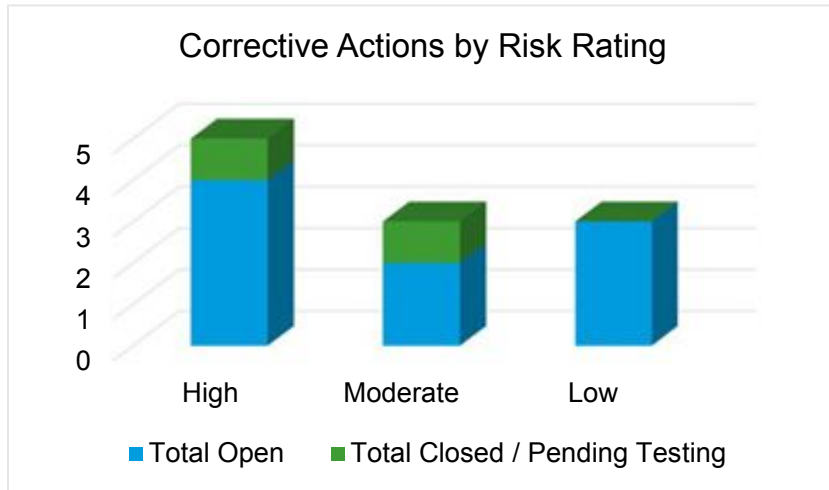
Follow-up on IT-Related Items**

Audit Report / Subject	Total
IT Policy and Procedure	10
Network Security Assessment	26
SCADA / PCS Security Review	21
Total	**57**

** IT Reports are confidential and issued during executive session.

8

RSM

Retail Rates Implementation Review - Post-Implementation Progress Update

The purpose of the Retail Rates Implementation review was to obtain an understanding of the implemented FY16 retail rates and related rate structure changes and assist management with the facilitation of the Retail Rates Implementation ("RRI") plan execution for completeness and accuracy. The post-implementation audit scope is based on the following objectives:

• To assess the data clean-up process, including proper classification of property type (identification of premise changes)
• Invoice testing to recalculate and verify that bills sent to customers are accurate;
• Review of billing adjustments made during October – December 2015.

We performed detailed testing and validation of data clean-up efforts, including premise validation and changes; as well as performed customer site visits and independent premise validation on a sample basis, and traced changes to eCIS.

Additionally, we re-calculated a sample of customer invoices to validate that the correct billing rates were utilized post-implementation, which occurred October 1, 2015. No exceptions were noted during Internal Audit's testing of 200 invoices between 10/01/2015 and 11/12/2015.

9

RSM

Retail Rates Implementation Review - Post-Implementation Progress Update, cont.

The Customer Service team will continue to ensure that system updates are operating effectively and the customer data is accurate. Other tasks that the customer service team has completed or are in-process include:
- Continuing data clean-up efforts and validation;
- Formalizing a process for meter downsizing, which requires approval from the permitting department;
- Analysis of Account Receivable collection and aging as a results of the rate changes; and
- Updating of SOPs, as needed.

Additionally, Customer Service has issued a Request for Proposal (RFP) for a CIS solution and implementation services. The RFP was issued on November 3, 2015 and responses were due by January 13, 2016. It is estimated that a firm will be selected and contract finalized by May 2016 and the project will begin in August 2016.

A Customer Billing & Collection Internal Audit is scheduled for FY 2016.
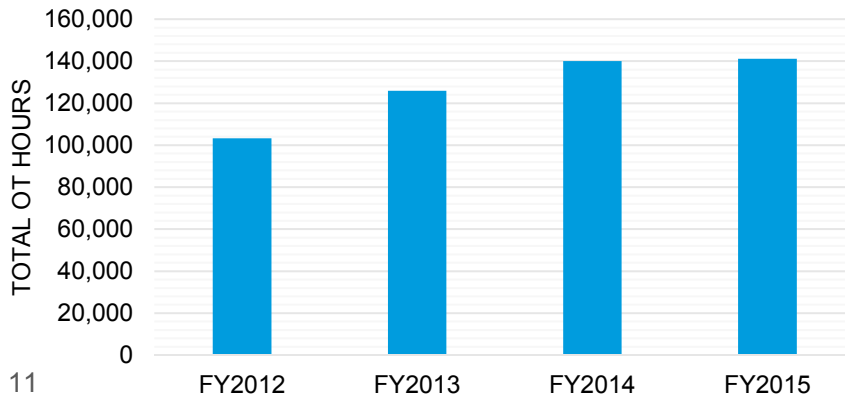
10

RSM

Overtime Audit and Analysis Report

Authority-wide Overtime Expenditures FY 2012 – FY 2015
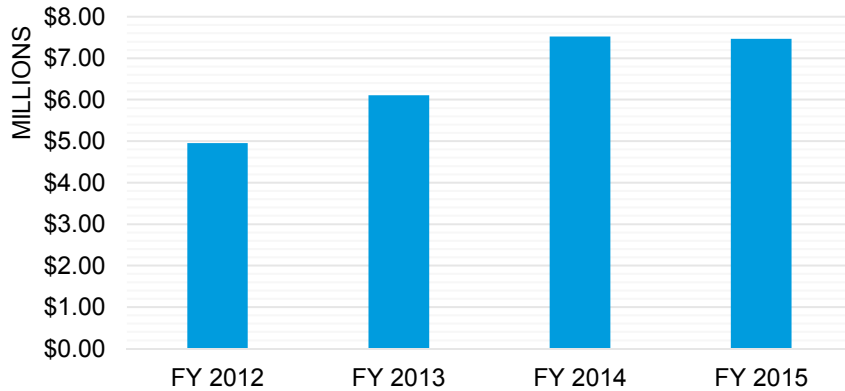
Source: FY 13-16 Revised Approved Budget Report

Authority-wide Overtime Hours FY 2012 – FY 2015

The scope of the Overtime Audit and Analysis included:

- Evaluate department-level overtime management and justification
- Evaluate consistency in overtime procedures across the Authority
- Evaluate compliance with Union agreements
- Assess overtime usage by comparing budgeted overtime hours and expenses to actual
- Analyze DC Water's Overtime Costs compare to other local utilities
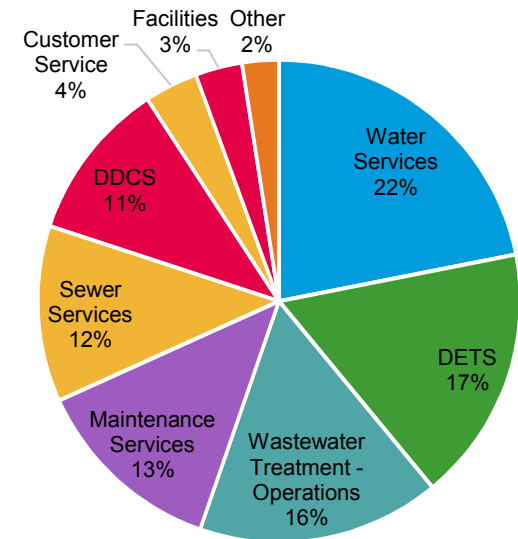
11

RSM

Overtime Audit and Analysis Report, cont.

In FY 2015, 80% of the Authority's overtime expenditures came from five departments; Sewer Services, Department of Engineering and Technical Services, Water Services, Wastewater Treatment and Maintenance Services. Each of these five departments have different drivers for greater overtime expenditures, as detailed in the chart below.

Department	Leading Overtime Drivers
Sewer Services	• Sewer blockages/ leaks • Aging infrastructure • Weather • New construction (strain on sewer system)
Department of Engineering and Technical Services (DETS)	• Contractor working hours • Weather • DOT permitted work hours (based on location, water shut-offs, traffic, etc)
Water Services	• Mains/valves leaks/breaks • Weather • Permitted work hours (based on location, water shut-offs, traffic) • Aging infrastructure • Contractor working hours
Wastewater Treatment	• Built-in shift overtime • Short staffed • Weather (heavy rain) • Employee PTO days requiring other employees to work
Maintenance Services	• Increase in training hours • Emergency services requested

FY 2015 Overtime Expenditures by Department

- Customer Service 4%
- Facilities 3%
- Other 2%
- DDCS 11%
- Sewer Services 12%
- Maintenance Services 13%
- Wastewater Treatment - Operations 16%
- DETS 17%
- Water Services 22%

Source: FY 16 Revised Approved Budget Report

RSM

Overtime Audit and Analysis Report, cont.

Overtime expenditures in most departments have been increasing year by year. This is a result of aging infrastructure, increasing severe weather events, vacancies, increasing costs, and additional factors (reference "Leading Overtime Drivers" table on page 11). In FY 2015, overtime expenditures of $7,467,306 accounted for 6.5% of personnel costs, down from 6.9% in FY 2014. This amount is 1.4% of the Authority's total operating revenue.

	Fiscal Year			
	FY 2012	**FY 2013**	**FY 2014**	**FY 2015**
Overtime Expenditures	$4,954,000	$6,106,000	$7,525,000	$7,467,306
Overtime Budget	$5,016,987	$5,166,209	$5,359,100	$6,067,920
Personnel Services Expenditures* - Operating & Capital	**$107,334,000**	**$118,567,000**	**$125,756,000**	**$134,263,000**
Personnel Services - Capital	($9,550,000)	($14,659,000)	($17,289,000)	($18,741,000)
Personnel Services Expenditures – Operating	$97,784,000	$103,908,000	$108,467,000	$115,522,000
Personnel Services Budget – Operating & Capital	**$111,114,000**	**$116,609,000**	**$119,765,000**	**$135,544,000**
Personnel Services Budget – Capital	($14,000,000)	($16,690,000)	($12,960,000)	($17,266,000)
Personnel Services Budget – Operating	$97,114,000	$99,919,000	$106,805,000	$118,278,00
Operating Revenue	$440,566,000	$439,079,000	$473,824,000	$546,096,000
OT Expenditures % of Personnel Costs – Operating & Capital	5.1%	5.9%	6.9%	6.5%
OT Expenditures % of Operating Revenue	1.1%	1.4%	1.6%	1.4%

*Personnel costs includes salary and overtime, benefits, and bonuses.
**These are preliminary year-end results pending the audited financial statements.
Source: Consolidated annual financial reports and FY 13-16 Revised Approved Budget Reports and September 30, 2015 Finance and Budget Report.

13

RSM

Overtime Audit and Analysis Report, cont.

The following graphs compare DC Water's overtime expenditures from FY 2014 to other local water and waste water authorities.

Organizations of all types and sizes recognize the value of comparing themselves to other like organizations. The process of benchmarking yields valuable information to leaders and decision makers. There are, however, some dangers inherent in the benchmarking, since no authority is the perfect comparison to DC Water.

Some of the differences between the authorities include:
• Union versus non-unionized staff;
• Not all authorities treat wastewater, some only treat part of their service area's wastewater;
• Different technology is being used and implemented;
• Age of infrastructure;
• Vacancy rates, and;
• Response time to emergencies

As evidenced by the following graphs, DC Water's overtime expenditures in FY 2014 were roughly consistent with other local authorities, when compared with the number of customers, number of employees, and amount of personnel expenditures.

Overtime versus Number of Employees
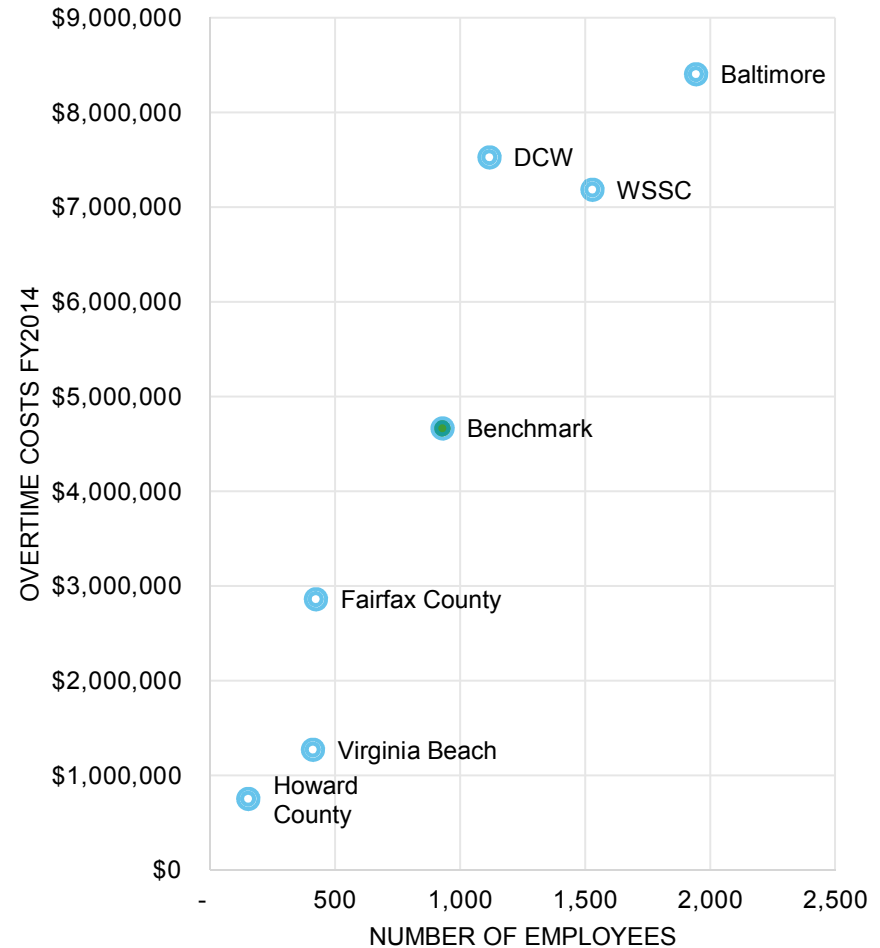
Source: Respective authorities' websites and information provided by the entity.

14

RSM

Overtime Audit and Analysis Report, cont.

Overtime versus Number of Customers

Overtime versus Personnel Expenditures

Source: Respective authorities' websites and information provided by the entity.

RSM
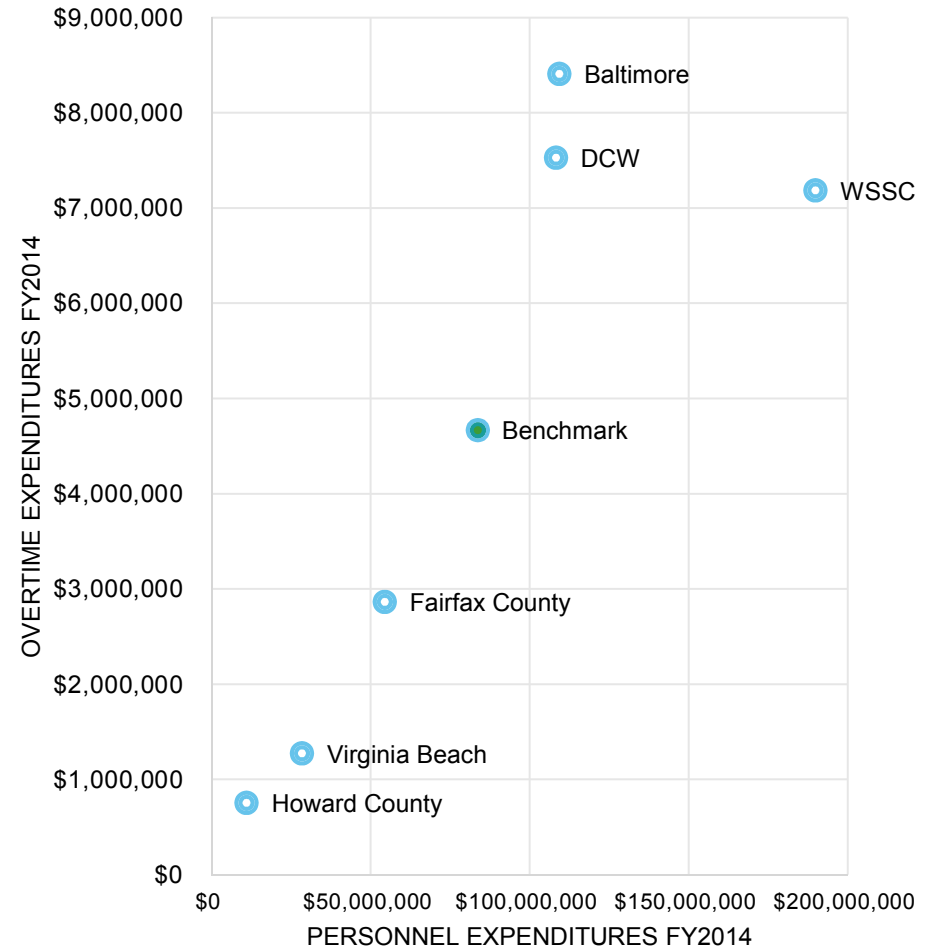
Overtime Audit and Analysis Report - Observations

Observations	Risk Rating
1. Overtime Justification and Approval Process	High
2. Documentation of Overtime Distribution	High
3. Management Reporting, Evaluation and Enforcement of Overtime Budget	Moderate

We are satisfied with management's responses and planned actions, and will perform follow-up on the observations in the course of routine follow-up procedures.

16

RSM

Hotline Update

Last audit committee meeting we reported that 3 cases were open. Since the last audit committee meeting:

Hotline Calls	
Calls Received	3
Fraud Claims	1
Other	2
Cases Closed	1
Cases Currently Open	5

17

RSM

RSM US LLP

1501 M St. NW, Suite 340
Washington, D.C. 20005
202.370.8200

+1 800 274 3978
www.rsmus.com

This document contains general information, may be based on authorities that are subject to change, and is not a substitute for professional advice or services. This document does not constitute audit, tax, consulting, business, financial, investment, legal or other professional advice, and you should consult a qualified professional advisor before taking any action based on the information herein. RSM US LLP, its affiliates and related entities are not responsible for any loss resulting from or relating to reliance on this document by any person. Internal Revenue Service rules require us to inform you that this communication may be deemed a solicitation to provide tax services. This communication is being sent to individuals who have subscribed to receive it or who we believe would have an interest in the topics discussed.

RSM US LLP is a limited liability partnership and the U.S. member firm of RSM International, a global network of independent audit, tax and consulting firms. The member firms of RSM International collaborate to provide services to global clients, but are separate and distinct legal entities that cannot obligate each other. Each member firm is responsible only for its own acts and omissions, and not those of any other party. Visit rsmus.com/aboutus for more information regarding RSM US LLP and RSM International.

RSM® and the RSM logo are registered trademarks of RSM International Association. *The power of being understood*® is a registered trademark of RSM US LLP.

RSM

DC Water & Sewer Authority
Proposed Internal Audit Plan
WORKING DRAFT - as of January 28, 2016

dc water is life

Legend

X	Required Internal Audit Activity
X	Proposed Future Audit
X	Audit In Progress
X	Audit Issued
X	Follow Up In Progress
X	Audit Closed

Audit Universe	Last Audit	2013	2014	2015	Proposed 2016	Preliminary 2017
Overall Internal Audit Management						
Risk Assessment for Audit Plan Development				X		
Update Risk Assessment and Audit Plan Development					X	X
Quality Control - Board Meetings, Status Reporting				X	X	X
Hotline Management				X	X	X
Follow-up and Cycle Audits						
Open Action Items - Remediation and Follow-up Procedures				X	X	X
Blue Horizons - Strategic Plan Monitoring					X	X
Contract Monitoring & Compliance Reviews	2014		X		X	
Audits by Department and/or Division						
Office of the General Manager						
Intellectual Property	2015			X		
Organization Policies & Procedures	2010					
Blue Plains (Wastewater Treatment)						
Maintenance Services						
Maintenance Services - Operations	2012					
Maintenance Services - Work Order Management					X	
Wastewater Treatment - Operations						
Chemical Purchasing	2013	X				
Process Control System (PCS)	2013	X		X		
Customer Services						
Customer Services						
Customer Billing & Collections	2011				X	
Retail Rates Pre- and Post-Implementation Monitoring	2015			X	X	
Emergency Management						
Emergency Management - Mitigation & Response	2014		X			
Emergency Management - Recovery	2014		X			
Sewer Services						
Sewer Services - Construction & Repair	2014		X			
Sewer Services - Emergency Maintenance	2013	X				
Utility Services - Drinking Water						
Pumping & Storage Water Leakage Review	2011					
Utility Services - Water Distribution	2013	X				
Utility Services - Water Maintenance	2013	X				
Support Services						
Facilities						
Facilities - Work Order Management						X
Fleet						
Fleet - Operations	2013	X				
Fleet - Intergovernmental Support (Ambulance Services)						X
Human Capital Management						
Employee Benefit Plans	2014		X			
Employee Recruitment and On-Boarding						X
Human Capital Management - Operations	2011					
Training, Certification and Licensing					X	
Occupational Safety and Health						
OSHA	2014		X			
Safety Programs, Training & Compliance	2010					
Procurement						
Materials Management - Disposal of Assets	2014		X			
Materials Management - Operations and Inventory	2014		X			X
Procurement Operations	2010					
Business Development Plan - Rapid Assessment					X	
Procurement Pre-Award Selection Process	2015			X		
Purchasing Cards (P-Card Program)	2013	X				X
Department of Engineering & Technical Services						
Long-Term Control Plan						
Clean Rivers Project Management	2014		X			
Clean Rivers - Vendor / Contractor Monitoring & Project Administration				X		
Engineering and Technical Services						
Engineering - Vendor / Contractor Monitoring & Project Administration	2015			X		
Engineering - Construction Management					X	
Engineering - Design and Program Management & Permitting	2013	X				X
Finance						
Financial Accounting and Reporting						
Payroll - General Operations	2012					
Timekeeping	2015			X		
Overtime					X	
Budget, Planning and Analysis						
Annual Budgeting & Planning					X	
Treasury, Debt and Risk Management						
Cash Receipts	2013	X				
Investments and Cash Management	2013	X				
Rolling Owner Controlled Insurance Program (ROCIP)					X	
Information Technology						
Governance: Planning and Organization:						
Information Technology - Remediation and Follow-Up				X	X	X
Vendor Risk Management / Compliance and Monitoring (Shadow IT)	2015			X		
Information Security Policy Review	2015			X		
Incident Management & Response Review						X
Human Resource/Employee Privacy Review						X
Enterprise SDLC Review	2013	X				X
IT Governance Review	2012				X	
Crisis Management / Business Continuity Program	2014		X			X
Technical & Operations: Information Security and Application Support:						
Operational Applications ITGC - SCADA	2015			X		
Network Penetration Testing (Corp/SCADA/Wifi)	2015	X		X		
Customer Data Collection and CIS (Integrated)					X	X
DB/OS Privileged User	2010					
Software and Asset Management	2014	X	X			
Help Desk Operations	2012					
GIS System	2014		X			
Internal Network & Telecommunications	2013	X				
General Counsel						
Legal Operations - Case Management	2014		X			
Regulatory Compliance Monitoring	2013	X				
Contingency and Requested Audits and Projects						

DC WATER INTERNAL AUDIT

Retail Rates Implementation
Progress Report

January 2016

RSM

Table of Contents

2

RSM

Transmittal Letter

January 2016

The Audit Committee of DC Water
5000 Overlook Avenue, SW
Washington, DC 20032

Pursuant to the approved 2015 and 2016 internal audit plan, we hereby submit the following progress report related to the retail rates pre- and post-implementation plan, including suspended and continued invoice testing. Our report is organized in the following sections:

Objectives and Approach	The objectives of our procedures and our approach to the execution of those procedures are expanded upon in this section.
Project Snapshot	This section provides an overview of the current status of each area subjected to our procedures.
Process Maps	This section provides a visual depiction of the workflow of all key processes included within our scope.

Our work has and continues to assist management with facilitation of this project. We did not, nor does DC Water desire us to, perform any management functions, make management decisions, or otherwise perform in a capacity equivalent to that of an employee or officer of DC Water.

We would like to thank the staff and all those involved in assisting the Internal Auditors in connection with this review.

Respectfully Submitted,

INTERNAL AUDITORS

3

RSM

Objectives

Objectives

The purpose of this review is to obtain an understanding of the implemented FY16 retail rates and related rate structure changes and assist management with the assessment of the Retail Rates Implementation ("RRI") plan execution for completeness and accuracy. Rate structure changes went into effect on October 1, 2015. The audit scope is based on the following objectives:

- To obtain and review the Rate Design Implementation Plan, including monitoring and reporting on the status of the plan;
- To assess the data clean-up process, including:
  - Proper classification of property type (identification of premise changes)
  - Validating meter size accuracy;
- To review existing business rules (not system requirements) established for the rates implementation and make recommendations, as applicable;
- Identify any additional requirements for the rate design implementation;
- To evaluate the design, completeness and effectiveness of the RRI User Acceptance Testing (UAT) approach;
- Perform invoice testing to recalculate and verify that bills sent to customers are accurate;
- Analyze billing adjustments made during October – December 2015.

4

RSM

Approach

Approach

Our approach consisted of the two following phases described below:

Obtaining an Understanding

In order to establish a foundational understanding of the new rate structure, the implementation plan and the related-business processes and to better assist DC Water, RSM met with key members of Finance, Customer Service, and Information Technology, including personnel on the rates steering committee. Major work steps as a part of this phase were as follows:

- Key process owner interviews to understand meter operations and billing processes;

- New rates structure and Rate Design Implementation Plan review;

- Business rules review;

- Identification of data clean-up efforts; and

- Review of the UAT.

Detailed Testing and Walkthroughs

The purpose of this phase was to validate that the implementation of the new rate structure was properly documented, executed, and, as needed, changes were appropriately made. Our testing procedures included:

- Walkthroughs of the data clean-up efforts, including premise validation and meter size validation;

- Re-performance of the premise validation process, on a sample basis;

- Physical verification of premise classification through site-visits, on a sample basis;

- Review of audit trail to ensure system changes were appropriately documented in eCIS for data clean-up activities;

- Validation of populations selected for data clean-up process;

- UAT Assessment, including re-performance, observation and inquiry of implementation testing procedures;

- Walkthroughs of the invoice recalculation process with Customer Service; and

- Recalculation of invoices following October 1, 2015 implementation date.

5

RSM

Pre-Implementation

Data Clean-up and User Acceptance Testing

Background

Retail Rates Implementation Steering Committee

To ensure that the new retail rates were applied to customer accounts appropriately and accurate billing operations continue, a steering committee was established to facilitate the implementation process. The steering committee consists of managers from each of the departments impacted by the rates change. The departments include, Customer Service, Finance, External Affairs, Information Technology, and Permits. The project sponsors are the Chief Financial Officer, AGM Customer Care and Operations, and the Chief Information Officer. The project sponsors provide direction, approve funding, approve scope, and act as the project champions.

7

RSM
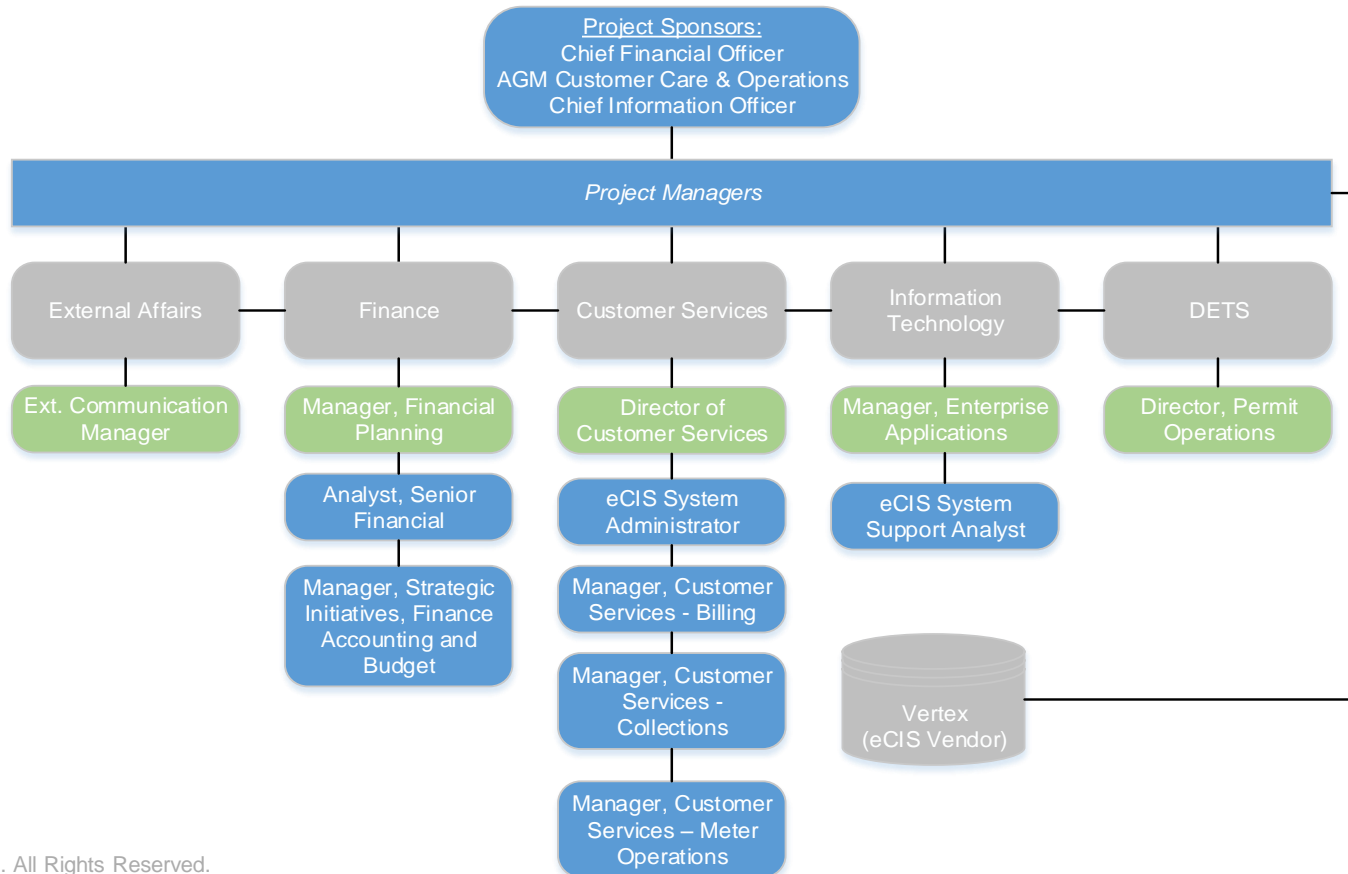
Data Clean-up Phase 1
Premise Validation Summary

Data Clean-up Phase 1: Premise Validation

The new rate structure is contingent on each customer's property-type or premise classification, thus reliance on DC Water customer records became increasingly significant. In order to validate the accuracy of the records, the steering committee established a data clean-up team.

One of the largest class of properties that were at risk for inaccuracies were the multi-family, condominium and cooperate property-types, which could be classified as either non-residential (if there is a business in the building) or Multi-Family or Residential based on the number of units in the property. DC Water identified 9,080 accounts that needed to be validated for proper classification.

To validate the premise type, each account was assessed for number of dwelling units in eCIS, the property use code was cross-checked the against the Office of Tax & Revenue (OTR) online tool, and viewed using Google maps street view. If the premise type still could not validated, the account was sent to Permit Operations, to conduct a field visit. The field visit team took notes on the property type and provided pictures.

The accounts that were recommended for premise type change, were sent to the Impervious Area Billing (IAB) for final premise type validation. IAB utilized GIS and made updates, as needed, in the impervious area database.

Internal Audit validated the population of accounts and re-performed the validation steps above for 65 accounts. Additionally, we conducted site visits of the accounts to further validate that DC Water had properly classified the accounts. No exceptions were noted.

8

Data Clean-up Phase 1
Premise Validation Metrics

Premise Validation	# of Accounts (approx.)	Percentage of Total Accounts
Total accounts reviewed	9,080	100%
Accounts requiring field visit to determine premise type	119	1.3%
Accounts sent to Impervious Area Billing for final review and validation	1,457	16.0%
Accounts Purged	5	0.1%
No Change	129	1.4%
Accounts Changed	1,323	14.6%

Source: Premise validation results were provided by Customer Service Data Clean-up team, Permit Operations and Impervious Area Billing.

9

RSM

Data Clean-up Phase 1
Meter Size Validation Summary

Large Meter Validation

The Water System Replacement Fee (WSRF), was established in order to recover the 1% renewal and replacement of water service lines. As the fees were based on meter size, customers with larger meters would be significantly impacted.

The data clean-up team worked with meter operations to determine large non-federal meters to review for meter size accuracy. The initiative focused on validating 8, 10, 12, 16 inch meters, as theses meters have the highest monthly fee. Large Meter Technicians conducted physical inspections to document if the meter size was correct.

Internal Audit conducted a walkthrough with the Meter Operations team to determine how the population was identified and obtained evidence of completion of the validation process.

Fire Suppression System – 2 Inch Meter Validation*

Special Provision 112.11 of DCMR Chapter 21 states "Residential customer, whose premises is served by a meter that is larger than one inch (1"), shall be charged a monthly Water System Replacement fee set forth in Subsection 112.10(a) for a one inch (1") meter."

In order to identify existing residential accounts (not new construction), that may qualify for the provision, the Rates Implementation Steering Committee obtained a listing from eCIS of residential accounts that have a 2" meter. The list of 661 accounts were provided to Permit Operations to determine if the 2" meter was needed due to a fire suppression system. Permit Operations utilized permit plans and direct contact with customers in order to validate the purpose of the meter size and ensure that they were classified appropriately, in order to received the lower WSRF.

Internal Audit conducted a walkthrough with the Permit Operations team to determine how the population was identified and obtained evidence of completion of the validation process.

*Validation Process occurred prior to the Board revision of Special Provision 112.11.

10

RSM

Data Clean-up Phase 1
Meter Size Validation Metrics

Large Meter Validation

Meter Size	# of Meters Identified (eCIS)	# of Meters Inspected	Final # of Meters*	Est. Annual WSRF Validated
8" Meters	142	113	112	$3,185,124
10" Meters	56	50	44	$3,526,855
12" Meters	2	2	5	$400,799
16" Meters	6	6	6	$480,935
Total Meters	206	171	167	$7,593,693

*As needed, updates were made in eCIS to adjust the meter size. This total does not include the meters that were not able to be inspected.

Meter Services were able to inspect 83% of the 206 meters identified

Fire Suppression System

Meter Size Validation	# of Accounts
Residential Accounts with 2" meter (existing construction)	661
Accounts validated through permit plan	432
Accounts validated through contact with customer	53
Residential accounts with fire suppression system	485

90% of the accounts were validated through permit plans or customer contact

80% of accounts reviewed had a fire suppression system

Source: Large Meter Validation results were provided by Customer Service – Meter Operations. Fire Suppression System results were provided by Permit Operations.

11

RSM

Data Clean-up Phase 1
Other Activities

Other Data Clean-up Efforts:

In addition to the premise validation process of the 9,080 accounts, large meter validation and fire suppression data analysis, the Data Clean-up team identified other sets of data to review and update in eCIS, as needed. Management has advised the tasks are now complete and we will validate a sample of these accounts during the next progress reporting period. Below is a list of the data clean-up efforts and the purpose of the reviews:

Data Clean-up Activity	Purpose
Premise type validation of 10,000 commercial and non-residential accounts with meter sizes 1" inch or less*	Verify if the property should be classified as residential
Premise type validation of 2,287 residential accounts with meter sizes greater than 1" inch	Validate that the property is a residential property and is not being utilized as a business or mix-use property
Zero usage residential and commercial accounts and zero billed (approximately 1,400 residential accounts and 400 commercial accounts)*	Determine if these accounts have zero usage due to seasonality (municipalities, such as school) or are non-active accounts
Meter size validation of over 5,000 accounts that had different meter size in two separate systems of record	Ensure meter size information in eCIS matches that of STAR (AMR)

*This clean-up activity was still in process during our phase 1 and phase 2 test period. Management has advised that DC Public Schools and Federal Municipal accounts have been reviewed and validated.

12

RSM

Rate Redesign Implementation
User Acceptance Testing Assessment

User Acceptance Testing Review Approach

- Inspect and evaluate the User Acceptance Testing (UAT) test plan to determine whether the plan covers all the Rate Redesign Implementation billing requirements.

- Interview management team leads with the responsibility to complete the UAT and obtain an understanding of their testing methodology, documentation requirements and process to remediate identified issues.

- Evaluate the UAT project management governance, monitoring and issue reporting/resolution controls.

- For a selection of completed UAT from each key DC Water test team (Customer Service, Information Technology, Finance and Accounting) re-perform the selected UAT to determine whether the tester conclusions are in agreement with the McGladrey independent reviewer conclusions.

User Acceptance Testing Review Results

- The Rate Redesign Implementation UAT Test Plan covered the billing calculation requirements. The original 40 test plan cases were reduced to 36 due to redundancy and the removal of the 4 test cases were deemed to be reasonable.

- Management UAT team leads followed an effective testing methodology that required testing documentation requirements and included a process to remediate identified issues.

- Project governance included timely status meetings and a process to resolve issues.

- Selected Customer Service, Finance, IT and Accounting testing team UAT evidence was supported and conclusions were in agreement with the independent RSM reviewer.

- No material exceptions were noted.

Post-Implementation

Invoice Testing and Data Clean-up

RSM

Invoice Testing Summary

When the new rate structure was implemented, invoices were suspended by one day while Customer Service and Finance recalculated the invoices to verify accuracy. Invoice previews were selected from the BillVantage Web portal. Customer Service created a spreadsheet based on the new rate specifications to recalculate the invoice amount based on property type, meter size, CCFs and ERUs used by each customer (see example below). The spreadsheet generated dollar amount was agreed to each invoice total.

Invoices were also tested for correctness against the Customer Information System (eCIS). Customer address, account number, meter number, property type, meter size, past and current read amount, past and current read date, and usage amount in the current period were validated.

Internal Audit validated Customer Service's recalculation spreadsheet and re-performed the validation steps above during the invoice suspension period. We continued to test invoices periodically to monitor the new Retail Rates Implementation.

No exceptions were noted during Internal Audit's testing of 200 invoices between 10/1/2015 and 11/12/2015.

Sample Bill Calculation

Choose Customer Type	Residential				
# CCF Total	6				
# of CCF - old rate					
Rate Step 1 <=, # of CCF Life Rate	4	4			
# of CCF - new rate (if MF/Nonres)	2	Use if MF or Non res or for CCF on res above 4 lifeline allow			
Enter Meter Size	1	$4.56	Meter Fee Cost		
Enter ERU Value	1				
# of CCF (CAP) <=4		CAP is all 2015 rate bcs new program starts 10/1			
Choose WSRF Type	WSR Fee Res	$9.67	WSR Fee Cost		
# of Days Meter Fee in Old Bill Period					
# of Days Meter Fee in New Bill Period	34				
Total # of Days in Bill Period	34				
Total # of Days in WSRF Period	30				
(if >25 days, enter 30 days because proration rule considers bill a full month)					
		2015 rates	2016 rates - Res	2016 rates - MF	2016 rates-NR
Meter Fee					
Water <=4		3.88	3.08	3.45	3.99
Water >4		3.88	3.87	3.45	3.99
Sewer		4.74	5.44	5.44	5.44
ROW		0.17	0.17	0.17	0.17
Pilot		0.46	0.47	0.47	0.47
CRIAC		16.75	20.3	20.3	20.3
Stormwater		2.67	2.67	2.67	2.67
WSRF					

	Bill Calculation		
	Residential	MultiFamily	NonResidential
Meter Fee old			
Meter fee new	4.56	4.56	4.56
Water fee old			
Water Fee Lifeline	12.32	NA	NA
Water fee new	7.74	6.90	7.98
Sewer fee old			
Sewer fee new	32.64	10.88	10.88
ROW old			
ROW new	1.02	0.34	0.34
Pilot Old			
Pilot New	2.82	2.82	2.82
CRIAC * only 25-35 days	20.30	20.30	20.30
Stormwater *	2.67	2.67	2.67
CAP credit			
WSRF	$9.67	$9.67	$9.67
Total Current Charges	$93.74	$58.14	$59.22

* Spreadsheet not formatted for CRIAC and Stormwater outside 25-35 day bill parameters. Do this section by hand instead.

15

RSM

Data Clean-up Phase 2
Premise Validation Summary

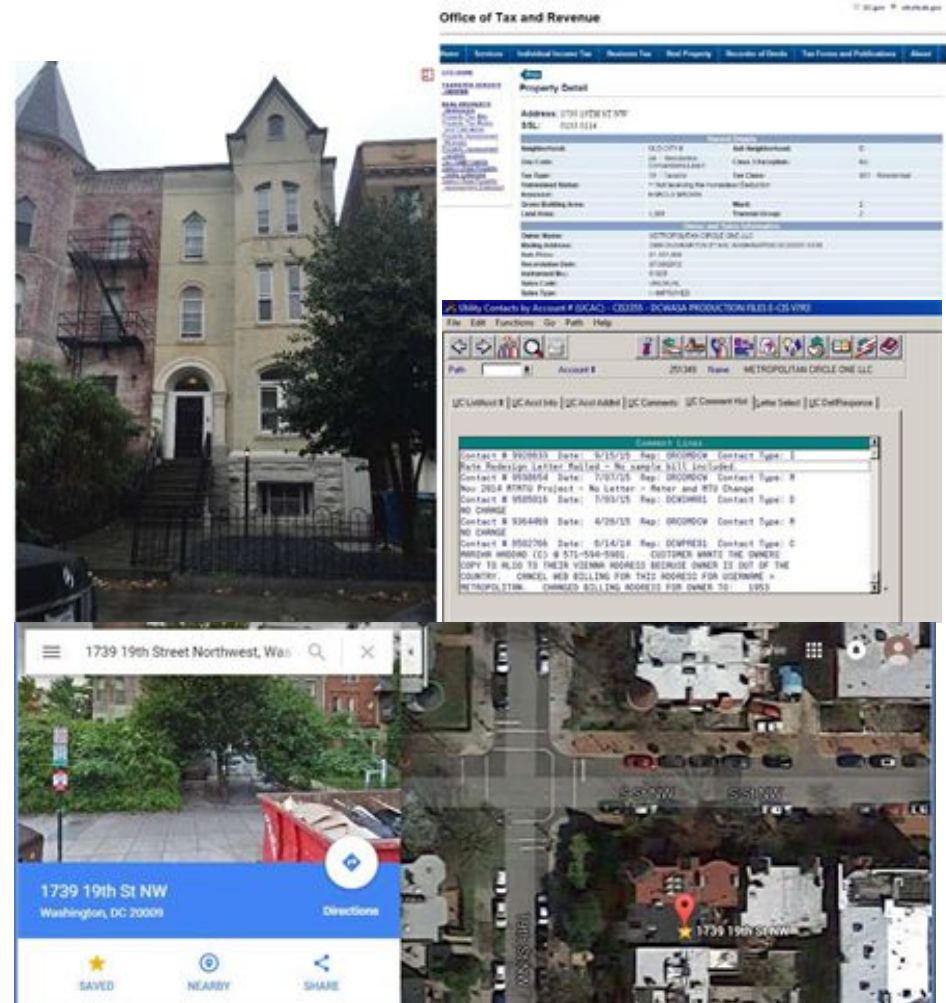**Data Clean-up: Premise Validation**

During the pre-implementation of the rates structure, other data clean-up activities were identified (reference slide "Data Clean-up Phase 1, Other Activities"). One of the data clean-up efforts was to validate that commercial and non-residential accounts with meter sizes 1" inch or less were properly classified.

DC Water identified approximately 10,000 accounts that needed to be validated for proper classification. As this effort is still on-going, approximately 5,400 have been validated as of December 2015.

To validate the premise type, each account was assessed for number of dwelling units in eCIS, the property use code was cross-checked the against the Office of Tax & Revenue (OTR) online tool, and viewed using Google maps street view. If the premise type still could not be validated, the account was sent to Permit Operations to conduct a field visit. The field visit team took notes on the property type and provided pictures.

The accounts that were recommended for premise type change were sent to the Impervious Area Billing (IAB) for final premise type validation. IAB utilized GIS and made updates, as needed, in the impervious area database.

Internal Audit validated the population of accounts and re-performed the validation steps above for 30 accounts. Additionally, we conducted site visits of the accounts to further validate that DC Water had properly classified the accounts. No exceptions were noted.

16

Data Clean-up Phase 2
Premise Validation Metrics

Premise Validation	# of Accounts (approx.)	Percentage of Total Accounts
Total accounts identified	10,000	100%
Total accounts reviewed	5,309	53.1%
Accounts changed	1,102	11.0%
Field visit required	81	0.8%
No change	4,126	41.3%

Source: Premise validation results were provided by Customer Service Data Clean-up team, Permit Operations and Impervious Area Billing.

17

RSM

Other Accomplishments and Next Steps

The Customer Service team will continue to ensure that system updates are operating effectively and the customer data is accurate. Other tasks that the customer service team has completed or are in-process include:

- Continuing data clean-up efforts and validation;

- Formalizing a process for meter downsizing, which requires approval from the permitting department;

- Analysis of Account Receivable collection and aging as a results of the rate changes; and

- Updating of SOPs, as needed.

Additionally, Customer Service has issued a Request for Proposal (RFP) for a CIS solution and implementation services. The RFP was issued on November 3, 2015 and responses are due by January 13, 2016. It is estimated that a firm will be selected and contract finalized by May 2016 and the project will begin in August 2016. Reference the anticipated schedule from the RFP below:

No	Description	Completion Dates 2015-2016
1	RFP made available for download	11/3/2015
2	Intent-To-Propose Due from Proposers	11/9/2015, 4:00 PM Local Time
3	Discovery Session with each Proposer	12/7 – 12/11/2015
4	Final RFP Questions Deadline	12/14/2015
5	RFP Responses Due	1/13/2016, 4:00 PM Local Time
6	Select Short Listed Proposers	2/5/2016
7	Conduct Demonstrations	2/22 – 3/11/2016
8	Reference Checks	2/22 – 3/11/2016
9	Select Proposer Finalist	3/15/2016
10	Solution Validation Process	3/28 – 4/1/2016
11	Site Visits	April 2016
12	Best and Final Offer Due	4/12/2016
13	Selection Approval	May – June 2016
14	Contract Signed	May – June 2016
15	Start CIS Project	August 2016

A customer billing and collections internal audit is proposed for Spring – Summer 2016.

18

RSM

Informational Resources

Comprehensive Annual Financial Statements – Fiscal Year 2014, Statistical Section

2015 Cost of Service Study

Current Rate Specifications (located on 2016 Rate Change Project SharePoint)

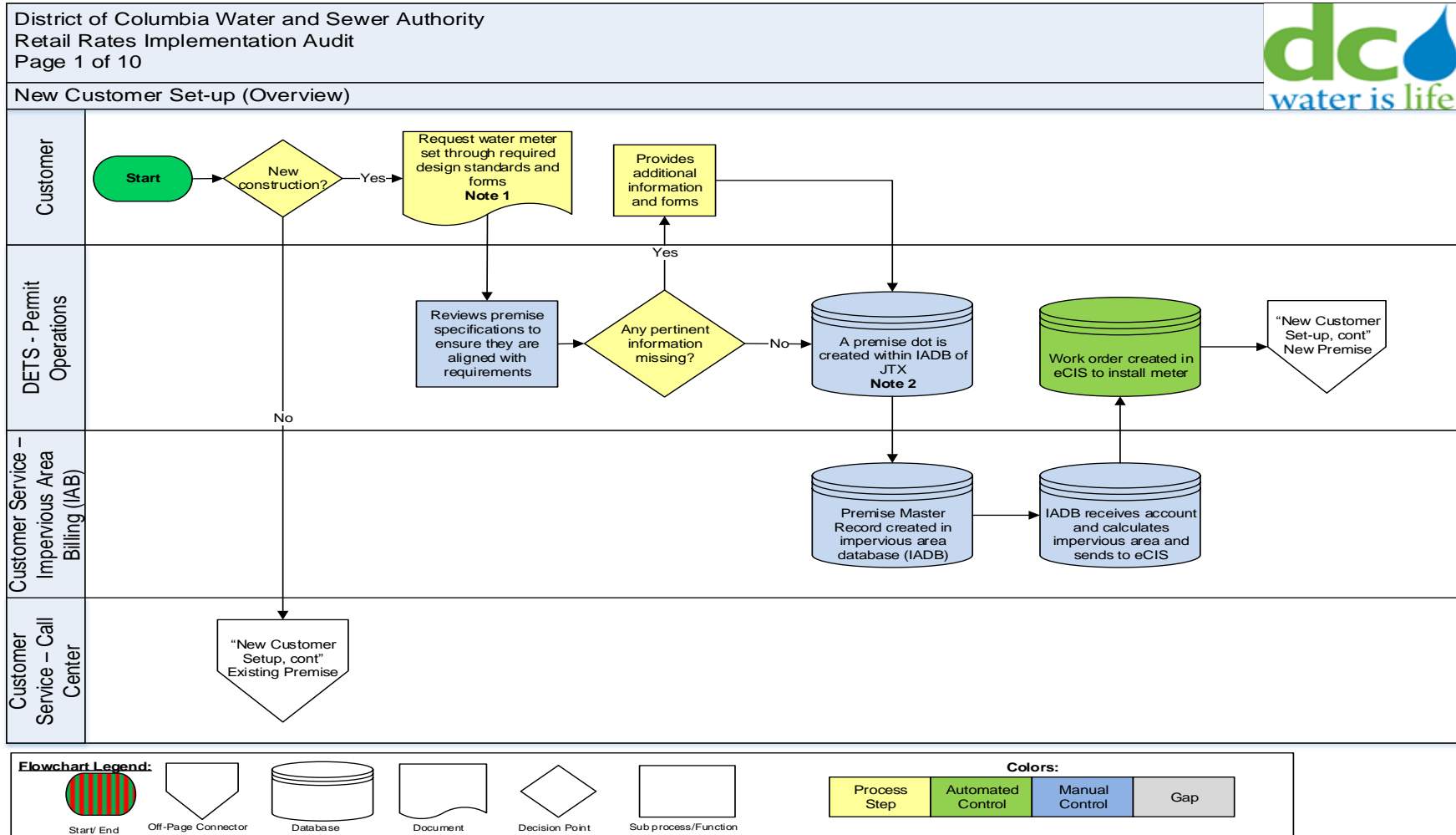DC Water Retail Water and Sewer Rates Committee Meeting – June 23, 2015

Fiscal Year 2016 Approved Rates

Rate Change Project Charter (located on 2016 Rate Change Project SharePoint)

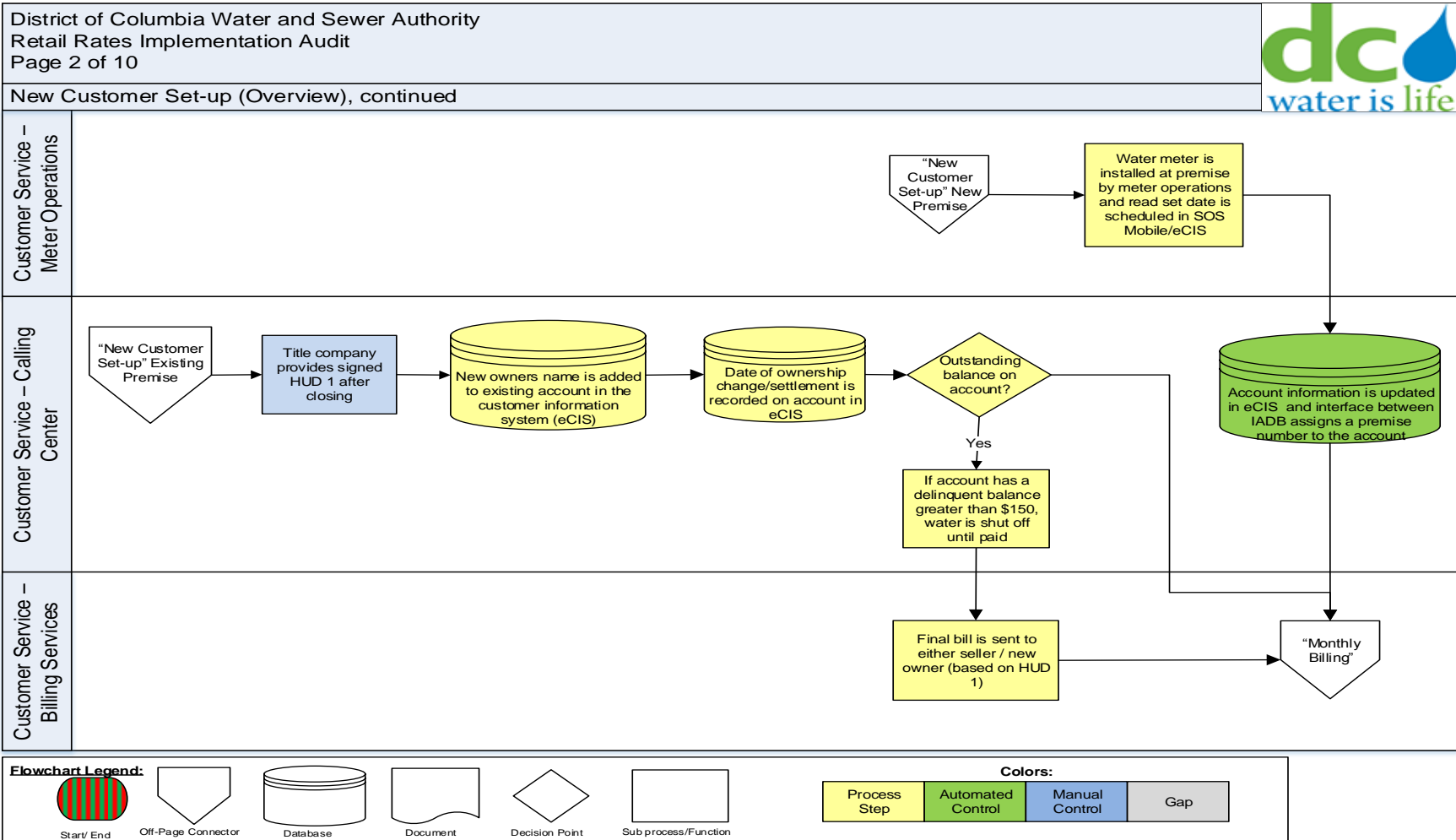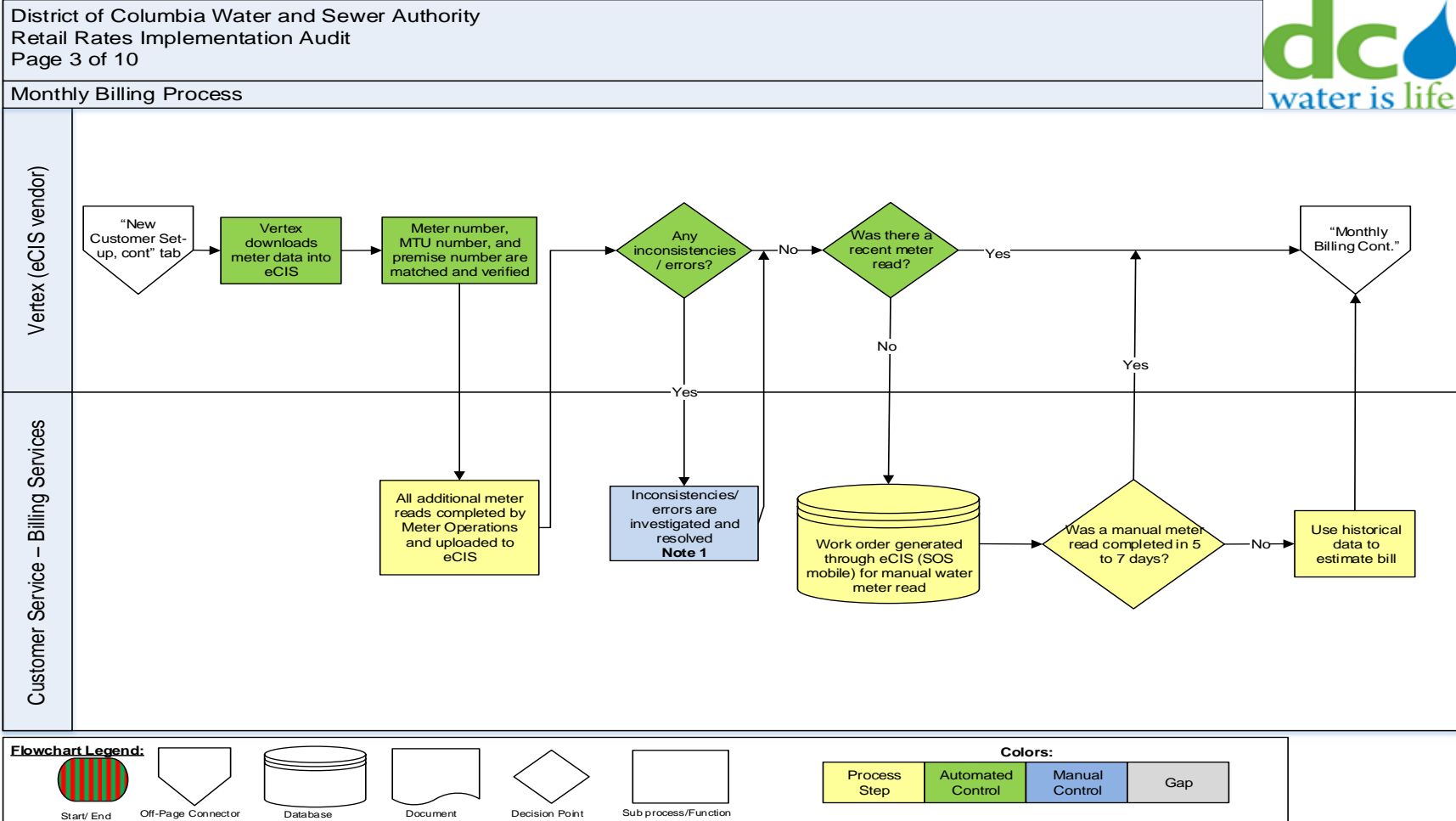Rate Redesign Project Analysis (located on 2016 Rate Change Project SharePoint)
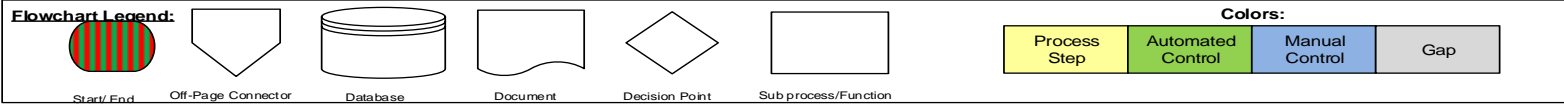
19

RSM

Process Maps

District of Columbia Water and Sewer Authority
Retail Rates Implementation Audit
Page 1 of 10

New Customer Set-up (Overview)

Flowchart Legend:

Start/ End · Off-Page Connector · Database · Document · Decision Point · Sub process/Function

Colors:

| Process Step | Automated Control | Manual Control | Gap |

Note 1: Design standards and forms are located on DC Water's website: https://www.dcwater.com/business/permits/criteria.cfm
Note 2: JTX is the job tracking for ArcGIS, which DC Water updates when water meters are installed.

20

RSM

Process Maps

District of Columbia Water and Sewer Authority
Retail Rates Implementation Audit
Page 2 of 10

New Customer Set-up (Overview), continued

Customer Service – Meter Operations

"New Customer Set-up" New Premise

Water meter is installed at premise by meter operations and read set date is scheduled in SOS Mobile/eCIS

Customer Service – Calling Center

"New Customer Set-up" Existing Premise

Title company provides signed HUD 1 after closing

New owners name is added to existing account in the customer information system (eCIS)

Date of ownership change/settlement is recorded on account in eCIS

Outstanding balance on account?

Yes

If account has a delinquent balance greater than $150, water is shut off until paid

Account information is updated in eCIS and interface between IADB assigns a premise number to the account

Customer Service – Billing Services

Final bill is sent to either seller / new owner (based on HUD 1)

"Monthly Billing"

Flowchart Legend:

| Start/ End | Off-Page Connector | Database | Document | Decision Point | Sub process/Function |

Colors:

| Process Step | Automated Control | Manual Control | Gap |

Note 1: Design standards and forms are located on DC Water's website: https://www.dcwater.com/business/permits/criteria.cfm
Note 2: JTX is the job tracking for ArcGIS, which DC Water updates when water meters are installed.

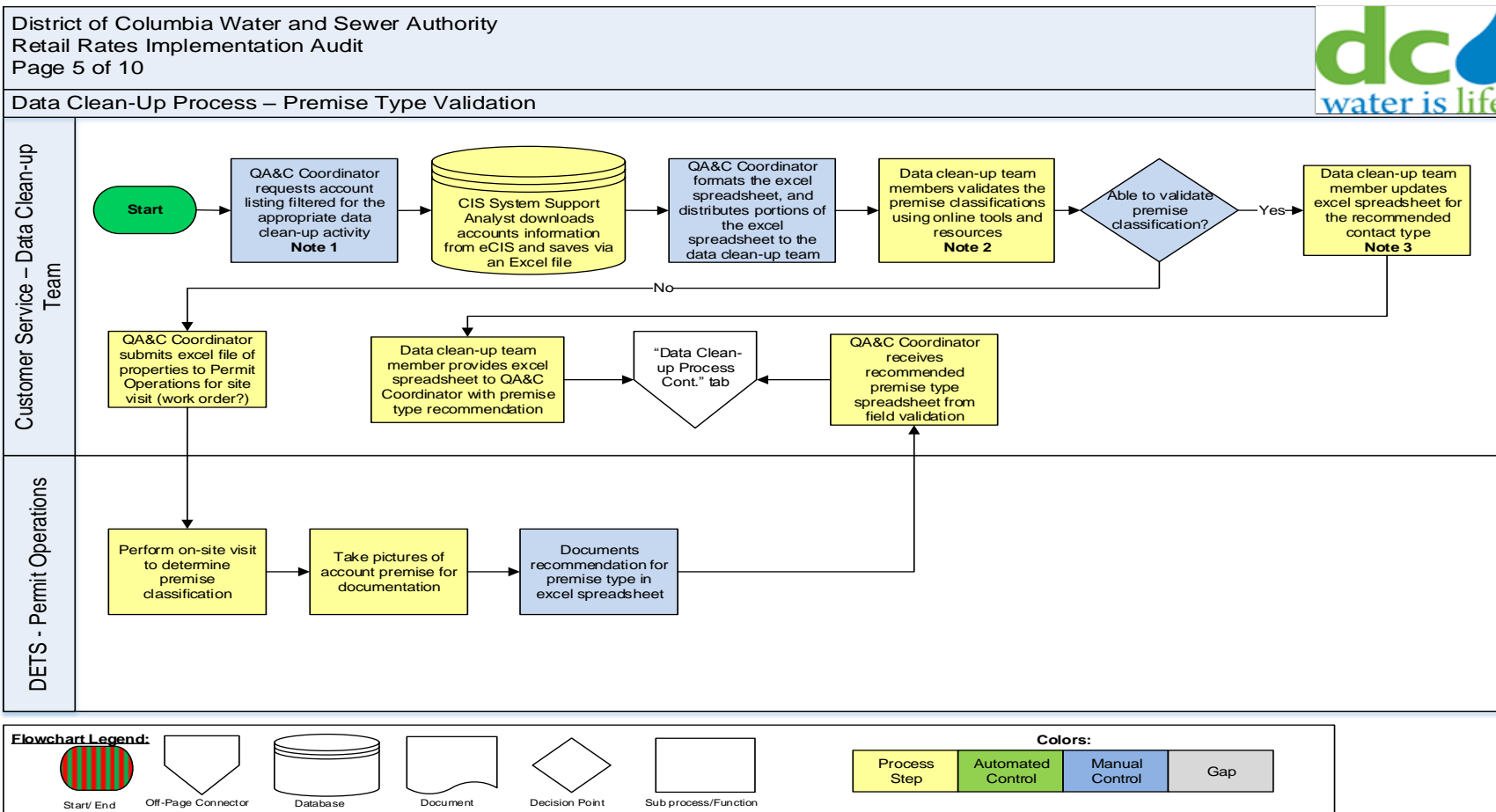21

RSM

Process Maps

Note 1: As part of the ongoing service order processing related to meter change-outs, the analysts performing the service order close, perform additional QA activities to ensure that the Premise Number, Meter Number, and MTU match between the service order, CIS, and Star application, as well as check to ensure the meter is transmitting. Anomalies are reported to Meter Operations for research and resolution.

22

Process Maps

District of Columbia Water and Sewer Authority
Retail Rates Implementation Audit
Page 4 of 10

dc water is life

Monthly Billing Process, continued

Vertex (eCIS vendor)

"Monthly Billing" tab → Billing edit reports (queries) are ran to identify data errors and inconsistencies → Any error or inconsistencies? — No → Monthly invoices are generated for customers → Does customer have automatic payment? — Yes → Transmit billing, cash, refunds, cash adjustment, and billing adjustment information

Customer Service – Billing Services

Perform follow-up procedures to investigate and resolve errors → Any billing adjustments? — Yes → Authorized individual makes adjustments based on authority matrix **Note 1**

Bill emailed?

KABRA (vendor)

Monthly invoices are printed and mailed to customer

Finance

General Ledger updated in Lawson → A/R process begins

Flowchart Legend:

Start/End	Off-Page Connector	Database	Document	Decision Point	Sub process/Function

Colors:

Process Step	Automated Control	Manual Control	Gap

Note 1: The authority matrix includes the adjustment limits ($) that are allowed by each customer service member. The matrix is reviewed on a monthly basis and updated as necessary.

23

RSM

Process Maps

District of Columbia Water and Sewer Authority
Retail Rates Implementation Audit
Page 5 of 10

Data Clean-Up Process – Premise Type Validation

Note 1: Data clean-up effort 1: Query from eCIS was run for all active and inactive accounts with a premise type of Multi-Family and a premise type of Commercial with a "Condo (C)" or "Co-op(O)" dwelling code. An additional review was done to include premises with "condo", "apartment", "co-op", and abbreviations of such in the account name to identify any additional condominiums or apartments to include.
Note 2: In order to validate the property type, the data clean-up team utilized the use code in DC's Office of Tax and Revenue records and through searches on Google Maps.
Note 3: The contact types are used to track which accounts have been identified for review (RRDCA), have been reviewed and confirmed no change (RRDCB), have been reviewed and needs a change (RRDCC) and which account need a field visit (RRDCD).

24

Process Maps

District of Columbia Water and Sewer Authority
Retail Rates Implementation Audit
Page 6 of 10

dc water is life

Data Clean-Up Process – Premise Type Validation, continued

Customer Service – Data Clean-up Team

- Connection from "Data Clean-up Process" tab
- QA&C Coordinator performs review of each premise's classification validation or change
- Any changes?
- Yes → QA&C Coordinator make adjustments to contact type on excel spreadsheet
- No → Team member updates contact type in eCIS
- QA&C Coordinator compiles spreadsheet of recommended premise changes
- Data clean-up team updates eCIS for the "no change" contact type.
- eCIS is updated for premise type and bill type
- QA – Vertex team performs "Edit Process", which flags any error between changes and system
- End

Customer Service – Impervious Area Billing (IAB)

- Recommended changes to premise type are received via excel spreadsheet
- IAB team reviews recommended changes using additional tools **Note 1**
- Premise type recommendation correct?
- No → Change different from data clean up recommendation?
- No → Adds additional comment in the "Data Clean-up Premise Validation-Change Report" stating no change
- Yes → IAB team adds a Comment "CHG FROM XX to XX" indicating the appropriate premise type and adds additional comments in the "Data Clean-up Premise Validation-Change Report"
- Yes → Impervious Area Database (IADB) premise type is updated **Note 2**

Flowchart Legend:
Start/ End | Off-Page Connector | Database | Document | Decision Point | Sub process/Function

Colors:
Process Step | Automated Control | Manual Control | Gap

Note 1: The impervious area team utilizes GIS, JTX, and the Impervious Area database (IADB) to validate the premise type.
Note 2: If the premise type is reclassified to residential, the IAB determines the appropriate usage tier for the account and rate schedules are altered.

25

RSM

Process Maps

District of Columbia Water and Sewer Authority
Retail Rates Implementation Audit
Page 7 of 10

Meter Servicing and Replacement

Customer Service – Call Center

Start → Receive customer complaint or inquiry pertaining to water meter → Service order created in eCIS

Customer Service – Meter Operations

Forman assigns Service Order to technician in SOS mobile → Technician reviews service order and obtains necessary equipment → Technician visits premise site and assesses the metering equipment → Is meter functioning properly? —No→ Determine root cause of meter malfunction → Does the meter need replacing? **Note 3** —No→ "Meter Servicing and Replacement, cont" tab

Is meter functioning properly? —Yes→

Customer Service – Billing Services

Update information in service order in SOS Mobile and ACLARA
Note 1, Note 2, Note 4

Flowchart Legend:

| Start/End | Off-Page Connector | Database | Document | Decision Point | Sub process/Function |

Colors:

| Process Step | Automated Control | Manual Control | Gap |

Notes
Note 1: Meter information inputted into SOS mobile includes MTU #, Meter #, Meter Reading, and Meter Type. This information is recorded from the old meters and the subsequent new meter (if necessary).
Note 2: ACLARA programing entries require Meter #, Meter Type, MTU #, Meter Size (dropdown), Meter manufacturer (dropdown), and Premise #.
Note 3: Per the American National Science Federation (ANSF), water meters must be comprised of no more than 0.25% lead (NSF 61, appendix F and G). As part of a meter assessment, DC Water technicians will replace a meter if it is a model that does not comply with ANSF's regulation.
Note 4: SOS Mobile and ACLARA are programs that run on the field technician's GETAC laptop computer. These laptops are kept in each technicians truck and brought to sites.

26

RSM

Process Maps

District of Columbia Water and Sewer Authority
Retail Rates Implementation Audit
Page 8 of 10

Meter Servicing and Replacement, continued

Customer Service – Meter Operations

"Meter Servicing and Replacement" tab → Physically remove and disable transmission on MTU → Enter old meter readings & data into SOS Mobile → Program new MTU in ACLARA **Note 2** → Remove old meter and install new meter **Note 4** → Update information in service order in SOS Mobile and ACLARA **Note 1, Note 2, Note 5**

Customer Service – Billing Services

Review changes to account in service order → Any issues with altered account information? **Note 6** → Yes → Perform follow-up with meter operations field technician → Does the customer need a billing adjustment? → Yes → Calculate billing adjustment and apply to customer account in eCIS → End

No / No

Flowchart Legend: Start/End, Off-Page Connector, Database, Document, Decision Point, Sub process/Function

Colors: Process Step, Automated Control, Manual Control, Gap

Notes
N1: Meter information inputted into SOS mobile includes MTU #, Meter #, Meter Reading, and Meter Type. This information is recorded from the old meters and the subsequent new meter (if necessary).
N2: ACLARA programing entries require Meter #, Meter Type, MTU #, Meter Size (dropdown), Meter manufacturer (dropdown), and Premise #.
N3: Per the American National Science Federation (ANSF), water meters must be comprised of no more than 0.25% lead (NSF 61, appendix F and G). As part of a meter assessment, DC Water technicians will replace a meter if it is a model that does not comply with ANSF's regulation.
N4: New Meters: Come with tags on from the factory, with Meter #, and Low, Med, High flow test ratings. The meters also have pertinent information branded on them.
N5: SOS Mobile and ACLARA are programs that run on the field technician's GETAC laptop computer. These laptops are kept in each technicians truck and brought to sites.
N6: The most common example of this is 'duplicate meter serial numbers in use". This can occur when a technician enters a serial number into SOS mobile/ACLARA and the meter associated with that serial number is already in use. This occurs commonly because meters are assigned serial numbers in sequence.

27

Process Maps

District of Columbia Water and Sewer Authority
Retail Rates Implementation Audit
Page 9 of 10

dc water is life

Large Meter Data Clean-up Initiative

Flowchart Legend:

Start/ End — Off-Page Connector — Database — Document — Decision Point — Sub process/Function

Colors: Process Step | Automated Control | Manual Control | Gap
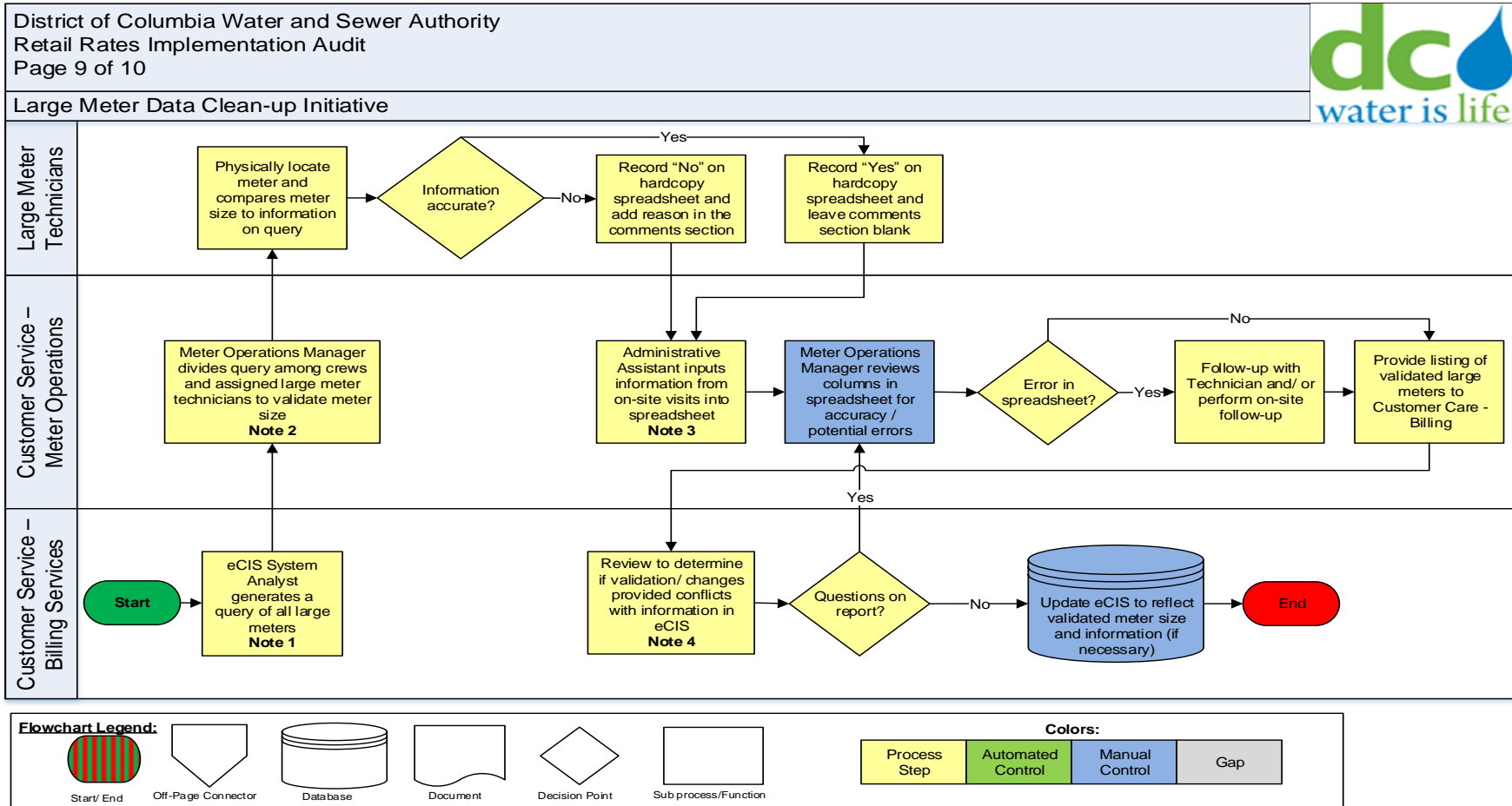
Notes
Note 1: There were approximately 142 8'" meters, 64 10" meters, and 10 12" and 16" inch meters.
Note 2: Crew was provided a spreadsheet of all meters they were assigned to validate. The spreadsheets included premise number, service address, account number, acct name, acct status, acct type, meter number, meter size, utility code, meter type, service code, schedule code.
Note 3: Technicians hand wrote information from on-site visits, so an admin was assigned to input the information manually into a organized spreadsheet.
Note 4: Changes to the meter information in eCIS was expected, but the data clean-up team may have recent information in Service Orders that conflicts with what technicians found.

28

RSM

Process Maps

District of Columbia Water and Sewer Authority
Retail Rates Implementation Audit
Page 10 of 10

System Interaction Map
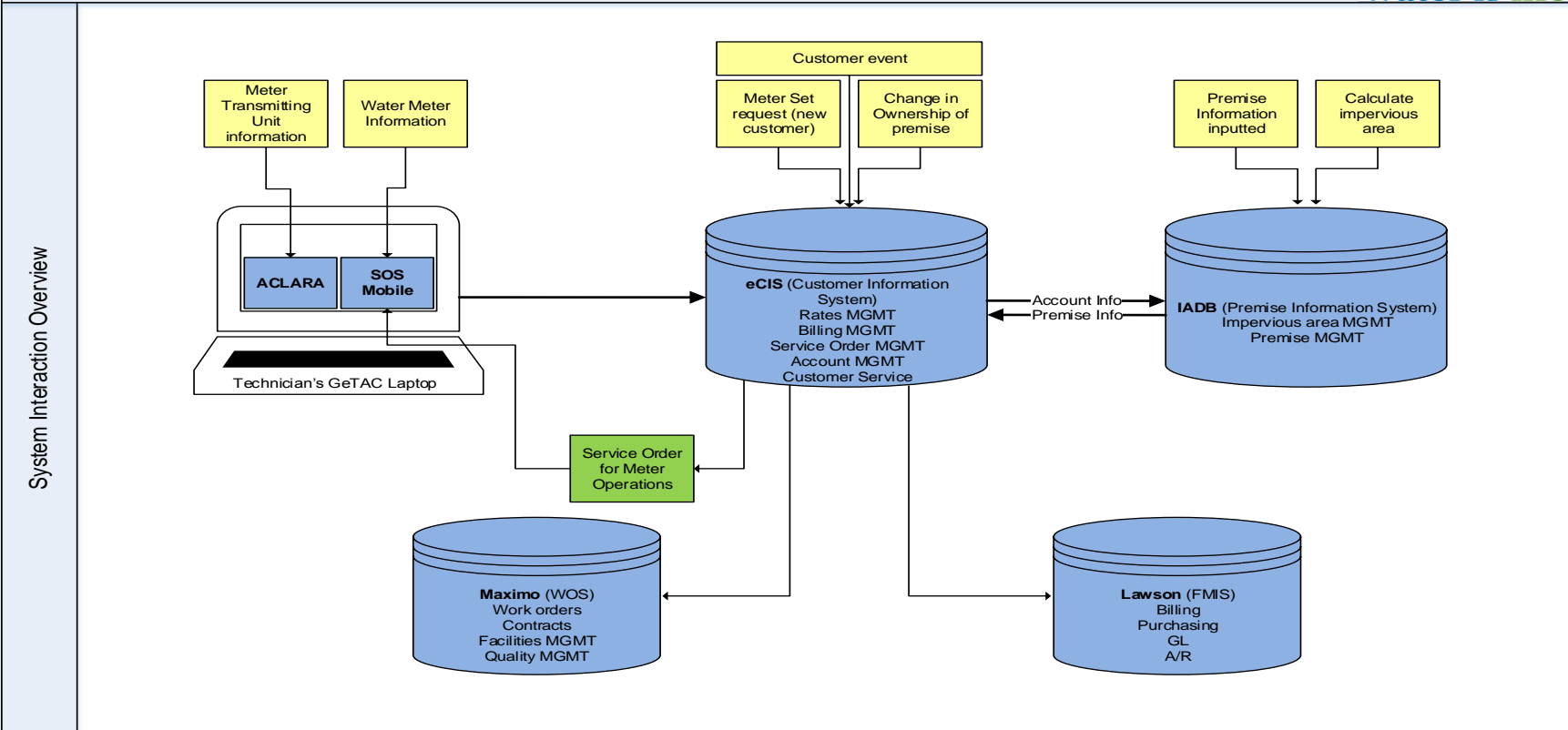
System Interaction Overview

Meter Transmitting Unit information

Water Meter Information

Customer event

Meter Set request (new customer)

Change in Ownership of premise

Premise Information inputted

Calculate impervious area

ACLARA

SOS Mobile

Technician's GeTAC Laptop

eCIS (Customer Information System)
Rates MGMT
Billing MGMT
Service Order MGMT
Account MGMT
Customer Service

Account Info
Premise Info

IADB (Premise Information System)
Impervious area MGMT
Premise MGMT

Service Order for Meter Operations

Maximo (WOS)
Work orders
Contracts
Facilities MGMT
Quality MGMT

Lawson (FMIS)
Billing
Purchasing
GL
A/R

Flowchart Legend:

Start/End | Off-Page Connector | Database | Document | Decision Point | Sub process/Function

Colors:

Information Input	System Request	System	Gap

29

©2015 RSM US LLP. All Rights Reserved.

RSM

RSM US LLP

1501 M St NW, Suite 340
Washington, DC 20005
+202 370 8200
www.rsmus.com

This document contains general information, may be based on authorities that are subject to change, and is not a substitute for professional advice or services. This document does not constitute audit, tax, consulting, business, financial, investment, legal or other professional advice, and you should consult a qualified professional advisor before taking any action based on the information herein. RSM US LLP, its affiliates and related entities are not responsible for any loss resulting from or relating to reliance on this document by any person. Internal Revenue Service rules require us to inform you that this communication may be deemed a solicitation to provide tax services. This communication is being sent to individuals who have subscribed to receive it or who we believe would have an interest in the topics discussed.

RSM US LLP is a limited liability partnership and the U.S. member firm of RSM International, a global network of independent audit, tax and consulting firms. The member firms of RSM International collaborate to provide services to global clients, but are separate and distinct legal entities that cannot obligate each other. Each member firm is responsible only for its own acts and omissions, and not those of any other party. Visit rsmus.com/aboutus for more information regarding RSM US LLP and RSM International.

RSM® and the RSM logo are registered trademarks of RSM International Association. *The power of being understood®* is a registered trademark of RSM US LLP.

Internal Audit Report
Overtime Audit and Analysis

January 2016

Overtime
Internal Audit Report
Issued: January 2016

TABLE OF CONTENTS

Overtime
Internal Audit Report
Issued: January 2016

TRANSMITTAL LETTER

January 2016

The Audit Committee of DC Water
5000 Overlook Avenue, SW
Washington, DC 20032

Pursuant to the approved 2016 internal audit plan for the District of Columbia Water and Sewer Authority ("DC Water" or the "Authority", we hereby present our assessment of Overtime. We will presenting this report to the Audit Committee of DC Water at the next scheduled meeting on January 28, 2016. Our report is organized in the following sections:

Executive Summary	This provides a summary of the observations and opportunities related to our internal audit of the Overtime process.
Background	This provides an overview of the Overtime process.
Objectives and Approach	The internal audit objectives and focus are expanded upon in this section, as well as a review of the various phases of our approach.
Operational Analysis	This provides an analysis of DC Water's overtime budget, expenditures and benchmarking to analyze DC Water's performance.
Detailed Observations	This section gives a description of the observations noted during our work and recommended actions as well as management's response, responsible party, and estimated completion date.

We would like to thank the staff and all those involved in assisting the Internal Auditors in connection with this review.

Respectfully Submitted,

Internal Auditors

1

Overtime
Internal Audit Report
Issued: January 2016

dc water is life

EXECUTIVE SUMMARY

Background and Operational Analysis

In FY 2015, overtime expenditures were $7,467,306, which is 6.5% of total personnel costs and 1.4% of the Authority's total operating budget. Over the past four fiscal years (FY 2012 – FY 2015), both overtime expenditures and hours have been increasing. Since FY 2012, overtime expenditures have increased by 33.7% and since FY 2013, DC Water has exceeded the overtime budget each fiscal year. The variances have been explained due to an increase in emergency responses to infrastructure repairs, maintenance and water main breaks, the reorganization in departments, and increase in capital projects. Overtime expenditures are budgeted annually by department as part of the overall Personnel Services budget. Due to vacancies, the Personnel Services expenditures have exceeded the budget once in the past four fiscal years.

In FY 2015, 80% of the Authority's overtime expenditures came from five departments; Sewer Services, Department of Engineering and Technical Services, Water Services, Wastewater Treatment and Maintenance Services. These Departments have consistently had the highest overtime expenses during the last four fiscal years and were the focus of our audit. We conducted department-specific interviews and obtained evidence on how departments manage, plan, review and approve overtime.

Through our review, we identified department-specific control activities for the documentation and monitoring of overtime. This included documenting overtime justification, reconciliation processes, and root cause analysis.

In addition to assessing overtime at a department-level, we conducted an operational analysis in which we analyzed the leading overtime drivers and vacancies at the departments with the largest overtime expenditures, budget versus actual for both the overtime budget and the Personnel Services budget, and assessed DC Water's overtime expenditures to comparable local water and wastewater authorities.

Objective and Scope

Our procedures were performed in accordance with the internal audit scope and approach set forth in our audit notification letter, dated 09/17/2015, and were limited to those procedures described therein.

Our scope included the following:
- Determine how planned and emergency overtime is budgeted
- Evaluate department-level overtime management and justification
- Evaluate consistency in overtime procedures across the Authority
- Evaluate compliance with Union agreements
- Assess overtime usage by comparing budgeted overtime hours and expenses to actual
- Analyze DC Water's Overtime Costs compare to other local utilities

Fieldwork was performed October 2015 through November 2015.

Overall Summary / Highlights

The observations identified during our assessment are summarized on the next page. We have assigned relative risk or value factors to each observation. Ratings are not assigned to opportunities as these items represent best practices and/or recommended initiatives. Risk ratings are the evaluation of the severity of the concern and the potential impact on the operations of each item. Only observations will require management action plans with estimated completion dates that will be included in the routine follow up of internal audit observations.

Overall Rating *(See Appendix A for definitions)*			
	Number of Observations by Risk Rating		
	High	Moderate	Low
Overtime Audit	2	1	0

We would like to thank all DC Water team members who assisted us throughout this review.

2

RSM

Overtime
Internal Audit Report
Issued: January 2016

EXECUTIVE SUMMARY (CONTINUED)

Ratings and Conclusions

Following is a summary of High and Moderate observations noted in the areas reviewed. Definitions of the rating scales are included in the Appendices.

Observations and Improvement Opportunities	
Observations	**Rating**
1. OVERTIME JUSTIFICATION AND APPROVAL PROCESS Upon review and inquiry of department-specific procedures, we identified that there is not a consistent process for documenting support or justification for overtime hours worked. Additionally, there is not a consistent review process to verify that overtime hours in DayForce, the timekeeping system, were actually worked and reconciled to supporting documentation prior to timesheet approval. While some departments have established a justification and review process, there is currently not an Authority-wide procedure on what must be maintained to support overtime worked. Of the departments in scope, three out of the five utilize an overtime justification form or a daily overtime summary. These forms are used to document the hours the employee worked, what caused the need for overtime, approval of the Foreman or Manager, and, if needed, the associated work order number. One out of the five departments did not utilize forms, but documented justification and related work order numbers in the "Manager Comments" field in DayForce. One of the five departments did not have a method of documenting overtime justification. Additionally, we noted that not all departments have a review process to ensure that overtime in DayForce is accurate and agrees to the supporting documentation during timesheet approval process. Though some of the departments utilize an overtime justification form, these forms are not always referenced when approving time. For three of the five departments interviewed, a reconciliation may occur by the timekeeper, but not the individual approving the time. Without a consistent Authority-wide procedure, documentation may not exist to support the overtime expenditures. Additionally, without a formal review process, overtime can go over budget or be inaccurately reported.	**High**

3

RSM

Overtime
Internal Audit Report
Issued: January 2016

EXECUTIVE SUMMARY (CONTINUED)

Ratings and Conclusions (continued)

Observations	Rating
2. DOCUMENTATION OF OVERTIME DISTRIBUTION Per Article 41, Administration of Overtime, of the NAGE Union Agreement, the AFSCME Local 2091 Working Conditions Agreement, AFGE 631 Working Conditions Agreement, and the AFGE 2553 Working Conditions Agreement, "Overtime work shall be equally distributed among employees and appropriate, specific arrangements for the implementation of this concept shall be agreed to at Union-Management Cooperation Meetings." The current process for assigning overtime in accordance with the agreements has not resulted in any employee grievances or inquiries from the Unions. The procedures in place are manually performed, and heavily reliant on documenting the distribution trail. Upon review and inquiry of department-specific procedures, we noted the procedures and documentation maintained by individual departments for tracking the equal distribution of overtime varies by department and is not standardized. Of the departments in scope, two of the five departments utilized an overtime log to evidence that overtime has been offered to the qualified employees and that the employee either accepted or rejected the overtime offer. Three of the five departments had established an overtime schedule or rotation process, evidenced either by handwritten notes or overtime justification forms. However, the rotation schedule did not always evidence if an employee rejected the overtime or reasons for changes in schedule. Non-compliance with Union agreements could result in employee grievance and arbitration.	**High**

4

Overtime
Internal Audit Report
Issued: January 2016

EXECUTIVE SUMMARY (CONTINUED)

Ratings and Conclusions (continued)

Observations	Rating
3. MANAGEMENT REPORTING, EVALUATION AND ENFORCEMENT OF OVERTIME BUDGET On a quarterly basis, the Budget Department provides all Department Heads a report showing Personnel budgeted expenditures versus year-to-date actual expenditures. The report indicates the percentage of the budget that has been used to-date by department for regular pay, overtime and benefits. For departments that have exceeded the anticipated overtime budget (calculated by the percentage of payroll processed compared to overtime budget), the Budget Department requests an explanation. Upon review of the overtime reports and testing of department responses, we noted the following: • For one of four departments in scope that exceeded the anticipated overtime budget, a response was not provided to the Budget Department. There is no formal review and approval process for the budget versus actual reports sent out. • Overtime budgets are based on annual totals and analyzed both quarterly and monthly for the percentage of budget that has been utilized compared to the percentage of payroll expenditures that have been processed. Though sufficient monitoring of the budget is occurring, seasonality is not considered when requesting explanation for variances. For instance, some departments are impacted greater during the first two quarters of the fiscal year due to cold temperatures and increased water main breaks, snow removal, etc. These departments may always exceed the anticipated overtime budget due to these factors. • The report did not account for scheduled overtime versus unplanned overtime. DC Water is reimbursed by the District of Columbia for scheduled overtime, such as planned events like the inauguration, which impacts the overall budget. • Though the overall Personnel services expenditures have not exceeded the budget in the past few fiscal years, the Authority continues to exceed the overtime budget. Though there was improvement in FY 2015, the departments may not have adequate funds due to vacancies, aging infrastructure and other root causes identified. Without proper review of the overtime budget, evaluation of departmental differences and explanation for variances, the Departments are not held accountable for potentially excessive overtime use.	**Moderate**

5

RSM

Overtime
Internal Audit Report
Issued: January 2016

BACKGROUND, OBJECTIVES AND APPROACH

Background

DC Water has over 1,000 employees, including exempt (salaried), non-exempt (hourly), full and part-time employees, as well as Union- and non-Union classifications. Employees are located at five main facilities throughout the District of Columbia; however, a large percentage of employees are mobile and service the 1,350 miles of water pipes and 1,900 miles of sanitary and combined sewers. Approximately 64% of DC Water's workforce is governed by one of five Union agreements. The Federal government and the District of Columbia have many laws and statues that the Authority must comply with regarding timekeeping. They include, but are not limited to, the Fair Labor Standards Act (FLSA), the Federal and Medical Leave Act of 1993, Final Rule, 29 CFR, Part 825 and applicable provisions of the District of Columbia Family and Medical Leave Act of 1990.

In addition to the above, the Authority is currently involved with 5 collective bargaining agreements for Union employees. The agreements address working hours, shift pay policies and overtime distribution. They are as follows:

- American Federation of Government Employees, Local 2553
- American Federation of Government Employees, Local 631
- American Federation of Government Employees, Local 872
- American Federation of State, County, and Municipal Employees Local 2091
- National Association of Government Employees, R3-06

Changes to Automated Timekeeping System

DC Water has implemented Ceridian DayForce Time and Attendance as part of the Authority-wide Ceridian Workforce Management implementation, which also includes benefits, human resources, payroll and recruiting modules. As a result of the DayForce implementation, internal controls and procedures, at both the department level and centrally within Payroll, have changed. Each Department is able to run reports based on overtime hours worked by employee. The capabilities of the new system greatly improve visibility into hours worked (time the employee clocks in and out), overtime distribution by department, automated compensatory time calculations, and automated the leave request process. In addition to conducting authority-wide training, the Payroll Department is in the process of updating the standard operating procedures.

Overtime Process

DC Water has both planned overtime and emergency overtime. Planned overtime could be for events occurring in the District of Columbia, such as the inauguration or assistance with snow removal, or could be negotiated as part of the Union contracts. More often, overtime is a result of emergency maintenance and service needs for DC Water's customers. Currently, there is not a distinction between planned and emergency overtime in the budget, and therefore it is not monitored by these categories. Overtime for non-exempt employees is captured as part of the timekeeping process through the timeclock and is approved by the Supervisor or Manager weekly.

6

Overtime
Internal Audit Report
Issued: January 2016

BACKGROUND, OBJECTIVES AND APPROACH (CONTINUED)

Background (continued)

Overtime Process (continued)

Monitoring overtime hours and costs facilitates managing the risks associated with personnel fatigue and safety concerns, while also overseeing financial responsibilities. On a quarterly basis, the Budget Department provides all Department Heads a fiscal year budget versus year-to-date actual report. The report indicates the percentage of the budget that has been expended to-date by department for regular pay, overtime and benefits. Additionally, the Budget Department prepares monthly reports, which includes an analysis of the Operating Expenses such as overtime, for the Finance and Budget Committee.

Management's Accomplishments

Through our review, we identified department specific control activities for the documentation and monitoring of overtime. For example, Sewer Services, Water Services, and Wastewater Treatment utilize an Overtime Justification Form, completed by the Foreman and reviewed by the General Foreman, to document hours worked, the reason the overtime was needed, and, if needed, the appropriate Maximo work order. In Maintenance Services, the Timekeeper adds reason for overtime into the comments of DayForce to justify overtime recorded. In Water Services, the Business Operations Specialist receives all Overtime Justification Reports and enters them into an access database to reconcile hours recorded in DayForce. Sewer Services sends a business report tracking year-to-date budget spending to the Business Office monthly.

Statistics and Financial Information

The following is a summary table of employees by functional category (as of September 30, 2015):

Functional Category	Number
Exempt (salary)	343
Non-Exempt (hourly)	806
Total Number of Employees	1,149
Part-Time / Temporary	19
Full-Time	1,130
Total Number of Employees	1,149
Union Employees	728
Non-Union Employees	421
Total Number of Employees	1,149
Total Number of Approvers	220
Total Number of Timekeepers	36

7

Overtime
Internal Audit Report
Issued: January 2016

BACKGROUND, OBJECTIVES AND APPROACH (CONTINUED)

Background (continued)

Statistics and Financial Information (continued)

In FY 2015, an overtime cost of $7,467,306 was incurred, which is 6.5% of total personnel costs and 1.4% of the Authority's total operating expense budget. The personnel services expenses have increased year-to-year due to an increased hiring effort to reduce the authority-wide vacancy rate, emergency response to water main breaks caused by the fluctuation in temperature, and due to employee salary increases. Personnel service expenses are budgeted annually by department and takes into consideration vacancy rates, budgeted positions, Departmental re-organizations, salary adjustments and overtime costs to support on-going capital projects.

Over the past four fiscal years (FY 2012 – FY 2015), both overtime costs and hours have been increasing. Since FY 2012, overtime expenditures have increased by 33.7%. Over the same time period, overtime hours have increased by 26.8%.
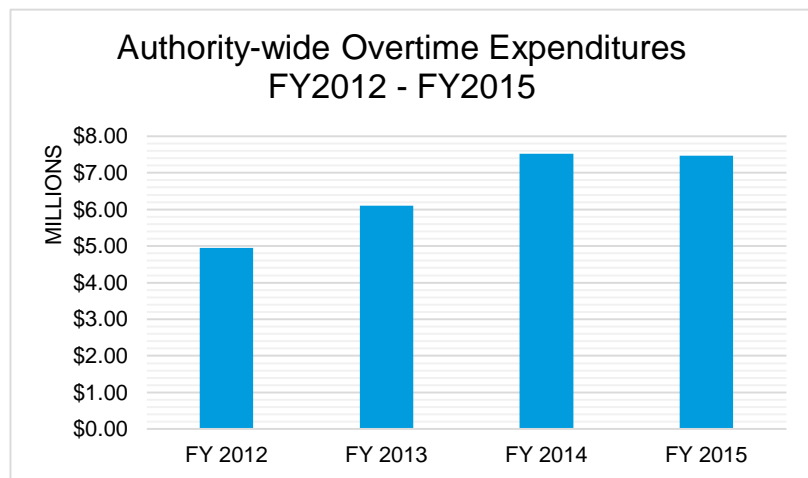
Source: FY 13-16 Revised Approved Budget Report
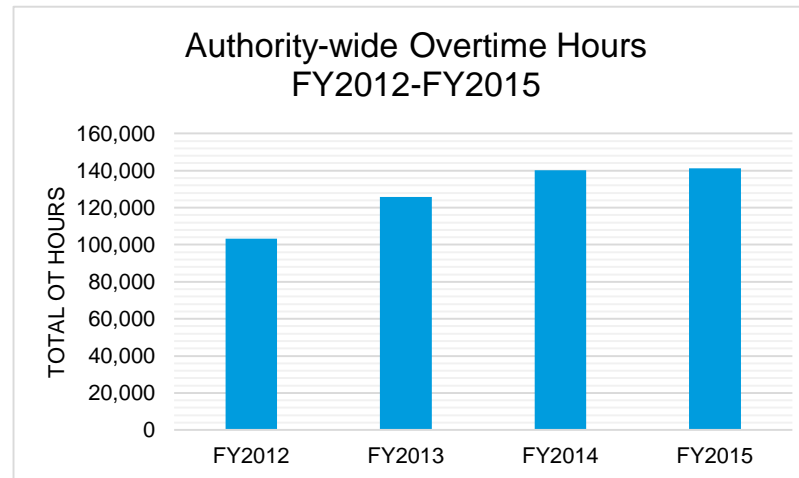
Source: Ceridian Data provided by the Payroll Department

8

Overtime
Internal Audit Report
Issued: January 2016

BACKGROUND, OBJECTIVES AND APPROACH (CONTINUED)

Objectives and Approach

Objectives

The objectives of the internal audit of overtime were to:

- Determine how planned and unplanned overtime is budgeted on an annual basis;
- Evaluate how overtime is managed at the department-level for high-usage departments, including the monitoring, distribution and documentation of overtime usage;
- Evaluate consistency in overtime procedures and controls across the Authority;
- Evaluate how Ceridian DayForce, the timekeeping system, is utilized to manage overtime and workflow approvals;
- Assess overtime usage, including:
  - o Comparing budgeted overtime hours and expenses to actual;
  - o Benchmarking DC Water overtime usage to local water utilities;
  - o Identifying root causes for unplanned overtime, and understand management's determination of reasonableness;
- Evaluate for compliance with Union agreements; and
- Determine how overtime statistics are utilized to make business decisions, including impact of authorized positions and vacancies.

Approach
Our audit approach consisted of the following phases:

Understanding of the Process
During the first phase of our approach, we conducted interviews with key personnel within the Payroll Department and Budget Department. We also analyzed overtime hours, expenditures and budget from the past four fiscal years (FY 2012 – FY 2015) to determine the departments with high overtime usage. The high-usage departments identified were:

- Sewer Services
- Department of Engineering and Technical Services
- Water Services
- Wastewater Treatment
- Maintenance Services

We obtained and reviewed DayForce training materials, any Authority-wide timekeeping procedures and guidelines. In addition, we reviewed the Union contracts to determine requirements related to overtime.

9

RSM

Overtime
Internal Audit Report
Issued: January 2016

BACKGROUND, OBJECTIVES AND APPROACH

Objectives and Approach (continued)

Documented Walkthroughs and Overtime Analysis
The purpose of this phase was to gain an understanding of department-level overtime policies, procedures, and controls. This phase included process walkthroughs with management from each of the departments identified above and inquiry of documentation.

Specific procedures performed include:

- Obtained overtime statistics and conducted an inquiry of DayForce timekeeping controls with the Payroll Department
- Inquiry and documentation of identification of emergency overtime and planned overtime at each department
- Inquiry of planned and emergency overtime approval, documentation and reporting at each department
- Inquiry of Department-level controls for management and analysis of overtime use
- Inquiry and review of overtime budget and justification provided to the Budget Department
- Testing of compliance with Union agreements, including the documentation of overtime distribution at each department
- Analysis of overtime at DC Water compared to other local water and wastewater authorities

Reporting
At the conclusion of this audit, we summarized our observations related to overtime pay at DC Water. We have reviewed the results of our testing with management.

10

Overtime
Internal Audit Report
Issued: January 2016

OPERATIONAL ANALYSIS

In order to assess DC Water's overtime costs, we analyzed the leading overtime drivers and vacancies at the departments with the largest overtime expenditures, budget versus actual for both the overtime budget and the Personnel Services budget, and assessed DC Water's overtime expenditures to comparable local water and wastewater authorities.

Overtime by Department

In FY 2015, 80% of the Authority's overtime expenditures came from five departments; Sewer Services, Department of Engineering and Technical Services, Water Services, Wastewater Treatment and Maintenance Services. These departments have consistently had the highest overtime expenses during the last four fiscal years. Each of these five departments have different drivers for greater overtime expenditures, as detailed in the chart below.

Department	Leading Overtime Drivers
Sewer Services	• Sewer blockages/ leaks • Aging infrastructure • Weather • New construction (strain on sewer system)
Department of Engineering and Technical Services (DETS)	• Contractor working hours • Weather • DOT permitted work hours (based on location, water shut-offs, traffic)
Water Services	• Mains/valves leaks/breaks • Weather • Permitted work hours (based on location, water shut-offs, traffic) • Aging infrastructure • Contractor working hours
Wastewater Treatment	• Built-in shift overtime • Short staffed • Weather (heavy rain) • Employee PTO days requiring other employees to work
Maintenance Services	• Increase in training hours • Emergency services requested

FY 2015 Overtime Expenditures by Department

Customer Service 4%
Facilities 3%
Other 2%
Water Services 22%
DDCS 11%
DETS 17%
Sewer Services 12%
Maintenance Services 13%
Wastewater Treatment - Operations 16%

Source: FY 16 Revised Approved Budget Report

11

Overtime
Internal Audit Report
Issued: January 2016

OPERATIONAL ANALYSIS (CONTINUED)

The following table illustrates the distribution of overtime expenditures and hours between departments over the most recent four fiscal years. The Budget Department monitors overtime expenditures compared to the budget on a monthly basis, in preparation of the Finance and Budget Committee reports. On a quarterly basis, the Budget Department provides a budget versus actual report to all Department Heads and request responses and support from departments who are trending towards going over budget. At the department level, overtime hours are more closely monitored, as the Departments do not always have control over salary increases due to union negotiations.

OT Expenditures and Hours by Department									
	FY 2012		FY 2013		FY 2014*		FY 2015			
Department	OT Expenditures	OT Hours	OT Expenditures	OT Hours	OT Expenditures	OT Hours	OT Expenditures	OT Hours	# Authorized Positions	# Employees earning OT
Water Services	$881,000	17,669	$1,183,000	24,720	$1,473,000	28,227	$1,635,658	33,537	194	141
DETS	$780,000	14,216	$941,000	15,394	$904,000	13,263	$1,278,014	16,672	166	55
Wastewater Treatment - Operations	$1,093,000	22,404	$1,089,000	21,863	$1,510,000	28,277	$1,216,487	23,178	118	103
Maintenance Services	$718,000	13,875	$928,000	17,393	$1,227,000	23,524	$967,062	17,903	117	91
Sewer Services	$875,000	21,705	$1,218,000	28,480	$1,476,000	28,465	$880,148	20,181	120	97
Distribution and Conveyance Systems	$142,000	3,079	$146,000	3,137	$279,000	4,033	$804,324	15,137	87	53
Customer Service	$178,000	4,063	$216,000	5,051	$194,000	4,003	$266,299	5,226	124	89
Facilities	$190,000	2500	$219,000	3,730	$242,000	3,408	$234,944	5,376	67	48
All Other Departments	$97,000	3,849	$166,000	6,075	$220,000	6,897	$184,370	3,924	267	63
Total	**$4,954,000**	**103,360**	**$6,106,000**	**125,842**	**$7,525,000**	**140,096**	**$7,467,306**	**141,134**	**1,260**	**740**

12

RSM

Overtime
Internal Audit Report
Issued: January 2016

OPERATIONAL ANALYSIS (CONTINUED)

Overtime expenditures in most departments have been increasing year by year. This is a result of aging infrastructure, increasing severe weather events, vacancies, increasing costs, and additional factors (reference "Leading Overtime Drivers" table on page 11). In FY 2015, overtime expenditures of $7,467,306 accounted for 6.5% of personnel costs, down from 6.9% in FY 2014. This amount is 1.4% of the Authority's total operating revenue.

	Fiscal Year			
	FY 2012	**FY 2013**	**FY 2014**	**FY 2015****
Overtime Expenditures	$4,954,000	$6,106,000	$7,525,000	$7,467,306
Overtime Budget	$5,016,987	$5,166,209	$5,359,100	$6,067,920
Personnel Services Expenditures* - Operating & Capital	**$107,334,000**	**$118,567,000**	**$125,756,000**	**$134,263,000**
Personnel Services - Capital	($9,550,000)	($14,659,000)	($17,289,000)	($18,741,000)
Personnel Services Expenditures – Operating	$97,784,000	$103,908,000	$108,467,000	$115,522,000
Personnel Services Budget – Operating & Capital	**$111,114,000**	**$116,609,000**	**$119,765,000**	**$135,544,000**
Personnel Services Budget – Capital	($14,000,000)	($16,690,000)	($12,960,000)	($17,266,000)
Personnel Services Budget – Operating	$97,114,000	$99,919,000	$106,805,000	$118,278,00
Operating Revenue	$440,566,000	$439,079,000	$473,824,000	$546,096,000
OT Expenditures % of Personnel Costs – Operating & Capital	**5.1%**	**5.9%**	**6.9%**	**6.5%**
OT Expenditures % of Operating Revenue	**1.1%**	**1.4%**	**1.6%**	**1.4%**

*Personnel costs includes salary and overtime, benefits, and bonuses.
**These are preliminary year-end results pending the audited financial statements.
Source: Consolidated annual financial reports and FY 13-16 Revised Approved Budget Reports and September 30, 2015 Finance and Budget Report.

13

RSM

Overtime
Internal Audit Report
Issued: January 2016

OPERATIONAL ANALYSIS (CONTINUED)

Budget versus Actual Overtime Analysis

The Authority budgets for overtime on an annual basis. These graphs depict the actual and budget figures for overtime by department for the most recent three fiscal years and the five highest earners of overtime. In FY 2013 and FY 2014, all five departments went over budget on overtime spending. In FY 2015, Sewer Services and Wastewater Treatment Departments both stayed within the budget for overtime expenditures, while the remaining three departments exceeded their FY 2015 budget. During FY 2014, the Pumping division from Water Services and Sewer Services we reorganized to the Distribution and Conveyance Systems Departments, which is a contributing factor to the overtime budget and costs for these departments.

FY 2015 Overtime Budget versus Actual by Department
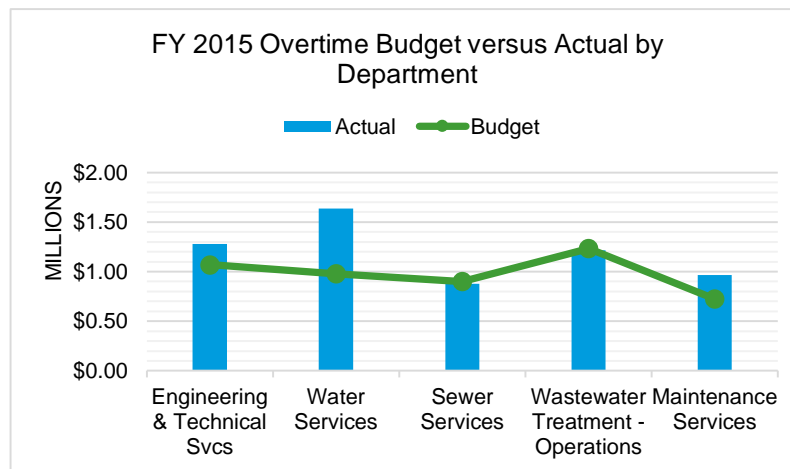
Budget Source: Finance & Budget Committee Meeting Reports
Actual Source: FY 16 Revised Approved Budget Reports

FY 2014 Overtime Budget versus Actual by Department
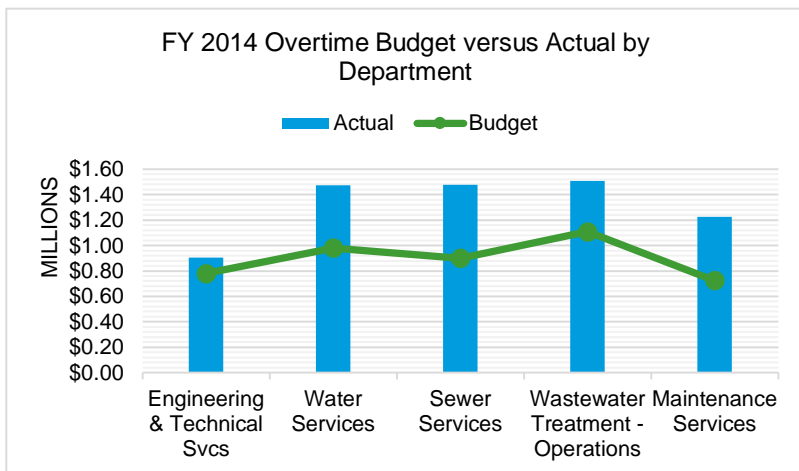
Budget Source: Finance & Budget Committee Meeting Reports
Actual Source: FY 15 Revised Approved Budget Reports

FY 2013 Overtime Budget versus Actual by Department
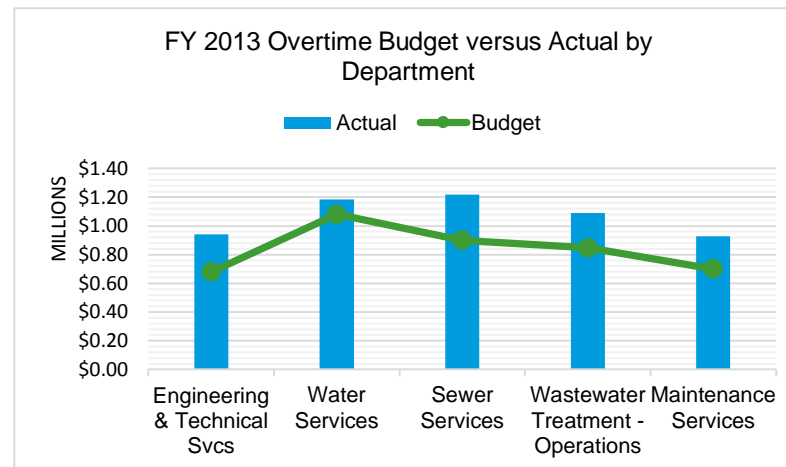
Budget Source: Finance & Budget Committee Meeting Reports
Actual Source: FY 14 Revised Approved Budget Reports

14

Overtime
Internal Audit Report
Issued: January 2016

OPERATIONAL ANALYSIS (CONTINUED)

The table below includes the final revised budget and actual expenditures for overtime for FY 2012 through FY 2015. Total actual overtime expenditures exceeded the Authority's overtime budget by 23% in FY 2015.

FY 2012-FY 2015 Overtime Budget versus Actual								
	FY 2012		FY 2013		FY 2014**		FY 2015	
Department	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget
DETS	$780,000	$548,481	$941,000	$680,000	$904,000	$780,000	$1,278,014*	$1,070,000
Water Services	$881,000	$1,080,000	$1,183,000	$1,080,000	$1,473,000	$980,000	$1,635,658	$960,000
Sewer Services	$875,000	$900,000	$1,218,000	$900,000	$1,476,000	$900,000	$880,148	$767,000
Wastewater Treatment - Operations	$1,093,000	$956,000	$1,089,000	$847,209	$1,510,000	$1,108,100	$1,216,487	$1,233,890
Maintenance Services	$718,000	$800,000	$928,000	$700,000	$1,227,000	$725,000	$967,062	$800,000
All Other Departments	$607,000	$732,506	$747,000	$959,000	$935,000	$866,000	$1,489,937	$1,237,030
Total	**$4,954,000**	**$5,016,987**	**$6,106,000**	**$5,166,209**	**$7,525,000**	**$5,359,100**	**$7,467,306**	**$6,067,920**
Variance	**1.26%**		**-18.19%**		**-40.42%**		**-23.06%**	

Budget and Actual Sources: Finance & Budget Committee Meeting Reports, FY 13-16 Revised Approved Budget Reports
*Engineering and Technical Services Department includes overtime that will be transferred to capital projects as part of the year-end close out process by the Accounting team.

15

Overtime
Internal Audit Report
Issued: January 2016

OPERATIONAL ANALYSIS (CONTINUED)

Vacancies by Department

In order to determine if departmental vacancies had an impact on overtime, we assessed the vacancies by department from FY 2012 through FY 2015. Overall, vacancy rates are decreasing as a results of an increased hiring effort Authority-wide and a reduction in the authorized positions. Though vacancy rates are decreasing, overtime costs and hours are still increasing.

Authorized Positions and Average Vacancies												
	FY 2012			FY 2013			FY 2014			FY 2015		
Departments	**Authorized Positions**	**Average Vacant**	**%**	**Authorized Positions**	**Average Vacant**	**%**	**Authorized Positions**	**Average Vacant**	**%**	**Authorized Positions**	**Average Vacant***	**%**
DETS	156	32	20.5%	166	26	15.6%	166	21	12.7%	166	17	10.2%
Water Services**	184	25	13.6%	207	45	21.7%	207	44	21.3%	194	22	11.3%
Sewer Services**	159	8	5.0%	158	5	3.2%	158	18	11.4%	120	11	9.2%
Wastewater Treatment - Operations	121	4	3.3%	108	7	6.5%	118	14	11.9%	118	6	5.1%
Maintenance Services	139	34	24.4%	115	17	14.8%	117	17	14.5%	117	8	6.8%
Total	**759**	**103**		**754**	**100**		**766**	**114**		**715**	**64**	

Source: FY 13-16 Revised Approved Budget Reports
*Vacancies based on actual as of September 30, 2015.
**During FY 2014, the Pumping division from Water Services and Sewer Services were reorganized to the Distribution and Conveyance Systems Departments, thus the number of authorized positions in FY 2015 decreased for Water and Sewer Services.

16

RSM

Overtime
Internal Audit Report
Issued: January 2016

OPERATIONAL ANALYSIS (CONTINUED)

Comparable Entities and Overtime Expenditures

The following graphs compare DC Water's overtime expenditures from FY 2014 to the following local water and waste water authorities:

- Fairfax County Water Authority (Fairfax County)
- Washington Suburban Sanitary Commission (WSSC)
- Baltimore City Department of Public Works (Baltimore)
- Richmond Department of Public Utilities (Richmond)
- Virginia Beach Public Utilities (Virginia Beach)
- Howard County Bureau of Utilities (Howard County)
- Anne Arundel County Bureau of Utilities (Anne Arundel)

Organizations of all types and sizes recognize the value of comparing themselves to other like organizations. The process of benchmarking yields valuable information to leaders and decision makers. There are, however, some dangers inherent in the benchmarking, since no authority is the perfect comparison to DC Water.

Some of the differences between the authorities include:

- Union versus non-unionized staff;
- Not all authorities treat wastewater, some only treat part of their service area's wastewater;
- Different technology is being used and implemented;
- Age of infrastructure;
- Vacancy rates, and;
- Response time to emergencies.

Reference the table on page 15 for more details on the specific authorities that were analyzed.

As evidenced by the following graphs, DC Water's overtime expenditures in FY 2014 were roughly consistent with other local authorities, when compared with the number of customers, number of employees, and amount of personnel expenditures. Despite having more customers than both Baltimore and WSSC, DC Water had lower overtime costs. However, DC Water overtime costs per employee is $6,731, which is approximately $2,000 greater than WSSC's and Baltimore's employees. DC Water's overtime costs compared to personnel costs falls at a level between Baltimore and WSSC.

Overtime versus Number of Customers

Source: Respective authorities' websites and information provided by the entity.

17

RSM

Overtime
Internal Audit Report
Issued: January 2016

OPERATIONAL ANALYSIS (CONTINUED)

Overtime versus Number of Employees
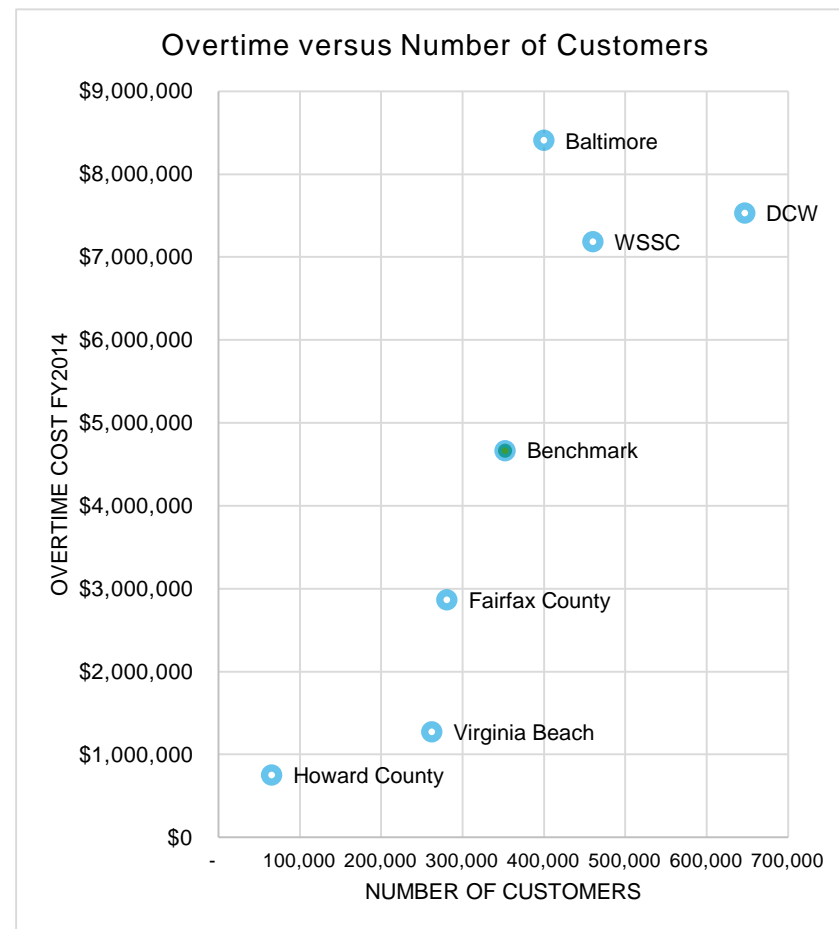
Source: Respective authorities' websites and information provided by the entity.

Overtime versus Personnel Expenditures

Source: Respective authorities' websites and information provided by the entity.

18

Overtime
Internal Audit Report
Issued: January 2016

OPERATIONAL ANALYSIS (CONTINUED)

The following chart includes overtime and general information on DC Water and other local water authorities.

Local Entities	2014 Overtime Expenditures	2014 Operating Revenue	2014 Personnel Expenditures	No. of Customers	No. of Employees	Wastewater Treatment?	Unionized?
DC Water and Sewer Authority	$7,525,000	$473,824,000	$108,467,000	646,449	1,118	yes	yes
Baltimore Department of Public Works	$8,403,075	$338,201,000[1]	$109,548,000[1]	400,000	1,944	yes	yes
Washington Suburban Sanitary Commission	$7,181,000	$624,358,000	$19,006,3000	460,000	1,530	yes	yes
Fairfax County Water Authority	$2,859,870	$182,200,000	$54,621,000	280,546	424	no	no[2]
Virginia Beach Public Utilities	$1,269,921	$152,805,112	$28,606,319	262,254	412	no	no[2]
Howard County Bureau of Utilities	$750,000	$57,220,944	$11,209,394	65,000	154	yes	yes
Benchmark[3]	$4,664,811	$304,768,176	$83,752,452	352,375	930		

[1]Baltimore Department of Public Works data is based on FY2013 data.
[2]VA does not allow collective bargaining in the public sector
[3]Benchmark based on the aggregate of DC Water and Sewer Authority, Baltimore Department of Public Works, Washington Suburban Sanitary Commission, Fairfax County Water Authority, Virginia Beach Public Utilities, and Howard County Bureau of Utilities.
Source: Respective authorities' websites as well as contact people from each authority.
Note that Operating Revenue and Personnel Expenditures are specific to Water and Sewer functions within each authority.

The following chart includes the key performance indicators, based on the information above.

Local Entities	Overtime Costs per Employee	Overtime Expenditures as a Percentage of Revenue	Overtime Expenditures as a Percentage of Personnel Expenditures	# Customers per Employee
DC Water and Sewer Authority	$6,731	1.59%	6.94%	578
Baltimore Department of Public Works	$4,323	2.48%	7.67%	206
Washington Suburban Sanitary Commission	$4,693	1.15%	3.78%	301
Fairfax County Water Authority	$6,745	1.57%	5.24%	662
Virginia Beach Public Utilities	$3,082	.83%	4.44%	637
Howard County Bureau of Utilities	$4,870	1.31%	6.69%	422
Benchmark[1]	$5,074	1.49%	5.79%	468

[1]Benchmark based on the aggregate of DC Water and Sewer Authority, Baltimore Department of Public Works, Washington Suburban Sanitary Commission, Fairfax County Water Authority, Virginia Beach Public Utilities, and Howard County Bureau of Utilities.

19

Overtime
Internal Audit Report
Issued: January 2016

DETAILED OBSERVATIONS

Overtime Internal Audit		
1. **Overtime Justification and Approval Process**	**Recommendation**	**Management's Action Plan**
Observation Rating: High		
Upon review and inquiry of department-specific procedures, we identified that there is not a consistent process for documenting support or justification for overtime hours worked. Additionally, there is not a consistent review process to verify that overtime hours in DayForce, the timekeeping system, were actually worked and reconciled to supporting documentation prior to timesheet approval. While some departments have established a justification and review process, there is currently not an Authority-wide procedure on what must be maintained to support overtime worked. Of the departments in scope, three out of the five utilize an overtime justification form or a daily overtime summary. These forms are used to document the hours the employee worked, what caused the need for overtime, approval of the Foreman or Manager, and, if needed, the associated work order number. One out of the five departments did not utilize forms, but documented justification and related work order numbers in the "Manager Comments" field in DayForce. One of the five departments did not have a method of documenting overtime justification. Additionally, we noted that not all departments have a review process to ensure that overtime in DayForce is accurate and agrees to the supporting documentation during timesheet approval process. Though some of the departments utilize an overtime justification form, these forms are not always referenced when approving time. For three of the five departments interviewed, a reconciliation may occur by the timekeeper, but not the individual approving the time. Without a consistent Authority-wide procedure, documentation may not exist to support the overtime expenditures. Additionally, without a formal review process, overtime can go over budget or be inaccurately reported.	We recommend that all Departments authority-wide implement a consistent procedure to document overtime justification and a procedure to reconcile justification in DayForce to ensure that overtime expenditures are accurate and supported. Some Departments have established good practices that could be applied Authority-wide, such as: - Overtime justification forms that document the hours worked and associated work order or project that supports the overtime; - Reconciliation of overtime justification forms to hours in DayForce, which are provided to the timesheet approvers for review and validation; - Update "Manager Comments" in DayForce that summarizes why OT hours were needed or references a work order or project number.	**Response:** Management agrees with the recommendation, and recommendation will be implemented in two phases. First, departments not following a process will adopt the internal best practice as an interim measure. Second, we will develop a standardized process authority-wide and implement it with sufficient internal controls. **Responsible Party:** AGM's, CIO, CE, COO **Target Date:** - Adoption of internal best practice for OT - January 30, 2016 - Unified best practice – March 1, 2016

20

Overtime
Internal Audit Report
Issued: January 2016

dc water is life

DETAILED OBSERVATIONS (CONTINUED)

Overtime Internal Audit			
2.	**Documentation of Overtime Distribution**	**Recommendation**	**Management's Action Plan**
	Observation Rating: High		
	Per Article 41, Administration of Overtime, of the NAGE Union Agreement, the AFSCME Local 2091 Working Conditions Agreement, AFGE 631 Working Conditions Agreement, and the AFGE 2553 Working Conditions Agreement, "Overtime work shall be equally distributed among employees and appropriate, specific arrangements for the implementation of this concept shall be agreed to at Union-Management Cooperation Meetings." The current process for assigning overtime in accordance with the agreements has not resulted in any employee grievances or inquiries from the Unions. The procedures in place are manually performed, and heavily reliant on documenting the distribution trail. Upon review and inquiry of department-specific procedures, we noted the procedures and documentation maintained by individual departments for tracking the equal distribution of overtime varies by department and is not standardized. Of the departments in scope, two of the five departments utilized an overtime log to evidence that overtime has been offered to the qualified employees and that the employee either accepted or rejected the overtime offer. Three of the five departments had established an overtime schedule or rotation process, evidenced either by handwritten notes or overtime justification forms. However, the rotation schedule did not always evidence if an employee rejected the overtime or reasons for changes in schedule. Non-compliance with Union agreements could result in employee grievance and arbitration.	Management should coordinate with the Labor Relations Manager to determine if specific arrangements and requirements for documenting the distribution of overtime were agreed upon at the Union-Management Cooperation Meetings. The Authority should establish minimum requirements for performing and documenting the overtime allocation. Where possible, the Payroll Department should automate requirements through the DayForce Time and Attendance module.	**Response:** Those departments that do not have an OT call-out procedure will adopt internal best practice as an interim remedy. The current call out practice, seems to be acceptable to both, union and management. However, we will review adopt a unified authority wide OT call-out procedure. **Responsible Party:** AGM's, CE, CoS, CIO, COO **Target Date:** March 1, 2016

21

RSM

Overtime
Internal Audit Report
Issued: January 2016

DETAILED OBSERVATIONS (CONTINUED)

Overtime Internal Audit			
3.	**Management Reporting, Evaluation and Enforcement of Overtime Budget**	**Recommendation**	**Management's Action Plan**
	Observation Rating: Moderate		
	On a quarterly basis, the Budget Department provides all Department Heads a report showing Personnel budgeted expenditures versus year-to-date actual expenditures. The report indicates the percentage of the budget that has been used to-date by department for regular pay, overtime and benefits. For departments that have exceeded the anticipated overtime budget (calculated by the percentage of payroll processed compared to overtime budget), the Budget Department requests an explanation. Upon review of the overtime reports and testing of department responses, we noted the following: • For one of four departments in scope that exceeded the anticipated overtime budget, a response was not provided to the Budget Department. There is not a formal review and approval process for explanation of variances in the budget versus actual reports. • Overtime budgets are based on annual totals and analyzed both quarterly and monthly for the percentage of budget that has been utilized compared to the percentage of payroll expenditures that have been processed. Though sufficient monitoring of the budget is occurring, seasonality is not considered when requesting explanation for variances. For instance, some departments are impacted greater during the first two quarters of the fiscal year due to cold temperatures and increased water main breaks, snow removal, etc. These departments may always exceed the anticipated overtime budget due to these factors. Reference Appendix B for graphs that show seasonality by Department	In order to improve upon the existing monitoring and reporting requirements for overtime, the Budget Department in coordination with the departments should: 1. Require Department Heads to provide explanations for exceeding the overtime budget. Establish an escalation process for those that do not respond. 2. At a department-by-department basis, analyze past year trends and determine if seasonality can be utilized to establish a better benchmark than percentage of payroll expenditures processed. 3. Determine if scheduled overtime could be identified as a percentage of the budget by department. An Annual Budgeting and Planning internal audit is on the approved FY 2016 audit plan. We will conduct further assessment of the budgeting process during this review.	**Response:** Management takes seriously the need to appropriately account for overtime and agrees that developing the right budgeting process and budgetary controls are the first order of the business. In order to achieve that the management will establish unified overtime codes, enabling proper tracking and management through better attributed data. Management will establish distributed budgetary controls at the appropriate level so effective management of OT is assured. Management agrees with the recommendations and will ensure department heads review past trends and identify deviation from expected patterns. **Responsible Party:** AGM's, CE, CFO, COO **Target Date:** March 1, 2016

22

Overtime
Internal Audit Report
Issued: January 2016

DETAILED OBSERVATIONS (CONTINUED)

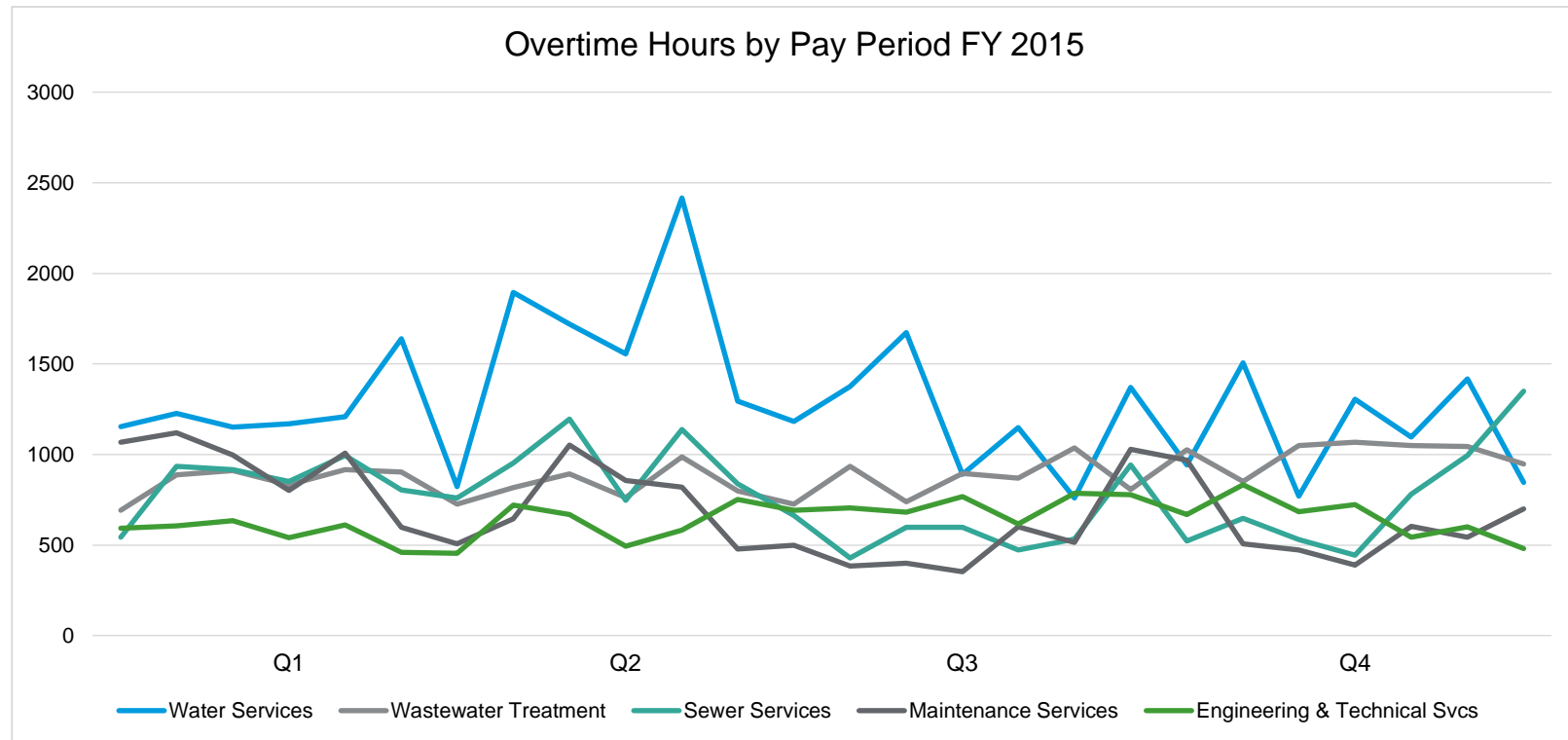| Overtime Internal Audit			
3.	**Management Reporting, Evaluation and Enforcement of Overtime Budget - continued**	**Recommendation**	**Management's Action Plan**
	Observation Rating: Moderate		
	• The report did not account for scheduled overtime versus unplanned overtime. DC Water is reimbursed by the District of Columbia for scheduled overtime, such as planned events like the inauguration, which impacts the overall budget. • Though the overall Personnel services expenditures have not exceeded the budget in the past few fiscal years, the Authority continues to exceed the overtime budget. Though there was improvement in FY 2015, the departments may not have adequate funds due to vacancies, aging infrastructure and other root causes identified. Without proper review of the overtime budget, evaluation of departmental differences and explanation for variances, the Departments are not held accountable for potentially excessive overtime use.		

23

Overtime
Internal Audit Report
Issued: January 2016

APPENDIX A – RATING DEFINITIONS

Observation Risk Rating Definitions	
Rating	**Definition**
Low	Observation presents a low risk (i.e., impact on financial statements, internal control environment or business operations) to the organization for the topic reviewed and/or is of low importance to business success/achievement of goals. Action should be taken within 12 months (if related to external financial reporting, must mitigate financial risk within two months unless otherwise agreed upon).
Moderate	Observation presents a moderate risk (i.e., impact on financial statements, internal control environment or business operations) to the organization for the topic reviewed and/or is of moderate importance to business success/achievement of goals. Action should be taken within nine months (if related to external financial reporting, must mitigate financial risk within two months).
High	Observation presents a high risk (i.e., impact on financial statements, internal control environment or business operations) to the organization for the topic reviewed and/or is of high importance to business success/achievement of goals. Action should be taken immediately, but in no case should implementation exceed six months (if related to external financial reporting, must mitigate financial risk within two months).

24

Overtime
Internal Audit Report
Issued: January 2016

APPENDIX B – SEASONALITY OF WORK

The graphs in this appendix illustrate the seasonality of overtime work performed. The graph below shows overtime hours worked per quarter in FY 2015 for each of the five high-earning overtime departments we examined. Some departments show a greater trend in seasonal work than others, Water Services being most influenced by the winter months.
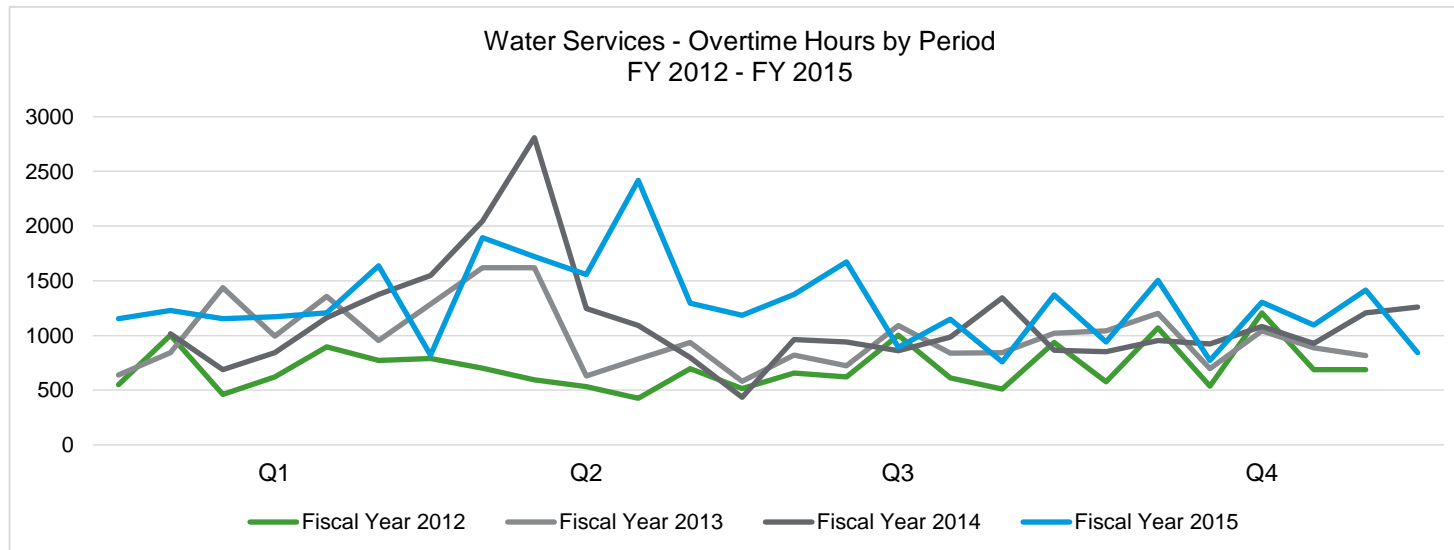

Overtime Hours by Pay Period FY 2015

25

Overtime
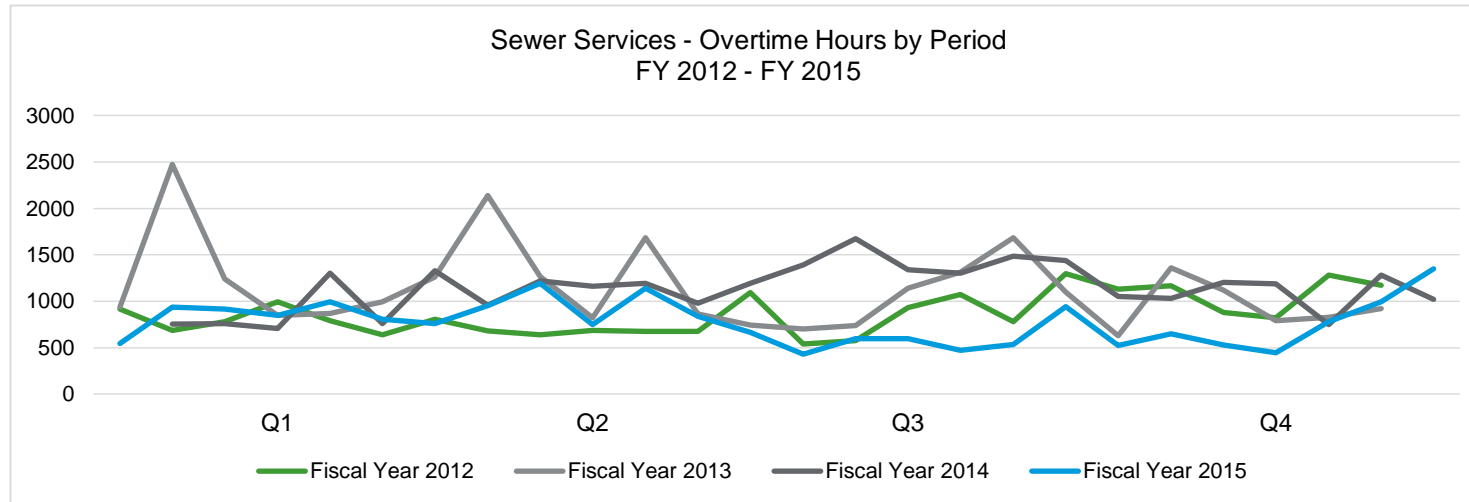Internal Audit Report
Issued: January 2016

APPENDIX B – SEASONALITY OF WORK (CONTINUED)

The following five graphs illustrate seasonality by department across the past four fiscal years. Similar seasonal trends were seen year-over-year. We see a spike in overtime work during the winter periods in most departments, though the Department of Engineering and Technical Services has an increase in the summer months.
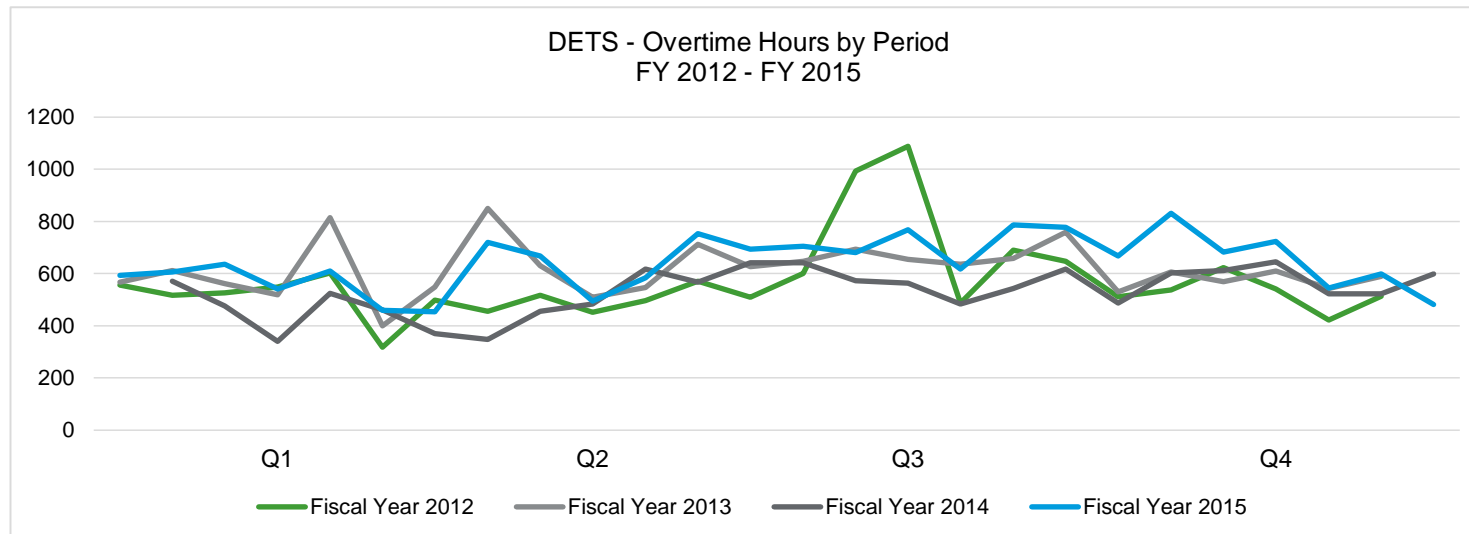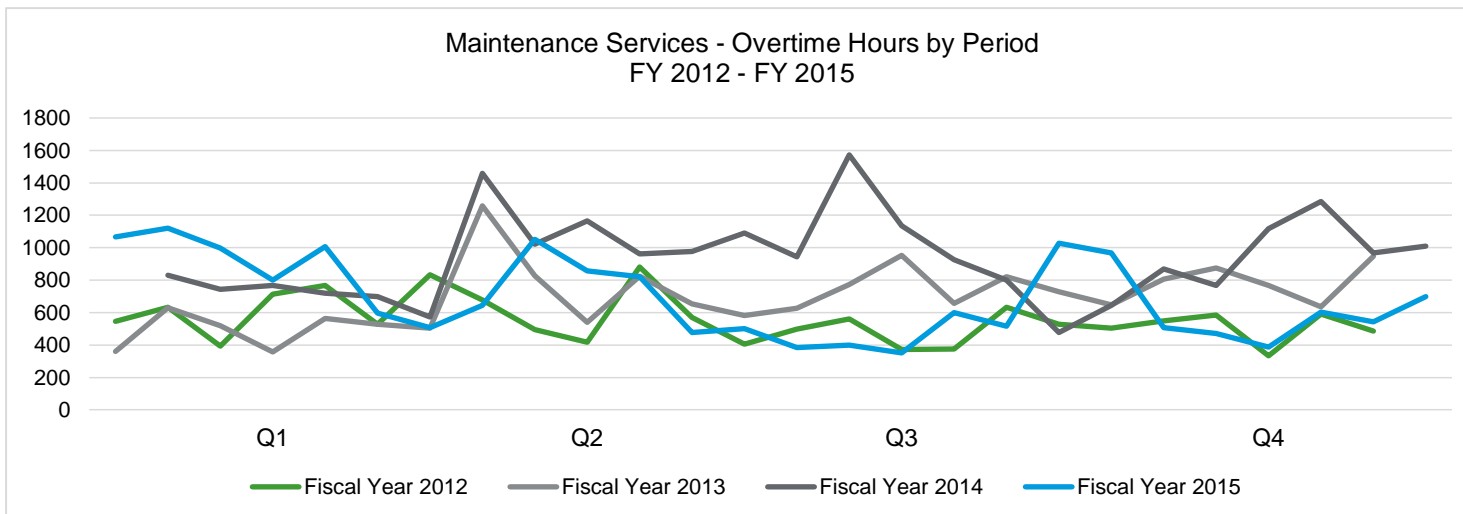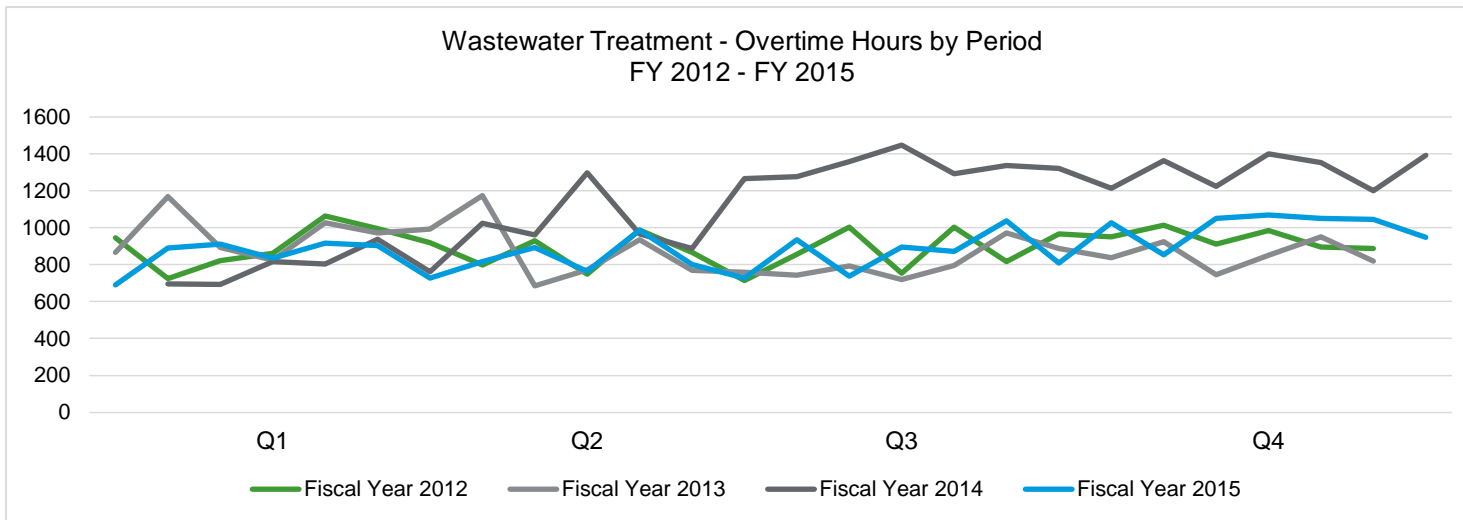

Water Services - Overtime Hours by Period
FY 2012 - FY 2015

26

Overtime
Internal Audit Report
Issued: January 2016

dc water is life

APPENDIX B – SEASONALITY OF WORK (CONTINUED)

Sewer Services - Overtime Hours by Period
FY 2012 - FY 2015

DETS - Overtime Hours by Period
FY 2012 - FY 2015

27

RSM

Overtime
Internal Audit Report
Issued: January 2016

APPENDIX B – SEASONALITY OF WORK (CONTINUED)

Wastewater Treatment - Overtime Hours by Period
FY 2012 - FY 2015

Maintenance Services - Overtime Hours by Period
FY 2012 - FY 2015

28

Overtime
Internal Audit Report
Issued: January 2016

29

RSM US LLP
1501 M St NW
Washington, DC 20005
www.rsmus.com

This document contains general information, may be based on authorities that are subject to change, and is not a substitute for professional advice or services. This document does not constitute audit, tax, consulting, business, financial, investment, legal or other professional advice, and you should consult a qualified professional advisor before taking any action based on the information herein. RSM US LLP, its affiliates and related entities are not responsible for any loss resulting from or relating to reliance on this document by any person.

RSM US LLP is a limited liability partnership and the U.S. member firm of RSM International, a global network of independent audit, tax and consulting firms. The member firms of RSM International collaborate to provide services to global clients, but are separate and distinct legal entities that cannot obligate each other. Each member firm is responsible only for its own acts and omissions, and not those of any other party. Visit rsmus.com/aboutus for more information regarding RSM US LLP and RSM International.

RSM® and the RSM logo are registered trademarks of RSM International Association. The power of being understood® is a registered trademark of RSM US LLP.

RSM