

### DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

#### **Board of Directors**

Audit Committee
Thursday, October 26, 2017
9:30 a.m.

1.	Call to Order	Nicholas A. Majett, Chairperson
2.	Internal Audit Update  A. Internal Audit Plan Status Update  B. Status Update on Prior Audit Findings  C. Contract Monitoring and Compliance Part I and Part II  D. Entity Level Assessment  E. Materials Management – Operations and Inventory  F. Hotline Update  G. FY 2018 Proposed Internal Audit Plan  H. FY 2017 Internal Audit Accomplishments	Dan Whelan, RSM, Auditor General
3.	Executive Session*	Nicholas A. Majett, Chairperson
4.	Adjournment	Nicholas A. Majett, Chairperson

<sup>\*</sup> 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)(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

### **Audit Committee Meeting**

October 26, 2017



### Agenda

- FY 2017 Internal Audit Plan Status Update
- Status Update on Prior Audit Findings
  - COR/COTR Training Update
- Report on Completed Audits:
  - Contract Monitoring and Compliance Part I and Part II
  - Entity Level Assessment
  - Materials Management Operations and Inventory
- Hotline Update
- FY 2018 Proposed Internal Audit Plan (and Risk Assessment Process)
- FY 2017 Internal Audit Accomplishments
- Executive Session



### FY 2017 Internal Audit Status Update

Audit	Status
FY 2017	
Department of Maintenance Services Work Order Management (Blue Plains)	Report Issued
Human Resource / Employee Privacy Review	Report Issued (executive session)
Purchasing Card (P-Card)	Report Issued
Automated Meter Reading Implementation	Progress Report(s) Issued
Intermunicipal Agreement	Report Issued
Contract Monitoring & Compliance Review (Part 1)	Report Issued
Contract Monitoring & Compliance Review (Part 2)	Report Complete
Entity Level Assessment	Report Complete
Vulnerability Management and Platform Technical Audit (Windows/UNIX)	Report Complete (executive session)
Materials Management - Operations and Inventory	Report Complete
Construction Plan Review and Permitting	Reporting In Process
Fleet – Accident and Incident Reporting (newly added)	Fieldwork In Process
IT Risk Management & Compliance	Postponed to FY18
Employee Recruitment and On-Boarding	Postponed to FY18
Remediation Follow Up Procedures	On-going
Hotline Management	On-going



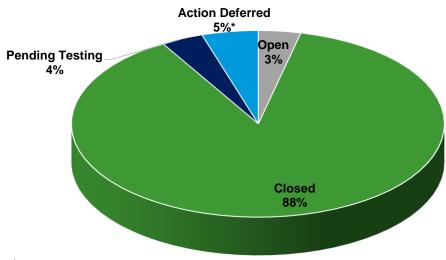
### FY 2017 Audit Plan Modifications

Audit	Modification
Employee Recruitment & On-Boarding	Postponed project to Q1 of FY 2018 due to re-organization, new processes and new process owners.
IT Risk Management & Compliance	Postponed project to Q1 to allow management to address the IT/governance remediation actions.
Fleet – Accident and Incident Reporting	Project added in place of Employee Recruitment & On-Boarding.
Vulnerability Management Review and Platform Technical Audit (Windows/UNIX)	These two projects have been combined, as many of the people, processes, and technologies overlap. This has no effect on original objectives and budget.



### Status Update on Prior Audit Findings

	Poport		<b>Corrective Actions</b>		
Audit Report/Subject	Report Issue Date	Total	Open	Closed	Pending Testing
Prior to FY	2015 Audit F	indings			
Organizational Policies & Procedures	02/23/2010	1	0	1	0
Safety Program Training & Compliance	10/07/2010	1	0	0	0
Human Capital Management	11/29/2011	1	0	0	0
Maintenance Services	04/18/2012	2	0	0	2
Fleet Management	04/17/2013	1	0	0	0
Water Services - Distribution Maintenance Branch	10/28/2013	1	1	0	0
Disposal of Assets	02/18/2014	1	0	0	0
Warehouse Operations	09/15/2014	1	0	0	1
GIS Mapping	06/23/2014	2	2	0	0
	Total	11	3	1	3



\*There are 4 action deferred items . All are policies pending union approval.

This pie chart represents the status of the 82 prior audit findings that RSM US LLP inherited October 2015.

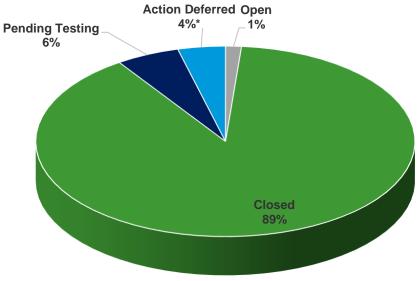


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### Status Update on Prior Audit Findings (continued)

	Poport		Corrective	e Actions	
Audit Report/Subject	Report Issue Date	Total	Open	Closed	Pending Testing
FY 201	15 Audit Findi	ngs			
Intellectual Property Program Assessment	01/08/2015	5	0	3	1
IT Policy and Procedure	01/21/2015	10	0	9	0
Timekeeping Audit	04/08/2015	4	0	4	0
Network Security Assessment	04/16/2015	26	1	25	0
Procurement – Pre-Award, Selection and Award	05/18/0215	2	0	2	0
SCADA / PCS Review	08/28/2015	21	0	19	1
IT Vendor Management	12/21/2015	6	0	4	2
	Total	74	1	66	4

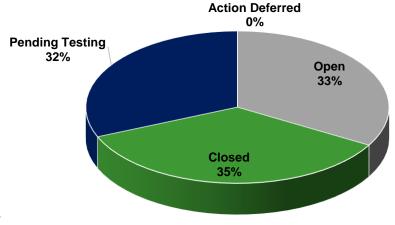


\*There are 3 action deferred items . All are policies pending union approval.



### Status Update on Prior Audit Findings (continued)

	Poport		Corrective	e Actions	
Audit Report/Subject	Report Issue Date	Total	Open	Closed	Pending Testing
FY 201	l6 Audit Findi	ngs			
Overtime Audit and Analysis	01/21/2016	3	3	0	0
Contract Compliance and Monitoring Part I	04/28/2016	4	1	3	0
Contract Compliance and Monitoring Part II	07/28/2016	11	4	7	0
ROCIP Savings Analysis	07/28/2016	4	0	3	1
Training, Licensing & Certification	07/28/2016	7	1	4	2
Blue Horizon 2020 Strategic Plan Monitoring	11/18/2016	3	3	0	0
Incident Management and Response Review	11/18/2016	3	2	1	0
Engineering – Contractor Management Phase II	2/14/2017	4	0	0	4
Billing & Collection	2/14/2017	1	1	0	0
Business Development Plan	2/14/2017	10	1	0	9
Annual Budgeting and Planning	4/27/2017	1	1	0	0
	Total	51	17	18	16





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### **COTR Training Update**

- Internal Audit presented to the Audit Committee on July 28, 2016 the findings from the Contract Monitoring & Compliance Audit Part II.
- One of the high risk findings was a lack of COR/COTR training. The Audit Committee requested a periodic update on the status of management's action plan.

Authority-Wide Observations	Risk Rating
1. COR/COTR Training	High

Management Action Plan: Department of Procurement will implement several steps to COR/COTR training and compliance monitoring:

<u>Phase I:</u> Procurement jointly with each COR/COTR for all active contracts will review and develop a contract compliance monitoring checklist for each of 160 active Goods and Services contracts. The items in the checklist will consist of key deliverables, milestones, key vendor performance, and key contractual obligations that should be actively monitored. Then COR/COTR will be responsible for monitoring the items in the checklist and submit a report to Procurement at the beginning of each quarter.

<u>Phase II:</u> Procurement along with the Office of Chief Operating Officer (OCCO), Learning and Development (L&D), and Information Technologies (IT) will implement Vendor Performance Management Training programs for COR/COTR.

<u>Phase III:</u> Procurement will source and implement a Vendor Performance Management application (an added module to the eSourcing application that Procurement will source and implement in early FY2017) to automate the contract compliance and vendor performance monitoring and reporting.



### **COTR Training Plan**

Phase I	COTR Update for all active contracts. Implement initial COTR Vendor Report.	<ul> <li>Completed the updating COTR list and issued new COTR Designation Letters for all 160 active contracts.</li> <li>100% complete on 1<sup>st</sup> COTR Vendor Report. Vendor Reports will be automated with the new application (reference phase III).</li> </ul>
Phase II	Provide COTR Training.	COTR training was held on 07/11/17, 07/18/17, 08/08/17 and 08/17/17.
Phase III	Implement automated Vendor Performance Management and Reporting application.	<ul> <li>Selected a vendor performance management application on 03/31/17.</li> <li>Implementation is in-progress with a target go-live in October 2017.</li> <li>Training COTRs in the use of the new application is planned for November 2017.</li> </ul>



### Contract Monitoring & Compliance Part I and Part II

The scope of the Contract Monitoring and Compliance Part I and Part II Internal Audit included the following:

- Determine contractor compliance with specific contract terms and provisions, as applicable;
- Identify the monitoring controls and evaluation process in place for these contracts, including follow-up of remediation of underperformance;
- Review invoice and change order approval processes, and
- Identify process improvement opportunities and recommend internal control enhancements to improve the contractor management process.

Internal Audit selected a sample of three contracts from various departments to evaluate contract monitoring and compliance. The Authority enters into many contracts each year, as illustrated by the contractual services expenditures in the following table:

Contractual Services Operating Expenditures <sup>1</sup>			
FY 2014 Actual	\$68,172,000		
FY 2015 Actual	\$66,241,000		
FY 2016 Actual	\$74,086,000		
FY 2017 Approved	\$82,760,000		
FY 2018 Approved	\$79,354,000		

<sup>1</sup>Source: DC Water Approved FY 2018 Operating Budget; FY 2016 Consolidated Annual Financial Report



## Contract Monitoring & Compliance Part I (continued) Issued July 2017

### Contract # 15-PR-DWT-02: Department of Wastewater Treatment, Industrial Cleaning Services

Charmay, Inc. dba ServiceMaster of Alexandria (ServiceMaster) was awarded the contract to perform industrial cleaning services for DC Water. The industrial cleaning services include power washing; cleaning of doors, windows, and piping; removing debris, dirt, scum, grease, solids, trash, and other cleaning services at the DC Water's Blue Plains Advanced Wastewater Treatment Plant.

Contract Overview				
Contractor	Charmay, Inc. dba ServiceMaster of Alexandria			
Award Date	October 19, 2015			
Original Contract Period	October 19, 2015 – October 18, 2016			
<b>Contract Award</b>	\$595,039.38			
Type of Contract	Type of Contract Firm fixed price, four (4) one (1) year option periods			
COR/COTR Specialist, Wastewater Treatment OS				

During the base year, DC Water had a contract modification that added the Primary Screening and Grit Conveyance Building No.1 (West) and Primary Screening and Grit Conveyance Building No.2 (East) to the scope of the contract. There are currently 54 locations covered in the scope of the contract, for which ServiceMaster are required to clean.

Based on the internal audit procedure performed, we did not identify any high risk observations. Please refer to Contract Monitoring and Compliance Part I Internal Audit Report for moderate and low risk observations.



#### Contract # 14-PR-OGC-01-AF: Office of the General Counsel, Environmental Law

Beveridge & Diamond, P.C. provides outside counsel for environmental legal services upon request to DC Water. McGuireWoods LLP was also awarded a contract (Contract #14-PR-OGC-01-AF) through the same RFP for environmental legal services, and the contract award amount illustrated below represents the total combined contract value for the two firms for the contract base period. However, only the Beveridge & Diamond contract is in scope for this contract compliance audit.

Contract Overview				
Contractor Beveridge & Diamond, P.C.				
Award Date	July 1, 2015			
Original Contract Period	July 1, 2015 – June 30, 2018			
Contract Award \$4,500,000 (\$1,500,000 per year per Contractor				
Type of Contract Legal Services Agreement – fee for service				
COR/COTR	Deputy General Counsel			

There have been two contract modifications during the life of this contract. The first occurred on April 7, 2016 for additional funding of \$1,544,000. The second modification occurred July 1, 2016 for additional funding of \$1,000,000. Both contract modifications were approved by DC Water's Board of Directors.

During FY 2015 and FY 2016, actual OGC contractual services expenditures exceeded the approved OGC contractual services budget by 34% and 89% respectively. See table below for OGC contractual services budget and expenditures over five fiscal years.

Office of the General Counsel Budget Requests <sup>1</sup>					
Fiscal Year	Approved Contractual	Actual Contractual Services			
	Services Budget	Expenditure			
FY 2014	\$5,477,000	\$3,566,000			
FY 2015	\$4,078,000	\$5,456,000			
FY 2016	\$3,776,000	\$7,123,000			
FY 2017	\$3,779,000	N/A – fiscal year ongoing			
FY 2018	\$5,236,000	N/A – fiscal year not started			



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# Observation Risk Rating 1. Inappropriate access to legal invoice detail regarding ongoing cases High

**Management Action Plan:** The OGC will direct legal service providers to send a statement of the charges to Accounts Payable and to send the actual invoice to the managing attorney. The OGC anticipates all firms will comply with this direction. Management will coordinate with AP to restrict access to prior invoices.

We are satisfied with management's responses and planned actions and will perform follow-up procedures in FY 2018 to verify remediation.

Please refer to the Contract Monitoring and Compliance Part I Internal Audit Report for an additional moderate risk observation.



#### Contract # 14-PR-DFS-02: Department of Facilities, Small Construction and Renovation Projects

ADP Group, Inc. (ADP) was awarded the contract to perform small construction and renovation projects for DC Water. These small construction and renovation projects have included roof replacements, building/office repairs, electrical feed to new buildings, etc.

	Contract Detail
Contractor	ADP Group, Inc.
Award Date	5/8/2014
Original Contract Period	May 5, 2014 – May 7, 2015
Contract Award	\$0
Type of Contract	Indefinite Delivery/Indefinite Quantity, four (4) one (1) year option periods
COR / COTR	Coordinator, Construction/Data Management

DC Water is in Option Year No. 4 of the ADP contract. The contract with ADP is an Indefinite Delivery/Indefinite Quantity (IDIQ) contract. All work performed under the contract between ADP and DC Water must be authorized and funded on a task order basis. Because the contract works on a project by project basis, the original contract award was \$0. Each time ADP is selected for a small construction or renovation project, a task order is created and the contract amount is modified.



Observation	Risk Rating
1. The wrong contract vehicle was utilized (terms and conditions were not appropriate)	High

Management Action Plan: Procurement will issue a solicitation in October 2017 to select a new set of small construction contractors and award them with new IDIQs. In the new IDIQ, Procurement will add the construction industry standard AIA terms and conditions as well as current DC Water safety requirements. AIA construction terms and conditions will contain all proper construction requirements including change order process, indemnification, liquid damage, etc. Current DC Water safety requirements will require contractors to submit necessary safety certification/permits and safety plans before work can begin.

Please refer to the Contract Monitoring and Compliance Part II Internal Audit Report for an additional moderate risk observation.



### **Entity Level Assessment**

The purpose of this review and the overall audit objectives was to assess the effectiveness of the entity-level control structure across the Authority. The audit scope was based on the following objectives:

- Obtain an understanding of how the Authority achieves internal control over the:
  - Effectiveness and efficiency of operations;
  - Reliability of financial reporting;
  - · Compliance with applicable laws and regulations;
- Evaluate Tone-at-the-Top of the Authority with respect to integrity and ethical values;
- Better understand management's philosophy and operating style;
- Assess the effectiveness of the Authority's organizational structure;
- Evaluate the effectiveness of the Authority's monitoring of policies and procedures;
- Determine competencies of key personnel in DC Water's financial reporting process;
- Evaluate the assignment of authority and responsibility at the Authority, and;
- Identify process improvement opportunities and recommend internal control enhancements to improve the overall entity level oversight.



### Entity Level Assessment (continued)

#### **Observations**

**Risk Rating** 

1. Lack of authority-wide formal process for approving updates to policies and procedures

High

**Management Action Plan:** The Authority has been working for an extended period of time to complete a comprehensive update of the employee polices. All policies will be placed online in the form of a virtual handbook that will be accessible for all employees at any time. We expect to launch a communication campaign regarding policies once union negotiations related to the employee personnel policies are completed. We will utilize this communication opportunity to clarify issues regarding policy owners, renewal schedules, and how employees can easily access policies. One third of the policies will be reviewed annually so that each policy is reviewed every 3 years. HCM is in the process of developing a compliance module for employees to reaffirm acknowledgement of particular policies and their location.

### 2. A formal entity-wide risk management program does not exist

High

**Management Action Plan:** DC Water is exploring options to review and address enterprise-wide risk management program, including how to consolidate many distributed risk management functions under one organizational structure.

Please refer to the Entity Level Assessment Internal Audit Report for additional moderate and low risk observations.



### Materials Management – Operations and Inventory

Our procedures were performed in accordance with the internal audit scope and approach set forth in our audit notification letter, dated June 15, 2017, and were limited to those procedures described therein. Our scope included the following:

- Develop an understanding of the materials management operations and inventory processes through review of policies and procedures;
- Understand changes that have been implemented as a result of the asset management and reliability program;
- Review prior audit findings related to materials management and inventory;
- Validate that goods are acquired through the Authority's approved procurement process;
- Assess appropriateness of warehouse operations controls to capture all materials management movement at the Authority;
- Assess the safety and security of warehouses; including:
  - Physical state of warehouses;
  - Physical safeguards of warehouses such as alarm systems and security personnel on hand; and
  - Emergency procedures in place;
- Validate that all materials movements are appropriately recorded within the Authority's Asset Inventory Management system.

Our scope did not include a review of the accounts payable process.



### Materials Management – Operations and Inventory

Observations	Risk Rating
Lack of analysis and documentation of root causes of inventory count variances	High

**Management Action Plan:** For future physical inventory counts, the MM data analyst will review count discrepancies prior to finalizing the count. The investigation will review all IC50 transactions to determine if a transaction did not get properly recorded. All discrepancies for variances of +/- 2% on count or +/- \$75.00 total variance will be investigated. The materials manager will review investigation for implementation of corrective action.

The count sheets utilized during the physical inventory process are standard forms in Lawson. We will need to research to see if standard Lawson forms exist that include the cost information. The reconciliation to include cost information will require additional research.

Please refer to the Materials Management – Operations and Inventory Internal Audit Report for additional moderate risk observations.



### Hotline Update

Last Audit Committee meeting we reported that 7 cases were open; below is activity since the July 2017 Audit Committee meeting:

Hotline Calls	
Calls Received	10
Fraud Claims – 2	
Other - 8	
Cases Closed	8
Cases Currently Open	9

Additionally, NAVEX Global upgraded the online case management system to EthicsPoint.

FY 2017 Hotline calls received:

FY 2017	
Calls Received	30
Fraud Claims	7
Other	23

Total calls by Fiscal Year:

Year	FY 13	FY 14	FY 15	FY 16	FY 17
# of calls	10	20	16	36	30
Action Taken	0	2	7	7	2

Updated hotline analytics will be presented during the January 2018 Audit Committee Meeting.

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### **Internal Audit Process**

Annual Risk Assessment	Audit Plan Development	Audit Execution	Reporting	Monitoring and Follow-up	
<ul> <li>Formalize objectives, scope and approach</li> <li>Define key organization risk factors</li> <li>Conduct an risk assessment (Enterprise and IT)</li> <li>Establish an audit universe</li> <li>Stakeholder communication</li> </ul>	<ul> <li>Refine the risk-based audit plan</li> <li>Co-develop audit objectives</li> <li>Establish high-level scope with process owners</li> <li>Obtain audit committee approval</li> </ul>	<ul> <li>Finalize audit scope and approach</li> <li>Develop audit notification letter and stakeholder alignment</li> <li>Develop process flows and data flow diagrams</li> <li>Perform test of controls</li> </ul>	<ul> <li>Co-develop management actions plans</li> <li>Draft audit reports</li> <li>Conduct internal quality assurance review</li> <li>Finalize and deliver reports</li> <li>Conduct periodic audit committee communications</li> </ul>	<ul> <li>Monitor         management         action plan due         dates</li> <li>Validate through         testing that         management         action plans         were addressed</li> <li>Communicate         and track closure         of action plans</li> </ul>	
On-going Internal Audit Process					



### **Risk Assessment Themes**

Operational Failure

Contract Compliance System Implementations

Affordability Programs

Strategic Planning

Safety

Work Order Management

Cybersecurity

Risk Management



### FY 2018 Proposed Internal Audit Plan

### Follow-up

Hotline Management (ongoing)

Open Action Items - Remediation & Follow Up

### Cycle Audits

Contract Monitoring & Compliance Reviews

Payroll and Timekeeping

### Customer Service

Automated Meter Reading Implementation (Integrated audit with IT MTU Audit)

Integrated Work Order Management (Distribution and Conveyance System, Sewer Services & Water Services)

Vulnerability Assessment and Business Continuity

### Human Capital Management

Employee Recruitment, Selection and On-Boarding

### **Finance**

Affordability Programs

Risk Management

### Information Technology

IT Risk Management & Compliance

Crisis Management / Business Continuity Program

DB/OS Privileged User

CIS Post-Implementation Review (including SDLC)



### FY 2017 Internal Audit Accomplishments

- Revised and implemented an External Communication Plan between Internal Audit, Management and the Audit Committee.
- Assumed responsibility for and conducted a comprehensive review of the prior internal audit findings (prior to FY 2015), reducing the number of open items from 82 to 10 (with 3 observations that will be closed pending testing and 4 that are action deferred observations) - 88% closure rate, through inquiry, testing and categorization of the issues noted.
- Conducted follow-up on the 74 issues identified in the FY 2015 audits, resulting in an 82% closure rate (with 4 observations that will be closed pending testing and 3 action deferred observations).
- Conducted follow-up on the 51 observations identified in the FY 2016 audits, resulting in a 35% closure rate (with 16 observations that will be closed pending testing).
- Established quarterly update meetings with KPMG (external auditors)
- Upgraded our automated, web-based remediation Issue Tracker for the follow-up action items.
- Managed 30 hotline calls and successfully converted the new EthicsPoint Hotline platform.
- Finalized and implemented an Authority-wide hotline protocol to improve the management of the hotline investigation process.
- Concluded an EPA investigation resulting in best practice recommendations including new Standing Operating Procedures (SOP) and release of EPA funding
- Planned and performed 12 Internal Audits or specific project-based reports (and expanded the scope of multiple audits to ensure an adequate review of the control effectiveness of certain process areas)





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RSM Proposed Inter WORKING DRAFT		•		water	المالية المالية
X Required Internal Audit Activity				water	is life
X Proposed Future Audit					
X Audit In Progress					
X Audit Issued X Follow Up In Progress	-				
X Audit Closed				,	
Audit Universe	2015	2016	2017	Proposed 2018	Preliminar 2019
verall Internal Audit Management				2016	2019
Risk Assessment for Audit Plan Development	X				
Update Risk Assessment and Audit Plan Development Quality Control - Board Meetings, Status Reporting	X	X	X	X	X
llow-up and Cycle Audits		^			
Open Action Items - Remediation and Follow-up Procedures Hotline Management	X	X	X	X	X
Blue Horizons - Strategic Plan Monitoring	X	X	^	^	X
Contract Monitoring & Compliance Reviews		X	X	X	X
Payroll and Timekeeping dits by Department and/or Division				X	<u> </u>
Office of the General Manager	1				
Entity-Level Assessment Intellectual Property	×		X		
Organization Policies & Procedures					
Blue Plains (Wastewater Treatment) Maintenance Services					
Maintenance Services - Operations					
Maintenance Services - Work Order Management  Wastewater Treatment - Operations			X		
Chemical Purchasing					
Process Control System (PCS)  Chief Procurement Office	X				
Procurement					
Materials Management - Disposal of Assets  Materials Management - Operations and Inventory			Х		
Procurement Operations					<b>†</b>
Business Development Plan Procurement Pre-Award Selection Process	X	Х			Y.
Purchasing Cards (P-Card Program)			X		
Customer Services Customer Services					
Automatic Meter Reading (AMR) Implementation (Integrated with MTU)			X	Х	
Customer Billing & Collections Retail Rates Pre- and Post-Implementation Monitoring	Х	X			<del>                                     </del>
Distribution and Convenyance Systems				, ,	
Integrated Work Order Management (Sewer Services & Water Services)  Emergency Management				X	
Emergency Management - Mitigation & Response					
Emergency Management - Recovery Vulnerability Assessment and Business Continuity				Х	
Sewer Services					
Integrated Work Order Management (Sewer Services & Water Services) Sewer Services - Construction & Repair				Х	
Sewer Services - Emergency Maintenance					
Utility Services - Drinking Water Integrated Work Order Management (Sewer Services & Water Services)		l		X	
Pumping & Storage Water Leakage Review					
Utility Services - Water Distribution Utility Services - Water Maintenance					
Human Capitol Management and Labor Relations					
Human Capital Management Employee Benefit Plans					
Employee Recruitment, Selection and On-Boarding Human Capital Management - Operations				X	
Training, Certification and Licensing		Х			
Support Services Fleet					
Fleet - Operations					T
Fleet - Accident and Incident Reporting			X		
Occupational Safety and Health OSHA		I			l l
Safety Programs, Training & Compliance					X
Department of Engineering & Technical Services  Long-Term Control Plan					
Clean Rivers Project Management					1
Clean Rivers - Vendor / Contractor Monitoring & Project Administration	Х				
Engineering and Technical Services Engineering - Vendor / Contractor Monitoring & Project Administration	×				
Engineering - Construction Management Phase II		X			
Engineering - Construction Management Phase III Finance			X		
Financial Accounting and Reporting					
Accounts Payable, including Reimburseable Expenses Payroll - General Operations					
Timekeeping	X				
Overtime  Budget, Planning and Analysis	L	Х			L
Annual Budgeting & Planning		Х	.,		
Intermunicipal Agreement (IMA) Treasury, Debt and Risk Management			X		
Affordability Programs				X	
Cash Receipts Investments and Cash Management					1
Risk Management		V		X	
Rolling Owner Controlled Insurance Program (ROCIP) Information Technology		X			
Governance: Planning and Organization: Information Technology - Remediation and Follow-Up	V	×	V	v	V
Vendor Risk Management / Compliance and Monitoring (Shadow IT)	X	X	X	X	Х
Information Security Policy Review IT Risk Management & Compliance	X				
Incident Management & Response Review		X		^	
Human Resource/Employee Privacy Review			X		
Enterprise SDLC Review Enterprise Project Governance Maturity Assessment		Х			<del>                                     </del>
Records Management					X
Crisis Management / Business Continuity Program Vulnerability Management Review			X		
Technical & Operations: Information Security and Application Support:	Y				
Operational Applications ITGC - SCADA Network Penetration Testing (Corp/SCADA/Wifi)	X				<u> </u>
DB/OS Privileged User				X	
Software and Asset Management Help Desk Operations					+
Business & Operating Applications					
GIS System Internal Network & Telecommunications					1
Platform Technical Audit (Windows/UNIX)			X		
Wifi Security Review Mobile Platform Assessment					X
MTU Implementation Review (Integrated with AMR)			X		^
CIS Post-Implementation Review (Includes SDLC)  General Counsel				X	
Legal Operations - Case Management					Х
	1	1	-	ı	
Regulatory Compliance Monitoring ntingency and Requested Audits and Projects					



# Internal Audit Report Contract Monitoring & Compliance Audit Part I

July 2017



Internal Audit Report Issued: July 2017



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### TRANSMITTAL LETTER

July 2017

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

Pursuant to the approved 2017 internal audit plan for the District of Columbia Water and Sewer Authority ("DC Water" or the "Authority"), we hereby present our assessment of Contract Monitoring & Compliance Part I. We will be presenting this report to the Audit Committee of DC Water at the next scheduled meeting on July 27, 2017. 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 contract monitoring and compliance process.
Background	This provides an overview of the Contract Monitoring & Compliance 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.
Contract Background and Detailed Observations	For each contract selected, we have provided an overview of the contract, including general statistics and financial information, as well as the observations noted during our work. Recommended actions and managements actions plans are also included.

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

Respectfully Submitted,

DC Water Internal Audit



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#### **EXECUTIVE SUMMARY**

#### **Background**

Internal Audit selected a sample of three contracts or service agreements from various departments of operations to test for compliance with applicable terms and conditions.

This report is Part I of the Contract Monitoring & Compliance Audit, and contains two of the three contracts selected by Internal Audit. Part II of this audit contains the remaining contract and will be issued at a later date.

### Contract # 15-PR-DWT-02: Department of Wastewater Treatment, Industrial Cleaning Services

Charmay, Inc. dba ServiceMaster of Alexandria (ServiceMaster) provides industrial cleaning services, such as power washing; cleaning of doors, windows, and piping; removing debris, dirt, scum, grease, solids, trash, and other cleaning services at the DC Water's Blue Plains Advanced Wastewater Treatment Plant. Under the industrial cleaning services contract, there are 54 locations at the Blue Plains that ServiceMaster is required to clean.

### Contract # 14-PR-OGC-01-AA: Office of the General Counsel, Environmental Law

Beveridge & Diamond, P.C. (B&D) is a law firm that provides environmental legal services to DC Water. This includes representing and defending DC Water in claims and negotiations involving environmental matters, defending and representing DC Water during both informal and formal alternative dispute resolution proceedings and other hearings, and provide informal opinions and discuss issues with DC Water personnel and provide recommendations regarding investigation, liability exposure, and overall case administration or matters, as needed.

### **Objective and Scope**

Our procedures were performed in accordance with the internal audit scope and approach set forth in our audit notification letter, dated April 12, 2017, and were limited to those procedures described therein.

Our scope included the following:

- Determine contractor compliance with specific contract terms and provisions, as applicable;
- Identify the monitoring controls and evaluation process in place for these contracts, including follow-up of remediation of underperformance:
- · Review invoice and change order approval processes, and
- Identify process improvement opportunities and recommend internal control enhancements to improve the contractor management process.

Fieldwork was performed April 2017 through June 2017.

#### **Overall Summary**

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	
Total Observations	1	2	2	

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



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### **EXECUTIVE SUMMARY (CONTINUED)**

### **Ratings and Conclusions**

The following is a summary of all observations noted in the areas reviewed. Definitions of the rating scales are included in the Appendices.

Observations and Improvement Opportunities	
Charmay Inc. dba ServiceMaster of Alexandria – Department of Wastewater Treatment	
Observation	Rating
1. Invoice Review Process	Moderate
Per inspection of the invoice review process, it was identified that not all invoices were approved without proper review. Not all invoices sent by ServiceMaster included breakdowns of materials, equipment, and supplies being charged to DC Water. By not properly reviewing the costs related to the invoice, DC Water runs the risk of overpaying for contracted services and materials.	
2. CONTRACT REQUIREMENTS	Low
The executed contract between DC Water and ServiceMaster reference the Request for Proposal (RFP) for contractual requirements. It was identified that processes currently being utilized between DC Water and ServiceMaster do not specifically follow the language specified in the RFP. While current processes have been deemed sufficient, DC Water runs the risk of being unable to enforce the current contract requirements.	
3. WEEKLY INSPECTIONS	Low
Currently, the COTR and on-site Supervisor for ServiceMaster perform weekly inspections of locations cleaned by ServiceMaster as required by the RFP. However, the COTR only documents one inspection per month. Due to a lack of consistent documentation surrounding inspections, DC Water runs the risk of inadequately capturing contractor performance.	



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### **EXECUTIVE SUMMARY (CONTINUED)**

### **Ratings and Conclusions (continued)**

Beveridge & Diamond – Office of the General Counsel		
Observations	Rating	
1. Access to Information Regarding Ongoing Cases	High	
Detailed Beveridge and Diamond invoices and support are posted to ImageNow, a document repository, by DC Water's Accounts Payable Department. These invoices may include confidential and legally privileged information regarding on-going cases. When full invoice support is posted to DC Water's system, many personnel outside of the OGC may access the files, which include strategy regarding ongoing legal cases.		
2. Invoicing and Payment	Moderate	
Per our testing of invoice approval, the Office of the General Counsel (OGC) did not remit payment of the Contractor's invoices within 30 days of receiving the invoice in accordance with the Service Agreement. For 4 of the 15 invoices selected for testing, the OGC did not maintain record of when the invoice was received.		



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### **BACKGROUND, OBJECTIVES, AND APPROACH**

#### **Background**

#### Overview

Internal Audit selected a sample of three contracts or service agreements from various departments of operations to test for contract monitoring and compliance with applicable terms and conditions. A contract with the Department of Wastewater Treatment and a service level agreement with the Office of the General Counsel will be issued during Part I of the internal audit. The internal audit of the third contract will be issued as Part II during the October Audit Committee meeting.

The designated Contracting Officer Representative (COR) and/or Contracting Officer's Technical Representative (COTR) are responsible for ensuring goods and services contract compliance at DC Water and Sewer Authority ("DC Water" or the "Authority"). The COR shall be responsible for all administration of the contract. The COTR is the technical expert for the contract and acts as a liaison between the Contractor and the Contracting Officer. The Authority enters into many contracts each year, as illustrated by the contractual services operating expenditures and budgets in the following table:

ı	Contractual Services Operating Expenditures <sup>1</sup>		
I	FY 2014 Actual	\$68,172,000	
I	FY 2015 Actual	\$66,241,000	
I	FY 2016 Actual	\$74,086,000	
I	FY 2017 Approved	\$82,760,000	
I	FY 2018 Approved	\$79,354,000	

<sup>1</sup>Source: DC Water Approved FY 2018 Operating Budget;

FY 2016 Consolidated Annual Financial Report

#### **Objectives**

The objective of the Contract Monitoring & Compliance Audit was to obtain an understanding of how contracts are managed and assess whether the system of internal controls are adequate and appropriate, at the department level and authority-wide, for promoting and encouraging the achievement of management's objectives in the categories of compliance. The audit scope was based on the following objectives:

- Determine Contractor compliance with specific contract terms and provisions, as applicable;
- Identify the monitoring controls and evaluation process in place for these contracts, including follow-up of remediation of underperformance;
- Review invoice and change order approval process; and
- Identify process improvement opportunities and recommend internal control enhancements to improve the overall Contractor management process.

Contracts managed by the Department of Engineering and Technical Services (DETS) are outside the scope of this audit, as those are being included in the Engineering – Contractor Management internal audits.



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### **OVERVIEW, OBJECTIVES, AND APPROACH (CONTINUED)**

#### Approach

Our audit approach consisted of the following phases:

#### **Understanding of the Process**

The purpose of this phase was to gain an understanding of DC Water's contract monitoring and compliance process for goods and services contracts. We submitted requests to the CORs and/or COTRs to gain a better understanding of the contract terms and determine how the contract is monitored. Internal Audit conducted walkthroughs with the CORs and COTRs of the contracts selected, the Contractor's Project Manager, and other employees within the Department, as needed.

#### Detailed Testing

The purpose of this phase was to test compliance and internal controls based on our understanding of the contract terms and conditions. This phase included the execution of applicable tests of compliance with DC Water contracts. The time period covered by testing was October 1, 2015 through March 31, 2017.

For all contracts selected, we conducted the following testing:

- Performed a review of the invoice submission, approval and payment process to verify:
  - o Invoices are submitted on a monthly basis and reflect the Contract # and PO #.
  - o Invoices define the period of service provided and describe the services provided.
  - o Invoices were paid by DC Water within 30 days.
- Reviewed the Contractor's Safety Plan, if applicable, to ensure it met all contractual requirements and was properly approved.
- Verified that DC Water maintained a current Certificate of Insurance for the Contractor, if applicable.

We also conducted testing of the following contracts to verify that the Contractor was meeting specific contractual requirements:

#### Contract # 15-PR-DWT-02 (Charmay Inc. dba ServiceMaster of Alexandria): Department of Wastewater Treatment, Industrial Cleaning Services

- Performed a review of the weekly inspection process to gain an understanding of what the COTR is inspecting and how inspections are being documented. Reviewed the scheduling process between DC Water and ServiceMaster to gain an understanding of how cleaning assignments are established, the difference between Schedule A, B, and C cleanings, and the timeliness for establishing cleaning assignments for each level of cleaning.
- Reviewed the reporting process to validate whether ServiceMaster is submitting required documentation timely.

#### Contract # 14-PR-OGC-01-AA (Beveridge & Diamond): Office of the General Counsel, Environmental Law

- Compared Service Agreement terms to current contract monitoring process.
- Reviewed purchase order and contract modifications executed throughout the testing period.

#### Reporting

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



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# **CONTRACT BACKGROUND AND DETAILED OBSERVATIONS (CONTINUED)**

Charmay, Inc. dba ServiceMaster of Alexandria

**Department of Wastewater Treatment, Industrial Cleaning Services** 



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# **CONTRACT BACKGROUND AND DETAILED OBSERVATIONS (CONTINUED)**

## **Contract Background**

#### Contract # 15-PR-DWT-02

Charmay, Inc. dba ServiceMaster of Alexandria (ServiceMaster) was awarded the contract to perform industrial cleaning services for DC Water. The industrial cleaning services include power washing; cleaning of doors, windows, and piping; removing debris, dirt, scum, grease, solids, trash, and other cleaning services at the DC Water's Blue Plains Advanced Wastewater Treatment Plant.

Contract Overview			
Contractor Charmay, Inc. dba ServiceMaster of Alexandria			
Award Date	rd Date October 19, 2015		
Original Contract Period October 19, 2015 – October 18, 2016			
Contract Award \$595,039.38			
Type of Contract Firm fixed price, four (4) one (1) year option periods			
COR/COTR Specialist, Wastewater Treatment OS			

During the base year, DC Water had a contract modification that added the Primary Screening and Grit Conveyance Building No.1 (West) and Primary Screening and Grit Conveyance Building No.2 (East) to the scope of the contract. There are currently 54 locations covered in the scope of the contract, for which ServiceMaster are required to clean.

#### Statistics and Financial Information

DC Water is currently exercising its option to extend the contract in Option Year No. 1. The ServiceMaster contract makes up approximately 6.37% of the Department of Wastewater Treatment's total contractual services operating expenditures budget for FY 2017, as illustrated below.

Approved FY 2016 Department of Wastewater Treatment Operating Expenditures Budget		
ServiceMaster budget for Option Year 1 <sup>2</sup>	\$612,915	
Total operating expenditures budget - Department of Wastewater Treatment <sup>3</sup>	\$80,466,000	
ServiceMaster budget % of total Department operating expenditures budget	0.76%	
Total contractual services budget – Department of Wastewater Treatment <sup>3</sup>	\$9,619,000	
ServiceMaster budget % of total Department contractual services budget	6.37%	

<sup>&</sup>lt;sup>2</sup> Source: ServiceMaster Option Year 1 Price Schedule



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<sup>&</sup>lt;sup>3</sup> Source: DC Water Approved FY 2017 Operating Budgets

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# **CONTRACT BACKGROUND AND DETAILED OBSERVATIONS (CONTINUED)**

# **Detailed Observations**

Service	ServiceMaster – Department of Wastewater Treatment – Industrial Cleaning Services			
1.	Invoice Review Process	Recommendation	Management's Action Plan	
	Observation Rating: Moderate			
	For two of the four invoices selected for testing, the invoice did not include a breakdown of materials, equipment, and supplies that were purchased by ServiceMaster and then billed to DC Water. The two invoices only included breakdowns of daily labor. Without breakdowns of each category that is billed, the Department of Wastewater Treatment cannot adequately review the completeness and accuracy of the invoice, which can lead to overpayment to the contractor. The invoices missing the breakdowns of materials, equipment, and supplies were approved and paid.  Upon Internal Audit's discovery of the missing schedules, the Department of Wastewater Treatment requested the documentation retroactively from ServiceMaster. ServiceMaster was able to provide the breakdown of material, equipment, and supplies, and the breakdowns agreed to the two previously paid invoices. Upon further investigation, it was noted that ServiceMaster made a change to their financial system, which, in turn, was not providing full breakdowns. Since discovery of this issue, ServiceMaster has made corrections.	If the COTR receives an invoice that does not include full breakdowns of all costs related to the invoice, they should suspend approval and communicate with ServiceMaster in order to receive full details to what costs have been incurred during the period.  In order to document compliance with the 30 day payment requirements, any suspension of payment due to lack of support should be documented.	Response:  The COTR will not approve invoices that do not contain full support for the total amount billed. If insufficient support is received, the COTR will reach out to ServiceMaster in order to obtain full details. If this causes payment to be made after the 30 day requirement, the issue will be documented by the COTR.  Responsible Party:  Department of Wastewater Treatment  Target Date:  July 31, 2017 (effective immediately)	



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# **CONTRACT BACKGROUND AND DETAILED OBSERVATIONS (CONTINUED)**

 Contract Requirements	Recommendation	Management's Action Plan
Observation Rating: Low		
It was noted that multiple requirements are not reflective of the current processes followed by the Department of Wastewater Treatment. Specifically, DC Water is not in compliance with the following sections of the ServiceMaster Request for Proposal (RFP):  1. The RFP states "Within two weeks, before quarterly scheduled cleanings are performed, the offeror shall prepare and submit a work plan to the COTR for approval."  Currently, formal work plans are not created for Schedule A cleanings. Instead, the COTR and on-site Supervisor for ServiceMaster create a cleaning schedule each month. The schedule will include which areas are to be cleaned and the level effort for each location. Throughout the month, the COTR and on-site Supervisor for ServiceMaster are in constant communication about the status of cleanings. Sometimes, new areas are added to the schedule during the month if a specific area needs unanticipated attention. Schedule B and C cleanings are more intensive and work plans are created 2-3 weeks out from when the task is to be performed. Since Schedule A cleanings are scheduled based on the current state of locations assessed each month, creating a formal work plan for the quarter is unnecessary.  Cleaning tasks are subject to change each week, and as such, the RFP language does not fully reflect how cleaning tasks are determined.	1. The executed contract refers to the RFP for scope of work. Because the actual current process differs from the RFP language, contract language should be added to better reflect the process of cleaning schedule determination. The updated language should explicitly state that Schedule B and C cleanings require a work plan, and should include the area, materials, expected cost of the task, personnel included in the cleaning, etc. Currently, the COTR and on-site Supervisor for ServiceMaster determine the schedule on a monthly basis for Schedule A cleanings. Any updates and changes made during the month for Schedule A cleanings should be documented on the schedule that is maintained by the COTR.	Response:  The Department of Wastewar Treatment, along with Procureme will write a revision to the contract explicitly state that only Schedule and C cleanings require a work pla The revised contract language vinclude what is required to documented in the work plan, su as the area to be cleaned, materia to be used, expected cost of task, personnel working on the tastetc.  Responsible Party:  Department of Wastewar Treatment and Procurement  Target Date:  August 31, 2017



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# **CONTRACT BACKGROUND AND DETAILED OBSERVATIONS (CONTINUED)**

Contract Requirements	R <u>ecommendation</u>	Management's Action Plan
Observation Rating: Low		
2. The RFP states, "Reports on all cleaning assignments shall be submitted to the COTR within 2 days after completion of the cleaning tasks. The COTR will use these reports for inspection purposes."  Currently, no reports are submitted to DC Water after cleaning occurs. The COTR and on-site Supervisor for ServiceMaster are in constant communication about what areas are to be cleaned and how long each cleaning should take. Because of this, the COTR knows which areas have been cleaned each day, and will visit work sites at least once a week. Since Schedule A cleanings are occurring daily, it is excessive for ServiceMaster to submit a report for each cleaning assignment.  These two requirements are not necessary to adequately perform the scope of work under the executed contract. However, DC Water runs the risk of being unable to enforce the current contract monitoring and compliance processes because they are not fully documented in the executed contract or RFP.	2. Since the COTR and on-site Supervisor are in constant communication, and Schedule A cleanings occur on a daily basis, reports should not have to be submitted after each cleaning assignment. While actual reports are not currently submitted after each cleaning task, the COTR is aware of which areas have been cleaned. Since Schedule B and C cleanings are more intensive and require a higher level of detail and planning, reports should be sent to the COTR following those tasks.	Response:  The Department of Wastew Treatment, along with Procurem will write a revision to the contract better reflect the reporting procedure between ServiceMaster and Water. The language will state reports are only required Schedule B and C cleaning task Responsible Party:  Department of Wastew Treatment  Target Date:  August 31, 2017



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# **CONTRACT BACKGROUND AND DETAILED OBSERVATIONS (CONTINUED)**

3. <u>Weekly Inspections</u>		Recommendation	Management's Action Plan
Observation Rating: Lo	DW .		
inspections of work area required to attend.  Weekly inspections are or inspection checklist each required to attend all inspection must be asked to be corrected in used for all weekly in undocumented.	COTR or his/her designee shall conduct weekly as, and ServiceMaster's on-site Supervisor is accurring, but only one area is documented in an month, and the on-site Supervisor has not been pections, although he does attend the majority. Inted inspections serve to represent all other sues identified during the weekly inspections are mediately. Since an inspection checklist is not inspections, an issue or concern may go of all issues or concerns, DC Water risks an uate contractor performance if multiple similar	The COTR should document all weekly inspections, rather than only one per month. By documenting all weekly inspections, the COTR can more easily identify issues, verify that all personnel that are required to be on site are there, and better capture the contractor's performance as a whole. For the formal, weekly inspections, the on-site Supervisor should be required to attend, as the contract states. Issues and feedback can be discussed real time, which can be relayed to the on-site Supervisor's team immediately.	Response:  Formal inspections by the COTR we continue to occur on a weekly basis. The on-site Supervisor ServiceMaster will be required attend. ServiceMaster will designate a replacement for circumstances which the on-site Supervisor unavailable to attend. All week inspections will be documented ar retained by the Department Wastewater Treatment.  Responsible Party:  Department of Wastewater Treatment  Target Date:  August 31, 2017



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# **CONTRACT BACKGROUND AND DETAILED OBSERVATIONS (CONTINUED)**

Beveridge & Diamond, P.C.

Office of the General Counsel, Environmental Law



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# **CONTRACT BACKGROUND AND DETAILED OBSERVATIONS (CONTINUED)**

## **Contract Background (Continued)**

Beveridge & Diamond, P.C. provides outside counsel for environmental legal services upon request to DC Water. McGuireWoods LLP was also awarded a contract (Contract #14-PR-OGC-01-AF) through the same RFP for environmental legal services, and the contract award amount illustrated below represents the total combined contract value for the two firms for the contract base period. However, only the Beveridge & Diamond contract is in scope for this contract compliance audit

Contract Overview			
Contractor Beveridge & Diamond, P.C.			
Award Date July 1, 2015			
Original Contract Period July 1, 2015 – June 30, 2018			
Contract Award \$4,500,000 (\$1,500,000 per year per Contractor			
Type of Contract Legal Services Agreement – fee for service			
COR/COTR Deputy General Counsel			

There have been two contract modifications during the life of this contract. The first occurred on April 7, 2016 for additional funding of \$1,544,000. The second modification occurred July 1, 2016 for additional funding of \$1,000,000. Both contract modifications were approved by DC Water's Board of Directors.

#### Statistics and Financial Information

DC Water is currently in the base year of this contract. This environmental legal services contract makes up approximately 39.7% of the Office of the General Counsel (OGC)'s total contractual services operating expenditures budget for FY 2017, as illustrated below.

Approved FY 2017 Office of the General Counsel Budget <sup>1</sup>		
Environmental Legal Services budget	\$1,500,000	
(Contract #14-PR-OGC-01-AA / 14-PR-OGC-01-AF)		
Total contractual services budget – OGC	\$3,779,000	
Environmental Legal Services budget % of total OGC	39.7%	
contractual services budget		

<sup>1</sup>Source: DC Water Approved FY 2017 Operating Budget and BoD Modification 2 Contractor Fact Sheet



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# **CONTRACT BACKGROUND AND DETAILED OBSERVATIONS (CONTINUED)**

## **Contract Background (Continued)**

During FY 2015 and FY 2016, actual OGC contractual services expenditures exceeded the approved OGC contractual services budget by 34% and 89% respectively. See table below for OGC contractual services budget and expenditures over five fiscal years.

Office of the General Counsel Budget Requests <sup>1</sup>			
Fiscal Year	Approved Contractual Services Budget	Actual Contractual Services Expenditure	
FY 2014	\$5,477,000	\$3,566,000	
FY 2015	\$4,078,000	\$5,456,000	
FY 2016	\$3,776,000	\$7,123,000	
FY 2017	\$3,779,000	N/A – fiscal year ongoing	
FY 2018	\$5,236,000	N/A – fiscal year not started	

<sup>&</sup>lt;sup>1</sup>Source: DC Water Approved Operating Budgets

Two PO modifications were necessary in FY 2016 and one PO modification has occurred in FY 2017 as of June 1, 2017. PO modifications are necessary when the OGC runs out of funding on a PO to adequately cover an invoice. See the table below for a breakdown of FY 2016 and FY 2017 PO modifications.

	Beveridge & Diamond PO Modifications			
	Fiscal Year	PO#	PO amount	
	FY 2016	160500	\$500,000	
		160500 Mod 1	\$1,000,000	
		160500 Mod 2	\$600,000	
\	FY 2016 total PO value		\$2,100,000	
	FY 2017	170617	\$200,000	
		170617 Mod 1	\$300,000	
	FY 2017 total	PO value (as of 6/1/17)	\$500,000	



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# **CONTRACT BACKGROUND AND DETAILED OBSERVATIONS (CONTINUED)**

# **Detailed Observations**

Beveridg	Beveridge & Diamond P.C. – Office of the General Counsel – Environmental Law			
1.	Access to Information Regarding Ongoing Cases	<u>Recommendation</u>	Management's Action Plan	
	Observation Rating: High			
	Detailed Beveridge and Diamond invoices and support are posted to ImageNow by DC Water's Accounts Payable Department. These invoices may include confidential and legally privileged information regarding on-going cases.  When full invoice support is posted to DC Water's system, many personnel outside of the OGC may access the files, which may include strategy regarding ongoing legal cases. This presents a risk of confidential cases being accessed by inappropriate employees and / or contractors.	The OGC should maintain full invoices and supporting documentation within their office, and Beveridge & Diamond should only share redacted invoice information with Accounts Payable as necessary for payment processing.	Response:  OGC will direct legal service providers to send a statement of the charges to Accounts Payable (AP) and to send the actual invoice to the managing attorney. One of the firms that represents DC Water in employment matters has already been following this process. OGC anticipates all firms will comply with this direction.  OGC will maintain the invoices for at least a three year period after the matter has been closed. Management will coordinate with AP to restrict access to prior invoices.  Responsible Party:  Office of the General Counsel  Target Date:  July 31, 2017	



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# **CONTRACT BACKGROUND AND DETAILED OBSERVATIONS (CONTINUED)**

Beveridg	everidge & Diamond P.C. – Office of the General Counsel – Environmental Law			
2.	Invoicing and Payment	<u>Recommendation</u>	Management's Action Plan	
	Observation Rating: Moderate			
	Per our testing of invoice approval, the Office of the General Counsel (OGC) did not remit payment of the Contractor's invoices within 30 days of receiving the invoice in accordance with the Service Agreement. For 4 of the 15 invoices selected for testing, the OGC did not maintain record of when the invoice was received. For these instances we used the invoice date to calculate days to payment. It is possible that invoices paid timely may appear late in our testing, as we have no way to evidence the mailing delay that may have existed between invoice date and the date the OGC received an invoice, as invoices are not submitted electronically. Of the invoices tested, 9 of 15 did not meet the 30 day requirement.  The Service Agreement states that DC Water will be invoiced once a month for Beveridge & Diamonds services. However, invoices are submitted monthly for each open case, which has led to up to eight invoices submitted by Beveridge & Diamond per month. When each invoice is received, the attorney assigned to the case performs a detailed review of all hours charged during the billing period to confirm that the time, rates, and work performed were appropriate. Any invoices over \$5,000 are also reviewed by the Deputy General Counsel. The volume of invoices received and detailed review necessary are time consuming tasks that contribute to payment delays.	The OGC should begin time stamping each invoice that is received. If the received date is maintained, the exact number of days between receipt and payment can be appropriately calculated. For timelier turnaround, the OGC should consider utilizing DC Water's e-invoicing portal for Beveridge & Diamond to submit invoices.  Additionally, the OGC should prioritize review of Beveridge & Diamond invoices such that the turnaround time of approval is less than 30 days and Accounts Payable can remit payment within the 30 days required by the Service Agreement.  Further, as part of the annual budgeting process, the Authority	Response:  OGC currently date stamps all correspondence received from outside of the office. There should be no discrepancies regarding the date any correspondence is received going forward. OGC will also explore the possibilities of using an e- invoicing portal.  Generally, 30 days are sufficient to approve and remit payment. However, if there is a change in the invoice due to incorrect billing, the understanding of all parties is that the 30 day period does not start until a corrected invoice is received.	



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services budget for the OGC, including evaluating past trends, pending litigation and anticipated needs to ensure adequate funds exist for external legal support.

# **CONTRACT BACKGROUND AND DETAILED OBSERVATIONS (CONTINUED)**

Beveridge & Diamond P.C. – Office of the General Counsel – Environmental Law				
2.	Invoicing and Payment - continued	Recommendation	Management's Action Plan	
	Additionally, two PO modifications were necessary in FY 2016 and one PO modification has occurred in FY 2017 as of June 1, 2017. PO modifications are necessary when the OGC's required service needs exceed the funding on a PO to adequately cover an invoice. In such instances, invoice payment must be held until a PO modification is created. Three of the nine invoices that exceeded the 30 day payment threshold were late due to pending PO modifications. Typically, POs require modification each year because the OGC is not granted enough budget to cover the cost of external legal services, requiring additional mid-year funding requests. During FY 2015 and FY 2016, actual OGC contractual services expenditures exceeded the approved OGC contractual services budget by 34% and 89%, respectively.	on April 27, 2017 for additional process improvement	Response (continued):  OGC will work with the Budget team to formulate a budget forecasting process that takes into account the unpredictable nature of outside counsel expenses and evaluate progress in implementing liability prevention practices to reduce litigation costs. In situations where litigation is not avoidable, OGC will implement practices to reduce defense costs, such as having third party providers participate in the discovery phase of the litigation.  Responsible Party:  Office of the General Counsel  Target Date:	
	contractual services budget by 34% and 89%, respectively.		having third party provid participate in the discovery phase of the litigation.  Responsible Party:  Office of the General Counsel	



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# **APPENDIX A - RATING DEFINITIONS**

Observation Risk Rating Definitions				
Rating Definition				
Cobservation presents a low risk (i.e., impact on financial statements, internal control environment, brand, or business operation to the organization for the topic reviewed and/or is of low importance to business success/achievement of goals.				
Moderate	Observation presents a moderate risk (i.e., impact on financial statements, internal control environment, brand, 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 in the near term.			
Observation presents a high risk (i.e., impact on financial statements, internal control environment, brand, or business to the organization for the topic reviewed and/or is of high importance to business success/achievement of goals. Activities taken immediately.				



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# Internal Audit Report Contract Monitoring & Compliance Audit Part II

July 2017



Internal Audit Report Issued: July 2017



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# TRANSMITTAL LETTER

August 2017

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

Pursuant to the approved fiscal year 2017 internal audit plan for the District of Columbia Water and Sewer Authority ("DC Water" or the "Authority"), we hereby present our assessment of Contract Monitoring & Compliance Audit Part II. We reviewed a selection of three contracts, and have included the results for the last contract in this report. We will be presenting this report to the Audit Committee of DC Water at the next scheduled meeting on October 26, 2017. 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 contract monitoring and compliance process.
Overview, 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.
Contract Background and Detailed Observations	This provides an overview of the contract, including general statistics and financial information, as well as the observations noted during our work. Recommended actions and managements actions plans are also included.

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

Respectfully Submitted,

DC Water Internal Audit



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# **EXECUTIVE SUMMARY**

## **Background**

Internal Audit selected a sample of three contracts or service agreements from various departments of operations to test for compliance with applicable terms and conditions and conducted the audit in two parts.

This report is Part II of the Contract Monitoring & Compliance Audit, and contains one of the three contracts selected by Internal Audit for review. Part I of this audit which addressed the other two contracts selected for review was issued at the July 27, 2017 Audit Committee Meeting.

# Contract # 14-PR-DFS-02: Department of Facilities, Small Construction and Renovation Projects

ADP Group, Inc. (ADP) performs general construction work at DC Water facilities. These small construction and renovation projects included office renovations, roof repairs, cafeteria design renovation, electrical feed to new buildings, and other various projects. ADP performs work for DC Water under an Indefinite Delivery/Indefinite Quantity (IDIQ) contract. For each project that ADP is selected as the contractor, a new task order is created, and the purchase order is modified.

During the course of our fieldwork it was identified that the Department of Engineering & Technical Services also leveraged this contract for two construction and renovation projects.

## **Objective and Scope**

Our procedures were performed in accordance with the internal audit scope and approach set forth in our audit notification letter, dated April 12, 2017, and were limited to those procedures described therein.

Our scope included the following:

- Determine contractor compliance with specific contract terms and provisions, as applicable;
- Identify the monitoring controls and evaluation process in place for this contract, including follow-up on remediation of underperformance:
- · Review invoice and change order approval processes; and
- Identify process improvement opportunities and recommend internal control enhancements to improve the contractor management process.

Fieldwork was performed April 2017 through June 2017.

#### **Overall Summary**

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	
Total Observations	1	0	2	

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



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# **EXECUTIVE SUMMARY (CONTINUED)**

# **Ratings and Conclusions**

The following is a summary of all observations noted in the areas reviewed. Definitions of the rating scales are included in the Appendices.

Observations and Improvement Opportunities	
ADP Group – Department of Facilities	
Observations	Rating
1. CONTRACT TERMS AND CONDITIONS  Per our review of the task orders, we identified that the Department of Engineering & Technical Services (DETS) leveraged the contract for task	High
Per our review of the task orders, we identified that the Department of Engineering & Technical Services (DETS) leveraged the contract for task order 8, the Renovation of Pump Station, 125 "O" Street. However, the contract was not modified to include the same general conditions as required for a construction contract.	
2. INVOICING AND PAYMENT	Low
The contract states that ADP Group (ADP) shall provide invoices that include the billing period for which DC Water is being billed. Of the three invoices selected for testing, none included a billing period. Projects vary in length of time, and multiple projects can be in progress at the same time under the contract with ADP.	
3. CONTRACT LANGUAGE	Low
We noted instances of non-compliance by the Department of Facilities with some of the monitoring and compliance requirements of the contract. DC Water runs the risk of being unable to enforce the current ADP contract monitoring and compliance processes because they are not being fully executed in accordance with the contract.	



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# **OVERVIEW, OBJECTIVES, AND APPROACH**

#### Overview

Internal Audit selected a sample of three contracts or service agreements from various departments of operations to test for contract monitoring and compliance with applicable terms and conditions. We conducted the audit in two parts with two contracts being reviewed in Part I and one contract being reviewed in Part II of the audit. A contract with the Department of Facilities was selected for Part II of the internal audit.

The designated Contracting Officer Representative (COR) and/or Contracting Officer's Technical Representative (COTR) are responsible for ensuring goods and services contract compliance at DC Water and Sewer Authority ("DC Water" or the "Authority"). The COR is responsible for all administration aspects of the contract. The COTR is the technical expert for the contract and acts as a liaison between the Contractor and the Contracting Officer. The Authority enters into many contracts each year, as illustrated by the contractual services operating expenditures and budgets in the following table:

Contractual Services Operating Expenditures <sup>1</sup>			
FY 2014 Actual	\$68,172,000		
FY 2015 Actual	\$66,241,000		
FY 2016 Actual	\$74,086,000		
FY 2017 Approved	\$82,760,000		
FY 2018 Approved	\$79,354,000		

<sup>1</sup>Source: DC Water Approved FY 2018 Operating Budget; FY 2016 Consolidated Annual Financial Report

#### **Objectives**

The objective of the Contract Monitoring & Compliance Audit was to obtain an understanding of how contracts are managed and assess whether the system of internal controls are adequate and appropriate, at the department level and authority-wide, for promoting and encouraging the achievement of management's objectives in the categories of compliance. The audit scope was based on the following objectives:

- Determine Contractor compliance with specific contract terms and provisions, as applicable;
- Identify the monitoring controls and evaluation process in place for these contracts, including follow-up of remediation of underperformance;
- Review invoice and change order approval process; and
- Identify process improvement opportunities and recommend internal control enhancements to improve the overall Contractor management process.

Contracts managed by the Department of Engineering and Technical Services (DETS) are outside the scope of this audit, as those are being included in the Engineering – Contractor Management internal audits. However, the contract within the scope of this audit was utilized by the Department of Engineering and Technical Services. As part of our scope, we evaluated the coordination between the Department of Facilities, the invoice approval process and the contractual terms and conditions.



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# OVERVIEW, OBJECTIVES, AND APPROACH (CONTINUED)

#### Approach

Our audit approach consisted of the following phases:

#### **Understanding of the Process**

The purpose of this phase was to gain an understanding of DC Water's contract monitoring and compliance process for goods and services contracts. We submitted requests to the CORs and/or COTRs to gain a better understanding of the contract terms and determine how the contract is monitored. Internal Audit conducted walkthroughs with the CORs and COTRs of the contracts selected, the Contractor's Project Manager, and other employees within the Department, as needed.

#### Detailed Testing

The purpose of this phase was to test compliance and internal controls based on our understanding of the contract terms and conditions. This phase included the execution of applicable tests of compliance with DC Water contracts. The time period covered by testing was October 1, 2015 through March 31, 2017.

For all contracts selected, we conducted the following testing:

- Performed a review of the invoice submission, approval and payment process to verify:
  - o Invoices are submitted on a monthly basis and reflect the Contract # and PO #.
  - o Invoices define the period of service provided and describe the services provided.
  - o Invoices were paid by DC Water within 30 days.
- Reviewed the Contractor's Safety Plan, if applicable, to ensure it met all contractual requirements and was properly approved.
- Verified that DC Water maintained a current Certificate of Insurance for the Contractor, if applicable.

We also conducted testing of the following contracts to verify that the Contractor was meeting specific contractual requirements:

#### Contract # 14-PR-DFS-02 (ADP Group, Inc.): Department of Facilities, Small Construction and Renovation Projects

- Gained an understanding of the Indefinite Delivery/Indefinite Quantity (IDIQ) contract to better understand how DC Water utilizes ADP's services.
- Reviewed the quality inspection process to understand what goes into an inspection and how the COTR follows up if issues are identified.

#### Reporting

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



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# CONTRACT BACKGROUND AND DETAILED OBSERVATIONS (CONTINUED)

**ADP Group, Inc.** 

**Department of Facilities, Small Construction and Renovation Projects** 



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# **CONTRACT BACKGROUND AND DETAILED OBSERVATIONS (CONTINUED)**

## **Contract Background**

#### Contract # 14-PR-DFS-02

ADP Group, Inc. (ADP) was awarded the contract to perform small construction and renovation projects for DC Water. These small construction and renovation projects have included roof replacements, building/office repairs, electrical feed to new buildings, etc.

Contract Detail		
Contractor	ADP Group, Inc.	
Award Date	5/8/2014	
Original Contract Period	May 5, 2014 – May 7, 2015	
Contract Award	\$0	
Type of Contract Indefinite Delivery/Indefinite Quantity, four (4) one (1) year option periods		
COR / COTR	Coordinator, Construction/Data Management	

DC Water is in Option Year No. 4 of the ADP contract. The contract with ADP is an Indefinite Delivery/Indefinite Quantity (IDIQ) contract. All work performed under the contract between ADP and DC Water must be authorized and funded on a task order basis. Because the contract works on a project by project basis, the original contract award was \$0. Each time ADP is selected for a small construction or renovation project, a task order is created and the contract amount is modified. Below is a list as of May 9, 2017 of all task orders issued since the start of the contract:

Task Order Details					
Task Order #	Project Description	Effective Date	Task Order Amount		
1	Concrete Slab/Relocation of Cantilever Rack	9/26/2014	\$32,366		
2	Multimedia Roof Replacements	10/7/2014	\$72,185		
3	Safety Department Office Renovation	10/7/2014	\$75,028		
4	Roof Replacement Main Electrical Substation	10/7/2014	\$83,235		
5	IT Trailer Leak Repairs	10/7/2014	\$1,765		
6	CMF Roof Repairs	10/7/2014	\$6,598		
7	TIC Renovation <sup>1</sup>	11/20/2014	\$306,564		
8	Renovation of Pump Station, 125 "O" Street <sup>1</sup>	1/15/2015	\$1,501,942		
9	Design Cafeteria Renovation <sup>1</sup>	7/31/2015	\$78,479		
	Stair Installation Fort Station <sup>4</sup>	10/26/2015	\$36,995		
10	Building "F" and Generator Room, 125 "O" Street, NE Repairs	4/4/2016	\$44,867		
11	Electrical Feed to new FCCC Office & Main Security Shack	4/4/2016	\$31,860		
12	Roof Repair at Rock Creek Plumbing Station	7/1/2016	\$51,557		
14	HVAC Shop Roof Repair <sup>1</sup>	7/11/2016	\$31,112		
15	Salt Dome Foundation & Soil Stabilization	4/14/2017	\$113,148		
16	Estuary Building and Grounds 2 <sup>nd</sup> Floor Renovation	5/1/2017	\$120,792		
	Total		\$2,777,714		

<sup>1:</sup> Task Order 7, 8, 9, and 14 all included at least one modification. The task order amount shown is the total amount, which reflects the original task order as well as the modification(s).

<sup>4:</sup> The Stair Installation Project does not currently have a task order number assigned to it. Task orders are assigned once a PO is cut. The PO has not been cut for this project yet, as DC Water is currently awaiting approval from government offices for a permit.



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# **CONTRACT BACKGROUND AND DETAILED OBSERVATIONS (CONTINUED)**

# **Detailed Observations (Continued)**

1.	Contract Terms and Conditions	Recommendation	Management's Action Plan
	Observation Rating: High		
	Per our review of the task orders, we identified that the Department of Engineering & Technical Services (DETS) leveraged the contract for task order 8, the Renovation of Pump Station, 125 "O" Street. DETS had attempted to bid the project out through the construction procurement process; however, in two instances DC Water did not receive any responses. In order to complete the \$1.5 million dollar renovation, DC Water coordinated with Facilities to leverage the ADP indefinite delivery/quantity (IDIQ) contract. However, the contract was not modified to include the same general conditions as required for a construction contract. The goods and services contract does not have the appropriate indemnification clauses and other various requirements.  Additionally, performance issues were identified during the course of the project. These issues included a lack of change order support and safety concerns identified through DC Water's inspection process. These were verbally communicated to the Director of Facilities as indicated by the project manager but were not documented at the time of the project. Lack of documentation of poor performance and inability to impose penalties as a result of poor performance may expose DC Water to financial and legal risks.	If an IDIQ contract is utilized for a construction project, DC Water should utilized the construction general conditions.  Additionally, DC Water should evaluate the definition of a "small construction" project and when additional terms and conditions should be utilized for these projects.	Response:  Procurement will issue a ne solicitation in October 2017 to select new set of small construction contractors and award them with ne IDIQs. In the new IDIQ, Procureme will add the construction industandard AIA terms and conditions well as current DC Water safe requirements. AIA construction terminand conditions will contain all proposonstruction requirements including change order process indemnification, liquid damagetc. Current DC Water safe requirements will require contract to submit necessary safe certification/permits and safety plate before work can begin.  Responsible Party:  Procurement Department  Target Date:

# **CONTRACT BACKGROUND AND DETAILED OBSERVATIONS (CONTINUED)**



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ADP – Department of Facilities – Small Construction and Renovation Projects				
2.	Invoices and Payment	Recommendation	Management's Action Plan	
	Observation Rating: Low			
	The contract states that ADP Group (ADP) shall provide invoices that include the billing period for which DC Water is being billed. Of the three invoices selected for testing, none included the billing period. Projects vary in length of time, and multiple projects can be in progress at the same time under the contract with ADP. Without the billing period documented on the invoices sent to DC Water, the Authority runs the risk of being billed for the wrong project or wrong period. However, we did note the invoices selected included the agreed upon amount for the project.	The COTR should require that the billing period be included on all invoices sent by ADP in accordance with the contract. If the COTR receives an invoice that does not include the billing period, they should refrain from approving until ADP includes the period in which the project took place and costs that were incurred.	Response:  The Department of Facilities has notified ADP that from now on all invoices submitted to DC Water shall include the billing period the invoice covers. If a submitted invoice does not have the billing period, the COTR will notify ADP and hold payment until the billing period is provided.	
			Responsible Party:	
			Department of Facilities	
			Target Date:	
			July 2017	



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# **CONTRACT BACKGROUND AND DETAILED OBSERVATIONS (CONTINUED)**

# **Detailed Observations (Continued)**

ADP – De	ADP – Department of Facilities – Small Construction and Renovation Projects					
3.	Contract Language	Recommendation	Management's Action Plan			
	Observation Rating: Low					
	We noted instances of non-compliance by the Department of Facilities with some of the monitoring and compliance requirements of the contract. Specifically, DC Water is not compliant with the following sections of the contract:  1. The contract states, "All tests, inspections, calibrations, time and work completed by the Contractor shall be documented on standard forms provided by the Contractor, in a format approved by DC Water." A form has not been submitted by ADP and approved by DC Water. The COTR uses an inspection checklist when inspecting finished projects, but the form used was created by DC Water.  2. The contract states, "The Contractor shall submit monthly invoices and monthly status reports of work performed to the COTR." Formal monthly status reports are not being submitted to the COTR; however, the COTR is in contact with ADP personnel, and will occasionally reach out for status updates on certain projects.  3. The contract states, "Contractors shall log in their start and completion times on the service ticket for services performed and the COTR shall confirm and approve the times." ADP does not have access to DC Water's MAXIMO system, so this contract requirement is not feasible. Each task order has an agreed upon amount over a specified period of time. Once the task order has been completed, the originally agreed upon amount is billed to DC Water. Since these contracts are not based on an hourly bill rates, it is unnecessary for ADP personnel to log their start and completion times each day and submit to the COTR.	The Department of Facilities team along with Procurement should evaluate the current contract in place. Sections of the contract that are not applicable should be removed. Other areas of the contract that do not fully capture the contract monitoring and compliance processes currently being utilized by DC Water should be revised.	<ol> <li>Response:</li> <li>The Department of Facilities will collaborate with Procurement on what type of standard form will be required in the next IDIQ Contract. In the interim, the Department of Facilities will continue using contractors' forms for daily reports, inspection, etc.</li> <li>The COTR has notified ADP that all invoices shall come with a monthly report or narrative.</li> <li>In the new IDIQ contract issued by Procurement, the language will be modified as Maximo Software is not available to the Contractor. Instead, the contractor daily reports dates and times will serve this purpose</li> </ol>			

**CONTRACT BACKGROUND AND DETAILED OBSERVATIONS (CONTINUED)** 



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ADP – Department of Facilities – Small Construction and Renovation Projects						
3.	Contract Language - continued	Recommendation	Management's Action Plan			
	Observation Rating: Low					
	DC Water runs the risk of being unable to enforce the current ADP contract monitoring and compliance processes because they are not fully being executed in accordance with the contract.		Responsible Party: Department of Facilities			
1100			Procurement Department			
			Target Date:			
			January 2018			



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# **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, brand, or business operations) to the organization for the topic reviewed and/or is of low importance to business success/achievement of goals.			
Moderate	Observation presents a moderate risk (i.e., impact on financial statements, internal control environment, brand, 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 in the near term.			
High	Observation presents a high risk (i.e., impact on financial statements, internal control environment, brand, 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.			



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# Internal Audit Report Entity-Level Assessment

August 2017





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# TRANSMITTAL LETTER

August 2017

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

Pursuant to the approved 2017 internal audit plan for the District of Columbia Water and Sewer Authority ("DC Water" or the "Authority"), we hereby present our assessment of DC Water's 2017 Entity-Level controls. We will be presenting this report to the Audit Committee of DC Water at the next scheduled meeting on July 27, 2017. Our report is organized in the following sections:

Executive Summary	This section provides a summary of the observations and related to our Entity-Level Assessment.	
Background	This section provides an overview of the Entity-Level Assessment.	
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.	
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





## **EXECUTIVE SUMMARY**

## **Background**

Entity-level controls are internal controls that help ensure that management directives pertaining to the entire entity are carried out. They are the second level of a top-down approach to understanding the risks of an organization.

An entity-level assessment is one mechanism for management to gain assurance that controls are operating throughout the organization.

To evaluate the entity-level controls, we utilized the COSO internal control framework (Committee of Sponsoring Organizations of the Treadway Commission). The COSO framework is made up of five categories that include the following, Control Environment, Risk Assessment, Control Activities, Information & Communication, and Monitoring.

We conducted interviews with various individuals across the Authority, with the purpose of having an open discussion with them about internal controls over the functional and overall processes at DC Water. This project is directly tied to into our previous work for the Blue Horizon 2020 Strategic Plan, by mapping the goals and objectives to the COSO frameworks components, principles, and associated points of focus.

This report contains a summary of the Entity-Level Controls and any recommendations to further enhance such controls.

# **Overall Summary / Highlights**

The observations identified during our assessment are summarized on the next few pages. We have assigned relative risk or value factors to each observation. Risk ratings are the evaluation of the severity of the concern and the potential impact on the operations of each item. Observations will require management action plans with estimated completion dates that will be included in the routine follow-up of internal audit observations.

# **Objective and Scope**

Our procedures were performed in accordance with the internal audit scope and approach set forth in our audit notification letter dated 2/17/2017, and were limited to those procedures described therein.

The purpose of this review and the overall audit objectives was to assess the effectiveness of the entity-level control structure across the Authority. The audit scope was based on the following objectives:

- Obtain an understanding of how the Authority achieves internal control over the:
  - o Effectiveness and efficiency of operations;
  - Reliability of financial reporting;
  - Compliance with applicable laws and regulations;
- Evaluate Tone-at-the-Top of the Authority with respect to integrity and ethical values:
- Better understand management's philosophy and operating style;
- Assess the effectiveness of the Authority's organizational structure;
- Evaluate the effectiveness of the Authority's monitoring of policies and procedures:
- Determine competencies of key personnel in DC Water's financial reporting process;
- Evaluate the assignment of authority and responsibility at the Authority, and:
- Identify process improvement opportunities and recommend internal control enhancements to improve the overall entity level oversight.

Fieldwork was performed February 2017 through May 2017

Summary of Observation Ratings (See Appendix A for definitions)					
	Number of Observations by Risk Rating				
	High	Moderate	Low		
Entity-Level Assessment	2	1	4		

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





# **EXECUTIVE SUMMARY (CONTINUED)**

# **Ratings and Conclusions**

Following is a summary of all observations noted in the areas reviewed (see "Detailed Observations" section for additional information). Definitions of the rating scales are included in the Appendices.

Summary of Observations			
Observations	Rating		
DC Water has not always had a consistent methodology for how non-IT policies and procedures are developed, formatted, approved, maintained and categorized at both the Department level and Authority-wide.	High		
DC Water assesses risk through the Internal Audit function, External Audit function and other departments such as the Risk Management, Security, Occupational Safety and Health, and Emergency Management. However, a comprehensive risk management council or function does not exist to evaluate risks at an entity level.	High		
DC Water's "Standards of Conduct" policy was approved by the General Manager in April 2016. Though the policy exists, awareness of the "Standards of Conduct" was inconsistent across the Authority. A majority of employees interviewed were not aware of a formal policy, were not aware if they were provided a copy of the policy during on-boarding or if they were trained on the policy	Moderate		
DC Water implemented a Fraud, Waste and Abuse hotline in 2013 to provide a confidential, secure means for employees to report suspected occurrences of fraud, waste and abuse. However, a standard operating procedure (SOP) or protocol has not been utilized to guide the investigation, reporting and resolution processes. [This item is now closed.]	Low		
An organization chart is maintained on DC Water's intranet, "Pipeline", and through the Microsoft Outlook address book. However, the organizational chart on both Pipeline and Outlook are not up-date-to for current titles and DC Water's reporting structure.	Low		
Goal 1 of DC Water's Blue Horizon 2020 Strategic Plan is to "develop, maintain and recruit a high performing workforce." In order to accomplish these goals, DC Water has been enhancing the employee performance management tools and identifying opportunities for employee development. However, per our interviews and hotline complaints that have been received, employees expressed concern about being limited in their ability to move upward within the organization which may be due to the lack of awareness or transparency of the selection and hiring process.	Low		
DC Water does not currently have a formal, documented succession plan for the Authority. DC Water has identified the need for a succession plan through goal 1 of the Blue Horizon 2020 Strategic Plan.	Low		





# **BACKGROUND, OBJECTIVES AND APPROACH**

# **Background**

#### Overview

DC Water and Sewer Authority ("DC Water" or "Authority") is governed by a Board of Directors (the "Board") consisting of 11 principal and 11 alternate members. The Board is composed of six District of Columbia representatives, two each from Montgomery and Prince George's counties in Maryland, and one from Fairfax County in Virginia. There are also advisory committees made up of subsets of the Board in order to streamline Board meetings and discuss topics in multiple forums.

The Executive Leadership Team is responsible for the oversight of operations at DC Water. The CEO and General Manager sets the tone at the top for the organization.

The Board adopted the DC Water Blue Horizon 2020 Strategic Plan in March 2013 (revised in 2015). This plan serves as a blueprint for achieving a vision to be a world-class water utility. Three focus areas of leadership, value and innovation serve as key drivers in achieving the goals and objectives of the plan. By laying out a course of action, Blue Horizon represents a disciplined process for making fundamental decisions and shaping DC Water's future, including the appropriate allocation of funding.



revised 2015

# vision values mission

vision: To be a world-dass water utility.

values: respectful –Serve with a positive attitude, courtesy, and respect that engender collaboration and trust. ethical –Maintain high ethical standards, accountability, and honesty as we advance the greater good. vigilant –Attend to public health, the environment, quality, efficiency, and sustainability of our enterprise.

accountable –Address challenges promptly, implement effective solutions, and provide excellent service as a committed team.

mission: exceed expectations by providing high quality water services in a safe, environmentally friendly, and efficient manner.

#### focus areas

**leadership** DC Water will advocate and lead local, regional, and national collaborations, while internally developing the workforce of the future.

value DC Water will be recognized for the value it delivers by protecting public health and the environment, supporting community sustainability, and providing for economic vitality.

innovation DC Water will achieve international prominence in development and adoption of science, technology and processes in support of a culture of innovation. Goal 1: Develop, Maintain and Recruit a High Performing Workforce

Goal 2: Collaborate Locally, Regionally, Nationally, and Internationally

Goal 3: Increase Board Focus on Strategic Direction

**Goal 4:** Enhance Customer and Public Confidence, Communications, and Perception

**Goal 5:** Promote Financial Sustainability, Integrity and Responsible Resource Allocation

Goal 6: Assure Safety and Security

Goal 7: Maximize Water Quality Treatment, Compliance and Efficiency

Goal 8: Optimally Manage Infrastructure

**Goal 9:** Enhance Operating Excellence through Innovation, Sustainability, and Adoption of Best Practices

Source: "Strategic Plan", www.dcwater.com



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# **BACKGROUND, OBJECTIVES AND APPROACH (CONTINUED)**

## **Background (continued)**

#### **Definition of Internal Controls**

An internal control is a process, affected by the entity's Board of Directors (the "Board"), management and other personnel, designed to provide reasonable assurance regarding the achievement of objectives in the following categories:

- Effectiveness and efficiency of operations
- Reliability of financial reporting
- Compliance with applicable laws and regulations

Based on the COSO expansion of the definition, the above guidelines reflect certain fundamental concepts. An internal control is:

- A process, it is a means to an end, not an end in itself;
- Affected by people. It is not merely policy manuals and forms but people at every level of the organization;
- Geared to the achievement of objectives in one or more separate but overlapping categories, and;
- Can be expected to provide only reasonable assurance, not absolute assurance, to an entity's management and the Board.

#### Limitation of Internal Controls

Internal control cannot provide absolute assurance of achieving an entity's objectives because of its inherent limitations. Internal control is a process that involves human diligence and compliance and is subject to lapses in judgment and breakdowns resulting from human failures. Internal control also can be circumvented by collusion or improper management override. Because of such limitations, there is a risk that material misstatements may not be prevented or detected on a timely basis by internal control over financial reporting. However, these inherent limitations are known features of the financial reporting process. Therefore, it is possible to design into the process safeguards to reduce, though not eliminate, this risk.

#### Relationship between Objectives and Components

A direct relationship exists between objectives, which are what an entity strives to achieve, components, which represent what is required to achieve the objectives, and the organizational structure of the entity (the operating units, legal entities, and other). The relationship can be depicted in the form of a cube.

- The three categories of objectives—operations, reporting, and compliance—are represented by the columns.
- The five components are represented by the rows.
- An entity's organizational structure is represented by the third dimension.





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### **BACKGROUND, OBJECTIVES AND APPROACH (CONTINUED)**

#### **Background (continued)**

#### **Entity- Level Controls**

To evaluate the entity-level controls, we utilized the COSO framework (Committee of Sponsoring Organizations of the Treadway Commission). The COSO framework is made up of five components that include the following:

#### **Control Environment**

•The control environment is the set of standards, processes, and structures that provide the basis for carrying out internal control across the organization. The board of directors and senior management establish the tone at the top regarding the importance of internal control including expected standards of conduct. Management reinforces expectations at the various levels of the organization. The control environment comprises the integrity and ethical values of the organization; the parameters enabling the board of directors to carry out its governance oversight responsibilities; the organizational structure and assignment of authority and responsibility; the process for attracting, developing, and retaining competent individuals; and the rigor around performance measures, incentives, and rewards to drive accountability for performance. The resulting control environment has a pervasive impact on the overall system of internal control.

#### **Risk Assessment**

•Risk assessment involves a dynamic and iterative process for identifying and assessing risks to the achievement of objectives. Risks to the achievement of these objectives from across the entity are considered relative to established risk tolerances. Thus, risk assessment forms the basis for determining how risks will be managed. Risk assessment also requires management to consider the impact of possible changes in the external environment and within its own business model that may render internal control ineffective.

#### **Control Activities**

•Control activities are the actions established through policies and procedures that help ensure that management's directives to mitigate risks to the achievement of objectives are carried out. Control activities are performed at all levels of the entity, at various stages within business processes, and over the technology environment. They may be preventive or detective in nature and may encompass a range of manual and automated activities such as authorizations and approvals, verifications, reconciliations, and business performance reviews. Segregation of duties is typically built into the selection and development of control activities. Where segregation of duties is not practical, management selects and develops alternative control activities.



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### **BACKGROUND, OBJECTIVES AND APPROACH (CONTINUED)**

#### **Background (continued)**

**Entity- Level Controls (continued)** 

#### **Information and Communication**

•Information is necessary for the entity to carry out internal control responsibilities to support the achievement of its objectives. Management obtains or generates and uses relevant and quality information from both internal and external sources to support the functioning of other components of internal control. Communication is the continual, iterative process of providing, sharing, and obtaining necessary information. Internal communication is the means by which information is disseminated throughout the organization, flowing up, down, and across the entity. It enables personnel to receive a clear message from senior management that control responsibilities must be taken seriously. External communication is twofold: it enables inbound communication of relevant external information, and it provides information to external parties in response to requirements and expectations.

#### **Monitoring**

•Ongoing evaluations, separate evaluations, or some combination of the two are used to ascertain whether each of the five components of internal control, including controls to effect the principles within each component, is present and functioning. Ongoing evaluations, built into business processes at different levels of the entity, provide timely information. Separate evaluations, conducted periodically, will vary in scope and frequency depending on assessment of risks, effectiveness of ongoing evaluations, and other management considerations. Findings are evaluated against criteria established by regulators, recognized standard-setting bodies or management and the board of directors, and deficiencies are communicated to management and the board of directors as appropriate.





### **BACKGROUND, OBJECTIVES AND APPROACH (CONTINUED)**

#### **Objectives and Approach**

#### **Objectives**

The objectives of the Entity-Level Assessment is to assess the effectiveness of the entity-level control structure across the Authority. The audit scope is based on the following objectives:

- Obtain an understanding of how the Authority achieves internal control over the:
  - o Effectiveness and efficiency of operations
  - Reliability of financial reporting
  - Compliance with applicable laws and regulations
- Evaluate Tone-at-the-Top of the Authority with respect to integrity and ethical values;
- Better understand management's philosophy and operating style;
- Assess the effectiveness of the Authority's organizational structure;
- Evaluate the effectiveness of the Authority's monitoring of policies and procedures;
- Determine competencies of key personnel in DC Water's financial reporting process;
- Evaluate the assignment of authority and responsibility at the Authority, and
- Identify process improvement opportunities and recommend internal control enhancements to improve the overall entity level oversight.

#### Approach

Our audit approach consisted of the following phases:

#### Understanding of the Process

The purpose of this phase was to gain a better understanding of DC Water's entity-level controls. This phase included a series of interviews with employees at varying levels of authority about the internal control environment and their perception of the control effectiveness throughout the organization.

#### Documentation Gathering / Limited Testing

In order to assess entity-level controls utilizing the components of the COSO framework, the following procedures were performed:

- Review of organization-wide policies and procedures to support the five components of COSO.
- Assessment of overall entity-level risk and related controls in each of the five components.
- Interviews of key individuals throughout the organization regarding entity-level controls and related environment.
- Evaluate operating effectiveness of controls by inquiries of key personnel, observation of management actions, inspection of written policies, and testing of compliance with key policies.

#### Reporting

At the conclusion of this audit, we summarized our observations related to the Entity-Level Assessment at DC Water. We have reviewed the results of our analysis and observations with management and included their responses herein.



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### **OBSERVATIONS AND RECOMMENDATIONS**

S	Summary of Observations and Recommendations			
	Reference	<u>Observation</u>	Recommendation	Management Response
	Risk Rating	High		
1	Control Environment  Principle 4 — Establishes policies and procedures  Principle 5 — Enforced accountability through structures, authority and responsibilities  Control Activities  Principle 11 — Establishes relevant technology infrastructure control activities  Principle 12 — Establishes policies and procedures to support deployment of managements directives; Reassesses policies and procedures	DC Water has not always had a consistent methodology for how non-IT policies and procedures are developed, formatted, approved, maintained and categorized at both the Department level and Authority-wide.  Policies Authority-wide policies are reviewed and issued by the Human Capital Management (HCM) Department.  Per our interviews, many employees were unaware of where to locate authority-wide policies. If employees are unable to locate policies, they may not be aware of the content or be in compliance with the policies. Additionally, if Supervisors or individuals in management are not aware of the policies, they might be unable to assist in the enforcement of the policies.  Of those policies posted on Pipeline, DC Water's intranet, 33 were approved in 2000 by the prior General Manager. These policies may be outdated or no longer applicable. Also, some of the newer policies have not been posted to the intranet.	We recommend management continue to strive towards concluding the impacts and effects bargaining and obtain final approval from the General Manager of all DC Water policies. Additionally, procedures should be developed or revised as needed in coordination with the Maturity Assessment initiative and as a result of any internal audit observations.  Suggested Control:  All DC Water policies are developed, formatted, approved and maintained in accordance with DC Water's policy on policies.  On a periodic basis, as determined by DC Water, policy owners re-examine existing policies and procedures to ensure they are still applicable and process any changes, as needed. Evidence of review is documented on a policy cover sheet.  On an annual basis, all employees reaffirm acknowledgement of key Authority-wide policies, highlighting any new policies or modifications to existing policies. Employees are required to evidence acknowledgement of receipt of the policies.	Response: The development and issuance of policies is the responsibility of HCM. Accordingly, any policy that is developed is reviewed by HCM which is responsible for ensuring that the policy is drafted and finalized in a manner consistent with established practice and follows the appropriate impacts and effects bargaining provided to the Unions.  The Authority has been working for an extended period to complete a comprehensive update of the employee polices. All policies will be placed online in the form of a virtual handbook that will be accessible for all employees at any time. These efforts accompanied by some transition of tenured employees may have caused some break downs in how policies are to be developed and administered. For clarity, regardless of the policy owner, all policies are reviewed by HCM in partnership with the General Counsel's Office.  As previously noted, we expect to launch a communication campaign regarding policies when union negotiations over the employee personnel policies are completed. We will certainly utilize this communications opportunity to clarify issues regarding policy owners, renewal schedules, and how employees can easily access policies.





S	Summary of Observations and Recommendations			
	Reference	<u>Observation</u>	Recommendation	Management Response
	Risk Rating	High		
1	Information & Communication  Principle 14 — Communicates internal control information with personnel	Additionally, many authority-wide policies require the Unions the right to bargain impacts and effects. As stated in Article 2, "no authority regulation on a negotiable issue is to be adopted or changed without the Union's having the right to bargain impacts and effects, to the extent provided by the law. Since not all policies have been updated, the existing policy on file is applicable to all of DC Water's workforce until further notified by HCM. We have noted that management is in the process of conducting union negotiations of all policies.  Standard Operating Procedures In some instances departments maintain standard operating procedures (SOPs) or business practice guidelines. Per our review, these documents may be misclassified as a policy. A policy on policies does not currently exist, which would define the difference between a policy and a procedure and include required approval(s).  In addition, DC Water does not always identify specific procedural owners, who are responsible for ensuring these documents are up-to-date and have been reviewed on a periodic basis, as evidenced by prior internal audits.		Response (continued):  We concur that policies should be reviewed on a regular basis. One third of the policies will be reviewed annually so that each policy is reviewed every 3 years. Similar to the annual cybersecurity compliance certification, HCM is in the process of developing a compliance module for employees to reaffirm acknowledgement of particular policies and their location. Ideally, this would be complete by February 2018.  Responsible Party:  Director, Human Capital Management  Target Date:  September 30, 2018





Sı	Summary of Observations and Recommendations			
	Reference	<u>Observation</u>	Recommendation	Management Response
	Risk Rating	High		
2	Risk Assessment  Principle 6 – Considers risk factors  Principle 7 – Analyzes internal and external factors; Estimate significance of risk  Control Activities  Principle 10 – Integrates with risk assessment; Considers entity-specific factors	DC Water assesses risk through the Internal Audit function, External Audit function and other departments such as the Risk Management, Security, Occupational Safety and Health, and Emergency Management. However, a comprehensive risk management council or function does not exist to evaluate risks at an entity level. Without a comprehensive risk management function, DC Water may not be able to effectively identify, evaluate and respond to the risks impacting operations and financials.	An annual risk assessment is performed that identifies and determines the significance of fraud and other risks and how the Authority will respond to identified risks. Internal and external factors are considered as well as assessing the organizations environment for	Response:  DC Water is exploring options to review and address enterprise-wide risk management program, including how to consolidate many distributed risk management functions under one organizational structure.  Responsible Party: COO Target Date: October 1, 2018





Sı	ımmary of Observatio	ons and Recommendations		
	Reference	<u>Observation</u>	Recommendation	Management Response
	Risk Rating	Moderate		
3	Control Environment  Principle 1 — Establishes standards of conduct	DC Water's "Standards of Conduct" policy was approved by the General Manager in April 2016 and is currently posted to DC Water's intranet, "Pipeline". The standards were designed to help ensure that DC Water conducts business consistent with core values and to assist the Authority in carrying out their mission.  Though the policy exists, awareness of the "Standards of Conduct" was inconsistent across the Authority. A majority of employees interviewed were not aware of a formal policy, were not aware if they were provided a copy of the policy during on-boarding or if they were trained on the policy.  If employees are not aware or periodically trained on the "Standards of Conduct", they may not be aware of when to report potential conflicts of interest, if an employee is disqualified from participation in the selection, award or administration of a contract and the enforcements of other required disclosures.	Suggested Control:  The "Standards of Conduct" policy is provided to all employees and reviewed during the on-boarding process. Employees are required to sign an acknowledgment upon receipt of the training. This policy should be included in all employee handbooks or manuals, and available electronically or otherwise. The standards are reiterated to all employees by Executive Leadership and Senior Leadership through enforcement of the standards.  Annually, Executive Leadership releases a company-wide communication to inform and remind all employees about the emphasis on acting ethically & responsibly and complying with the "Standards of Conduct" policy. As needed, refresher training is provided to staff which requires certification at the end of the course.	Response:  The Authority is in what it believes are the final stages of negotiations with the Unions over a comprehensive revision of the employee personnel handbook. The Standards of Conduct policy will be included in the revised handbook. Accordingly, upon completion of negotiations the Human Capital Management (HCM) Department will partner with the Office of External Affairs to ensure employees are aware of the updated employee handbook.  Although, we do not necessarily believe this policy merits an annual communication to employees, it can be included in the message that is disseminated in the annual message to all employees regarding compliance with Equal Employment Opportunity.  Responsible Party:  Director, Human Capital Management  Target Date:  December 31, 2017





Sui	Summary of Observations and Recommendations			
	<u>Reference</u>	<u>Observation</u>	Recommendation	Management Response
	Risk Rating	Low		
4	Control Environment  Principle 1 — Evaluates adherence to standards of conduct	DC Water implemented a Fraud, Waste and Abuse hotline in 2013 to provide a confidential, secure means for employees to report suspected occurrences of fraud, waste and abuse. The Internal Auditors have been responsible for receiving the complaints reported through the hotline system and conducting an investigation into each complaint or referring the compliant to the appropriate department for investigation. However, a standard operating procedure (SOP) or protocol has not been utilized to guide the investigation, reporting and resolution processes.  An SOP was drafted in 2015 by the Internal Auditors, with the assistance of various Executive Leaders. However, these procedures have not been finalized and therefore have not been provided to other departments who may be responsible for conducting a hotline investigation. Without a documented process, investigations may not be conducted properly or consistently and / or information may be shared inappropriately. Additionally, if a hotline investigation is conducted improperly, DC Water may not be able to enforce	Suggested Control:  Internal Audit, and departments required to assist with a hotline compliant investigation, comply with a standard protocol for managing suspected occurrences of fraud, waste and abuse. The procedures should capture the following elements:  • Reporting process • Investigation procedures • Resolution and closure of complaints • Reporting • Record Retention  The protocol is available to all employees to encourage transparency into hotline management. Additionally, all employees with specific roles and responsibilities within the protocol are trained on the requirements.	Response:  DC Water finalized Standard Operating Procedures on the Fraud, Waste, and Abuse Hotline.  Responsible Party: Office of the General Manager  Target Date: Closed





S	ummary of Observatio	ons and Recommendations		
	Reference	<u>Observation</u>	Recommendation	Management Response
	Risk Rating	Low		
5	Control Environment  Principle 3 – Establishes reporting lines  Principle 5 – Enforced accountability through structures, authority and responsibilities	An organization chart is maintained on DC Water's intranet, "Pipeline", and through the Microsoft Outlook address book. These organizational charts are available to all employees with access to a computer or email account. However, the organizational chart on both Pipeline and Outlook are not up-date-to for current titles and DC Water's reporting structure.  Per our interviews, the recent organizational changes have created confusion between the roles, responsibilities and authority within Executive Leadership and Senior Leadership. For example, the differences between an Assistant General Manager (AGMs) and a Chief are unclear. Currently, employees are dependent on information shared between Managers, Supervisors and other employees.  Since the organizational chart has not been updated and there have been multiple re-organizations in the past few years, reporting lines and authority may be unclear.	Suggested Control:  The Authority maintains an up-to-date organizational charts that clearly depicts the reporting hierarchy, as well any informal chain of command for each operating unit and department. The organizational chart is available to all employees and customers through DC Water's website, Pipeline and Microsoft Outlook address book.  Additionally, DC Water maintains an authority delegation matrix and a segregation of duties matrix.	Response:  HCM will partner with ITSC to ensure the AD is current and DC Water organizational charts are updated in a timely fashion.  As of today, AD is updated manually (data entry) by IT Solutions Center (ITSC). HCM provides ITSC a new hire spreadsheet each pay period with employee's department, title, employee number, and supervisor. ITSC uses the spreadsheet to create an employee network account in AD. This data is used to create the organization chart. Employees who have changes such as promotions, or movement to another department are dependent on departments to submit an ITSC ticket updating their employee's information. Departments have been notified to complete the request to ITSC, however it seems they have not been in compliance. HCM will explore taking on the responsibility to ensure this communication happens with ITSC asking them to accept a spreadsheet of employee changes they can use to update AD. This process may also be handled by HCM Business Partners once the three vacant position are filled.





S	Summary of Observations and Recommendations			
	Reference	<u>Observation</u>	Recommendation	Management Response
	Risk Rating	Low		
5				Response (continued):
				HCM will partner with ITSC and our IT Windows team to explore creating a process that will take a data feed from our core HCM system. If AD cannot be configured to take a data feed, it may be necessary to have IT discontinue publishing AD's version of DC Water org charts on Authority sites. In the alternative HCM would publish PDF versions of the organization charts.  The Authority will create and keep up to date delegation matrix which will be maintained in the Office of the General Manager.  Responsible Party:  Director, Human Capital Management  Target Date:  December 31, 2017





S	Summary of Observations and Recommendations			
	Reference	<u>Observation</u>	Recommendation	Management Response
	Risk Rating	Low		
66	Control Environment  Principle 4 — Attracts, develops, and retains individuals  Principle 5 — Establishes performance measures incentives and rewards; Evaluates performance measures, incentives, and rewards for ongoing relevance	Strategic Plan is to "develop, maintain and recruit a high performing workforce." In order to accomplish these goals, DC Water has been enhancing the employee performance management tools and identifying opportunities for employee development.  However, per our interviews and hotline complaints that have been received, employees expressed concern about being limited in their ability to move upward within the organization which may be due to the lack of awareness or transparency of the selection and hiring process.  It should be noted that this observation is based on interviews and that new hire, selection and on-boarding internal audit will be conducted during FY 2018 to evaluate employee concerns.  Concerns were attributed to the following:  Tenure of employees in key management, senior and executive level positions	The Authority should continue to address Goal 1 of the strategic plan through improved performance management tools and identification of training opportunities. As previously noted, Internal Audit will also conduct a new hire, selection and onboarding internal audit to evaluate the employee concerns.  Suggested Control:  DC Water demonstrates a commitment to attract, develop, and retain competent individuals in alignment with the goals and commitments outlined in the strategic plan. On an annual basis, DC Water Management evaluates employee performance, provides constructive feedback and opportunities for improvement through training, leadership development and other means.  The company utilizes a process through which poor performance is brought to the attention of employees and then performance standards are reiterated or clarified. Formal memorandums relating to performance are placed in employee files.	Response:  The Authority considers its greatest asset to be its employees. We strive to hire the best talent in the market; invest in those employees' development; reward them for superior performance; and retain those employees because DC Water is a great place not only to work but to make a career. To this end, we determined these findings were reached based on interviews of a representative population. Without sufficient data and feedback from enough employees, we are unable to determine any level of noncompliance or risk with regard to Blue Horizon 2020 – Goal 1.  These findings are premised on the notion that employees expressed frustration with opportunities for upward mobility based on:  Tenure of employees in key management, senior and executive positions;  The Authority considers the number of highly tenured employees, both within the ranks of management and front-line employees, to be an indication that DC Water is a great place to work. Tenure demonstrates the level of commitment employees have chosen to make to DC Water with regard to their professional career.





Summary of Observations and Recommendations			
Reference	Observation	Recommendation	Management Response
Risk Rating	Low		
6	Employees expressed concern that they are unable to advance their career if the position did not exist due to individuals retaining key roles for upward of 20 years of service. Reference observation #6 regarding succession planning and the applicable management action plan.  Unclear or undefined performance goals that may not correlate with company objectives  Employees expressed a lack of awareness of the strategic alignment between their goals and those of superiors and the organization. It was noted that the Maturity Assessments have provided more clarity to performance goals along with the roll out of Advancing Blue (Performance Management process) and the Authority-wide succession planning process		Response (continued):  Accordingly, we believe the issue to focus on is not frustration with advancement but how to balance the need for knowledge transfer and succession planning with appropriate development opportunities for less tenured employees. There is no doubt that retaining employees does limit some opportunities for advancement. HCM plans to conduct further analysis of this issue and provide an update to the Committee by January 2018. This review will consider the number of highly tenured employee (20 years of service or greater); the number of internal promotions made within the past two years; promotions by grade and department; and forecast for highly tenured separations by retirement in the next five years.  Unclear defined performance goals that may not correlate to company objectives;
	Hiring of employees externally or from contractors, as opposed to hiring from within  Though there is an evaluation process to consider the best candidate for a position, employees expressed concerns or had perceptions regarding the frequency of outside contractors hired into DC Water		Although, it is our position there is insufficient data or documented feedback to merit any finding on this topic we do welcome the opportunity to speak to aligning employee performance with DC Water objectives. The Authority uses the performance management system, Advancing Blue, to create alignment between strategic planning, operational





S	Summary of Observations and Recommendations			
	Reference	<u>Observation</u>	Recommendation	Management Response
	Risk Rating	Low		
6		Lack of awareness of open positions within other departments  Though DC Water has controls in place to post positions, we noted a lack of awareness regarding the procedures on how hiring and promotion decisions are made or when a position is repurposed.  Additionally, employees may not be aware of what development opportunities exist and the related requirements as DC Water is still in the process of identifying training requirements by position (reference the FY 2016 "Training, Licensing and Certification Internal Audit Report").		Response (continued):  At the beginning of each performance rating cycle we stress the importance of our Executive team creating goals that are aligned with strategy and operational priorities. These goals should essentially cascade down and be reflected in the performance goals set for directors, managers, and supervisors within their respective business unit. The current performance management system in place prohibits the establishment of performance goals for union employees. This prohibition was one of the central issues that delayed negotiation of the successor agreement on compensation. We are pleased to have successfully negotiated such prohibition out of the agreement that was ratified this year. Beginning on April 1, 2018, performance goals will also be established for union employees. We believe proper goal setting, coaching and feedback during the performance year should create alignment and clarity to DC Water objectives and the endeavors we direct our employees to complete. In order to enhance the likelihood that our planning is aligned with our actual outcomes, HCM will begin to audit performance cycle.





S	Summary of Observations and Recommendations			
	Reference	Observation	<u>Recommendation</u>	Management Response
	Risk Rating	Low		
6				Response (continued):  Hiring employees externally versus hiring from within;  The Authority values promotional opportunities for internal employees. However, we also value finding the best talent the market has to offer when hiring opportunities occur. Our preference is to promote from within but we will not promote an internal employee during recruitment of a position if we believe we have found a more suitable candidate that happens to be external, during the screening process. As noted above, we will report to the Committee by November 30, 2017 on the number of internal candidates we have promoted in the past two years. If our analysis reveals opportunities for improvement we will take immediate action as warranted. Labor Relations has offered for many years the opportunity for represented employees a chance for a resume review and to conduct a mock interview in the event the employee feels he/she is not adequately prepared to interview for a higher level position or lateral position within their unit or elsewhere within the Authority.





S	Summary of Observations and Recommendations			
	<u>Reference</u>	<u>Observation</u>	Recommendation	Management Response
	Risk Rating	Low		
6				Response (continued):
				Lack of awareness of open positions within other departments;
				We publish job opportunities in a number of ways. First, we utilize the DC Water website to post vacant positions under our career opportunities. Second, we post on select bulletin boards at work sites throughout the Authority. Third, we provide copies of job opportunities for union positions directly to the Union presidents concurrent with our distribution through the methods referenced in this response. Finally, we utilize external job boards such as Monster, Indeed, LinkedIn, DCJobs, etc.
				The Authority also notes that we are preparing to launch our enterprise employee engagement survey in October. This survey is a critical instrument that we believe will better capture the level of satisfaction employees have with promotional and developmental opportunities here at the Authority. We look forward to sharing the results of this survey at a future meeting of the Committee if so desired.  Responsible Party: Director, Human Capital
				Management Director, Human Capital
				Target Date: December 31, 2017





Sı	Summary of Observations and Recommendations						
	Reference	<u>Observation</u>	Recommendation	Management Response			
	Risk Rating	Low					
7	Control Environment  Principle 4 - Plans and prepares for succession	DC Water does not currently have a formal, documented succession plan for the Authority.  However, DC Water has identified the need for a succession plan through goal 1 of the Blue Horizon 2020 Strategic Plan. Additionally, efforts have begun to document the succession plan through a pilot program to identify key positions within the Authority. Additionally, DC Water has purchased the Succession Planning module within Cornerstone, the performance management system.  Without developing and maintaining a succession plan for members of the leadership team, DC Water may fail to retain and transfer institutional knowledge and may struggle to replace departing leaders in a timely manner. Based on our interviews, there is a larger reliability on institutional knowledge due to the tenure of employees across the Authority and the lack of documentation of policies and procedures.	The Authority should continue to develop the succession plan, both at the Senior Leadership level and at the Department-level. As the succession plan is developed, it should be communicated to the appropriate audience, including the Board of Directors and applicable Board Committees.  Suggested Control  DC Water maintains a succession plan for individual in key executive leadership positions and key operational positions. The plan is evaluated on an annual basis.	Response:  DC Water is currently finalizing plans for a 30 position pilot succession plan. At the conclusion of a one-year pilot program the Authority will review outcomes and determine how to best proceed with a permanent program.  Responsible Party:  Director, Human Capital Management  Target Date:  December 31, 2017			





### SUMMARY OF DC WATER'S ENTITY-LEVEL CONTROLS

#### **CONTROL ENVIRONMENT**

The control environment reflects the tone set by senior management and the overall attitude, awareness and actions of the Board of Directors, management, stakeholders, and others concerning the importance of the overall internal control and emphasis placed on control in the Authority's policies, procedures, methods and organizational structure. It is the foundation for all other components of internal control, providing discipline and structure.

Principle 1: The Authority demonstrates commitment to integrity & ethical values

COSO Points of Focus*		
Control Objectives	DC Water's Control	<b>Effective</b>
<b>Sets the tone at the top</b> - The Board of Directors and management at all levels of the entity demonstrate, through their directives, actions, and behavior, the importance of integrity and ethical values to support the functioning of internal control systems.	<ul> <li>The Board of Directors, Board Committees and the CEO and General Manager set the tone at the top of the organization through oversight and operational responsibilities</li> <li>The Board of Directors meet monthly and the Board Committees meet frequently to ensure transparency of operations and strategic planning. All meetings are evidenced via meeting minutes that are posted to DC Water's website.</li> </ul>	Yes
<b>Establishes standards of conduct</b> - The expectations of the Board of Directors and Executive Management concerning integrity and ethical values are defined in the entity's standards of conduct and understood at all levels of the organization, including outsourced service providers and business partners.	is available on the DC Water's intranet, "Pipeline", and is provided to new hires upon employment.	Partial (3)
<b>Evaluates adherence to standards of conduct</b> - Processes are in place to evaluate the adherence of individual and team conduct against the entity's expected standards of conduct.	<ul> <li>A fraud, waste and abuse (ethics) hotline is available to all employees to report instances of non-ethical behavior.</li> <li>All complaints are routed through internal Audit and investigated by the appropriate department.</li> </ul>	Partial (4)

<sup>(3) -</sup> See Observations and Recommendations #3



<sup>(4) –</sup> See Observation and Recommendations #4

<sup>\*</sup>Through the summary of DC Water's entity-level controls, we evaluated 60 of the 81 COSO points of focus. It was not required to evaluate all points of focus to evaluate each principle as many are related or duplicative.



### **SUMMARY OF DC WATER'S ENTITY-LEVEL CONTROLS**

**CONTROL ENVIRONMENT (CONTINUED)** 

Control Objectives	DC Water's Control	<b>Effective</b>
Addresses deviations in a timely manner - Deviations of the Company's expected standards of conduct are identified and remedied in a timely and consistent manner.		Yes





## **SUMMARY OF DC WATER'S ENTITY-LEVEL CONTROLS (CONTINUED)**

### **CONTROL ENVIRONMENT (CONTINUED)**

Principle 2: The board of directors demonstrates independence from management and exercises oversight of the development and performance of internal controls

COSO Points of Focus			
Control Objectives	DC Water's Control	<b>Effective</b>	
Establishes board of directors oversight responsibilities - The Board of Directors identify and accept its oversight responsibilities in relation to established requirements and expectations.	<ul> <li>In accordance with the District of Columbia Water and Sewer Authority enabling legislation (D.C. Code § 34-2202.05), the oversight responsibilities of the Board of Directors are clearly defined.</li> <li>Upon appointment to the Board of Directors, each Board member is provided with a "New Board Member Briefing Book", which contains DC Water's enabling legislation, Board by-laws, Board Minutes and other various documents. Additionally, an orientation is held with new Board members.</li> <li>Board and Committee meeting minutes are posted on DC Water's website.</li> </ul>	Yes	
<b>Applies relevant expertise</b> - The Board of Directors defines and periodically assesses the essential knowledge and skills needed among its members to enable them to ask probing questions of Executive Management and take commensurate actions.	Columbia and confirmed by the DC Council (D.C. Code § 34-2202.04).	Yes	
<b>Operates independently</b> - The Board of Directors includes a sufficient representation of members who are independent of the organization and demonstrate objectivity.	<ul> <li>On an annual basis, the Mayor's Office of Boards, Ethics and Accountability and Governance (BEGA) coordinate a review of Board member independence. Board Members are required to complete a "Confidential Statement of Employment and Financial Interests".</li> </ul>	Yes	





## **SUMMARY OF DC WATER'S ENTITY-LEVEL CONTROLS (CONTINUED)**

### **CONTROL ENVIRONMENT (CONTINUED)**

Control Objectives	DC Water's Control	<b>Effective</b>
<b>Provides oversight for the system of internal controls</b> - The Board of Directors guide, direct and review the development and performance of the internal control system.		Yes





## **SUMMARY OF DC WATER'S ENTITY-LEVEL CONTROLS (CONTINUED)**

### **CONTROL ENVIRONMENT (CONTINUED)**

Principle 3: Management establishes, with board oversight, structures, reporting lines, and appropriate authorities and responsibilities in the pursuit of objectives.

COSO Points of Focus		
Control Objectives	DC Water's Control	<b>Effective</b>
Considers all structures of the entity - Executive Management and the Board of Directors consider the multiple structures used (including operating units, legal entities, and outsourced service providers) to support the achievement of objectives.	and revised the strategic plan in 2015.	Yes
<b>Establishes reporting lines</b> - Management designs and evaluates appropriate lines of reporting for each entity structure, enabling the execution of authorities, responsibilities, and the flow of information necessary to manage the activities of the entity.	<ul> <li>An organization chart is maintained on DC Water's intranet, Pipeline, and through Microsoft Outlook for all employees to access including lines of reporting for each Department/Division.</li> </ul>	Partial (5)
Defines, assigns, and limits authorities and responsibilities - Executive Management and the Board of Directors delegate authority, define and assign responsibility, and segregate duties as appropriate at the various levels of the organization.	<ul> <li>DC Water maintains a contracting delegation of authority. This is incorporated into the Procurement Regulations and via a "Signature Authority Memorandum".</li> <li>Invoices are not released for payment unless the Department Head or designee approves the payment, in accordance with the "Procurement Disbursements" procedure.</li> </ul>	Yes

(5) – See Observations and Recommendations #5





## **SUMMARY OF DC WATER'S ENTITY-LEVEL CONTROLS (CONTINUED)**

### **CONTROL ENVIRONMENT (CONTINUED)**

Principle 4: The Authority demonstrates a commitment to attract, develop, and retain competent individuals in alignment with objectives

COSO Points of Focus		
Control Objectives	DC Water's Control	<b>Effective</b>
Establishes policies and procedures - Policies and procedures reflect the organization's expectations of competence necessary to support the achievement of objectives.	<ul> <li>Authority-wide policies and procedures are housed on DC Water's intranet, Pipeline.</li> <li>The Strategic Mission and Vision of the Information Technology Department is communicated to all of DC Water's employees, contractors and vendors through comprehensive policies and Standard Operating Procedures (SOPs). The governance documents are reviewed by the Information Technology Department Management Staff. Governance documents that have an enterprise wide impact are also reviewed/approved by the Office of the General Counsel (OGC) and/or the General Manager or their designate. This document identifies those policies and SOPs that have gone through the review process and approved by Chief Information Officers (CIO).</li> </ul>	Partial <sup>(1)</sup>
<b>Evaluates competence and addresses shortcomings</b> - The Board of Directors and Executive Management evaluate competence across the organization and in outsourced service providers in relation to established policies and practices, and acts as necessary to address shortcomings.	<ul> <li>During FY 2016, DC Water established a Maturity Assessment initiative. The purpose of this initiative is to define key business processes and roles and responsibilities within each Department and then define the current state of maturity for these processes. After current state is identified, strategies are identified to advance the maturity of the business process and metrics are developed to measure maturity. Todate the maturity assessments have been completed for Human Capital Management, Information Technology and Facilities.</li> <li>Additionally, the risk based internal audit plan evaluates DC Water's compliance with established policies and practices to identify any deficiencies.</li> </ul>	Yes







## **SUMMARY OF DC WATER'S ENTITY-LEVEL CONTROLS (CONTINUED)**

### **CONTROL ENVIRONMENT (CONTINUED)**

COSO Points of Focus			
Control Objectives		DC Water's Control	Effective
Attracts, develops, and retains individuals - The organization provides the mentoring and training needed to attract, develop, and retain sufficient and competent personnel and outsourced service providers to support the achievement of objectives.	•	Positions within each Departments are approved through the annual budget process. As needed, business cases for additional positions or repurposing of positions are provided to Human Capital Management and the Budget Department. As part of this process, job descriptions may be reviewed and updated.  The Human Capital Management department has a Talent Division, focused on recruiting competent personnel.	Partial <sup>(6)</sup>
<b>Plans and prepares for succession</b> - Executive Management and the Board of Directors develop contingency plans for assignments of responsibility important for internal control.		An objective of goal one of the Blue Horizon 2020 Strategic Plan is to implement an organizational succession plan.  DC Water purchased the Succession Planning module within Cornerstone, the performance management system. A pilot program has begun to identify key positions and develop the succession plan.	Partial (7)

<sup>(6) -</sup> See Observations and Recommendations #6



<sup>(7) -</sup> See Observations and Recommendations #7



## **SUMMARY OF DC WATER'S ENTITY-LEVEL CONTROLS (CONTINUED)**

### **CONTROL ENVIRONMENT (CONTINUED)**

Principle 5: The Authority holds individuals accountable for their internal control responsibilities in the pursuit of objectives

COSO Points of Focus		
Control Objectives	DC Water's Control	<b>Effective</b>
Enforces accountability through structures, authorities, and responsibilities - Executive Management and the Board of Directors establish the mechanisms to communicate and hold individuals accountable for performance of internal control responsibilities across the organization and implement corrective action as necessary.	<ul> <li>The Internal Audit function conducts internal control reviews, supporting the enforcement of accountability.</li> <li>A fraud, waste and abuse (ethics) hotline is available to all employees to anonymously report instances of non-ethical behavior to a third-party (Internal Auditors).</li> <li>DC Water has a Standards of Conduct policy.</li> </ul>	Partial (1, 5)
Establishes performance measures, incentives, and rewards - Executive Management and the Board of Directors establish performance measures, incentives, and other rewards appropriate for employees at all levels of the entity, reflecting appropriate dimensions of performance, expected standards of conduct, and the achievement of both short-term and long-term objectives.	<ul> <li>DC Water has implemented the Cornerstone performance management system. As part of this process, DC Water began on their leadership development program, "Leading Blue". This initiative is to develop a leadership training program and identify critical leadership competencies.</li> <li>In support of Goal 1 of the Blue Horizon 2020 Strategic Plan, a revised</li> </ul>	Partial <sup>(6)</sup>
Evaluates performance measures, incentives, and rewards for ongoing relevance - Executive Management and the Board of Directors align incentives and rewards with the fulfillment of internal control responsibilities in the achievement of objectives.	Rewards and Recognition Program has been presented for Executive Management evaluation.  The Authority maintains and updates as necessary job descriptions, which outline roles and responsibilities.	

<sup>(1, 5) -</sup> See Observations and Recommendations #1 and #5



<sup>(6) -</sup> See Observations and Recommendations #6



### SUMMARY OF DC WATER'S ENTITY-LEVEL CONTROLS (CONTINUED)

#### **RISK ASSESSMENT**

Risk assessment is the company's identification and analysis of relevant risks (both internal and external) to the achievement of its objectives, forming a basis for determining how the risks should be managed.

Principle 6: The Authority specifies objectives with sufficient clarity to enable the identification and assessment of risks relating to objectives.

COSO Points of Focus		
Control Objectives	DC Water's Control	<b>Effective</b>
<b>Considers materiality</b> - Management considers materiality in financial statement presentation.	<ul> <li>The Budget and Finance Committee considered the dollar value of materiality when they establish and review the ten-year financial plan.</li> <li>CFO and Finance evaluate external audit results for material adjustments and potential management letter comments and areas of concern</li> </ul>	Yes
<b>Complies with applicable accounting standards</b> - Financial reporting objectives are consistent with accounting principles suitable and available for that entity. The accounting principles selected are appropriate in the circumstances.	<ul> <li>CFO meets with External Auditors every July for a kick-off meeting where they discuss new changes in accounting standards applicable to the Authority.</li> <li>The External Audit is performed within relevant standards by Certified Public Accountants.</li> </ul>	Yes
<b>Considers risk factors</b> - An entity's assessment considers factors that influence the significance of the loss of assets and the related impact on operations, reporting, and compliance activities.	<ul> <li>Internal Audit performs a risk assessment and discusses results with management.</li> <li>External Audit also performs a fraud risk assessment on an annual basis</li> <li>DC Water hired an independent risk management consultant to provide services related to coverage assessments, claim/risk analyses, policy review, Rolling Owner Controlled Insurance Program (ROCIP) project management and other consultation for various areas of risk.</li> </ul>	Partial (2)





(2) - See Observations and Recommendations #2



## **SUMMARY OF DC WATER'S ENTITY-LEVEL CONTROLS (CONTINUED)**

### RISK ASSESSMENT (CONTINUED)

**Principle 7:** The Authority identifies risks to the achievement of its objectives across the entity and analyzes risks as a basis for determining how the risks should be managed.

COSO Points of Focus		
Control Objectives	DC Water's Control	Effective
Includes entity, subsidiary, division, operating unit, and functional levels - The organization identifies and assesses risks at the entity, subsidiary, division, operating unit, and functional levels relevant to the achievement of objectives.	<ul> <li>As part of the annual budget process, DC Water evaluates risks at various levels of the entity, including an evaluation of operational risks and financial risks.</li> <li>For Construction-related projects, Project Managers complete a risk register for each project during planning.</li> </ul>	Partial (2)
<b>Analyzes internal and external factors</b> - Risk identification considers both internal and external factors and their impact on the achievement of objectives.	DC Water developed the Blue Horizon 2020 Strategic Plan to consider both internal and external factors that impact operations and achievement of objectives.	Partial (2)
<b>Involves appropriate levels of management</b> - The organization puts effective risk assessment mechanisms in place, which involve appropriate levels of management.	<ul> <li>As part of the annual budget process, managers and Department Heads evaluate risks and present them to Chief Operating Officer and other members of Senior Leadership and Executive Leadership.</li> </ul>	Partial (2)
Estimates significance of risks identified - Identified risks are analyzed through a process that includes estimating the potential significance of the risk.	<ul> <li>DC Water hired an independent risk management consultant to provide services related to coverage assessments, claim/risk analyses, policy review, Rolling Owner Controlled Insurance Program (ROCIP) project management and other consultation for various areas of risk.</li> <li>As part of the annual Internal Audit risk assessment, risks are evaluated for likelihood and impact (significance).</li> </ul>	Partial (2)

(2) – See Observations and Recommendations #2





## **SUMMARY OF DC WATER'S ENTITY-LEVEL CONTROLS (CONTINUED)**

### RISK ASSESSMENT (CONTINUED)

Principle 8: The Authority considers the potential for fraud in assessing risks to the achievement of objectives.

COSO Points of Focus			
Control Objectives	DC Water's Control	Effective	
Considers various ways that fraud can occur - The assessment of fraud considers possible loss of assets, fraudulent reporting, and corruption resulting from the various ways that fraud and misconduct can occur.		Partial (7)	
Assesses incentive, pressures and opportunities - The assessment of fraud risk considers incentives, pressures and opportunities for unauthorized acquisition, use, or disposal of assets, altering of the entity's reporting records, or committing other inappropriate acts.	for loss of information.  The General Provisions for DC Water contracts include requirements for	Partial (7)	
Determines how to respond to risks - Risk assessment includes considering how the risk should be managed and whether to accept, avoid, reduce, or share the risk.	<ul> <li>DC Water hired an independent risk management consultant to provide services related to coverage assessments, claim/risk analyses, policy review, Rolling Owner Controlled Insurance Program (ROCIP) project management and other consultation for various areas of risk.</li> </ul>	Partial (7)	

(7) - See Observations and Recommendations #7





## **SUMMARY OF DC WATER'S ENTITY-LEVEL CONTROLS (CONTINUED)**

### RISK ASSESSMENT (CONTINUED)

Principle 9: The Authority identifies and assesses changes that could significantly impact the system of internal controls.

COSO Points of Focus		
Control Objectives	DC Water's Control	Effective
Assesses changes in the external environment - The risk identification process considers changes to external factors that can significantly affect the entity's ability to achieve objectives.	<ul> <li>In alignment with Goal 2 of the Blue Horizon 2020 Strategic Plan, External Affairs monitor and report any regulation changes to the Executive Leadership Team.</li> <li>DC Water is also involved with various organizations, such as the American Water Works Association (AWWA), and are able to identify external trends that may impact DC Water's operations.</li> </ul>	Yes
Assesses changes in the business model - The organization considers the potential impacts of new business lines, dramatically altered compositions of existing business lines, acquired or divested business operations on the system of internal control, changing reliance on foreign geographies, new technologies, and changes to the physical environment in which the business operates.	Directors to assist DC Water focus on long-term strategies, including modifications to the business model to address risks and changes to the industry.	Yes
Assesses changes in leadership - The organization considers changes in management and their respective attitudes and philosophies on the system of internal control.	<ul> <li>As part of the strategic plan, DC Water continually evaluates the organizational structure and adjusts the reporting structure as appropriate. For example, Human Capital Management was recently restructured and now reports to the Chief of Staff as opposed to the Chief Operating Officer through Support Services.</li> </ul>	Yes





## **SUMMARY OF DC WATER'S ENTITY-LEVEL CONTROLS (CONTINUED)**

#### **CONTROL ACTIVITIES**

Control Activities are the policies and procedures that help ensure that management's directives are carried out.

Principle 10: The Authority selects and develops control activities that contribute to the mitigation of risks to the achievement of objectives to acceptable levels.

COSO Points of Focus		
Control Objectives	DC Water's Control	<b>Effective</b>
Integrates with risk assessment – The organization considers risks when developing policies and procedures.	The Blue Horizon 2020 Strategic Plan was adopted by the Board of Directors to assist DC Water focus on long-term strategies, including modifications to the business model to address risks and changes to the	Partial (2)
<b>Considers entity-specific factors</b> – The organization considers specific risks unique to their own operations and objectives.	industry.	
<b>Determines relevant business processes</b> - Ongoing evaluations of the business processes are conducted to determine key processes to the organization.	<ul> <li>During FY 2016, DC Water established the Maturity Assessment initiative. The purpose of this initiative is to define key business processes and roles and responsibilities within each Department and then define the current state of maturity for these processes. After current state is identified, strategies are identified to advance the maturity of the business process and metrics are developed to measure maturity. Todate the maturity assessments have been completed for Human Capital Management, Information Technology and Facilities.</li> <li>On an annual basis, Internal Audit conducts an entity-wide risk assessment, identifies key business areas, and high risk processes to be included in the internal audit plan.</li> </ul>	Yes
Addresses segregation of duties - The organization ensures there are appropriate segregation of incompatible activities.  (2) – See Observations and Recommendations #2	<ul> <li>DC Water maintains a contracting delegation of authority. This is incorporated into the Procurement Regulations and via a "Signature Authority Memorandum".</li> <li>Invoices are not released for payment unless the Department Head or designee approves the payment, in accordance with the "Procurement Disbursements" procedure.</li> </ul>	Yes





## **SUMMARY OF DC WATER'S ENTITY-LEVEL CONTROLS (CONTINUED)**

### **CONTROL ACTIVITIES (CONTINUED)**

Principle 11: The Authority selects and develops general control activities over technology to support the achievement of objectives.

COSO Points of Focus		
Control Objectives	DC Water's Control	Effective
Determines dependency between the use of technology in business processes and technology general controls — The organization considers the role of technology when defining business objectives.	requests.	Yes
Establishes relevant technology infrastructure control activities – The organization has considered technology's role in meeting business objectives in its policies and procedures.	<ul> <li>The IT department has developed and implemented specific IT policies and procedures such as the "Department of Information Technology - Acquisition of IT Hardware, Software or Services Standard Operating Procedure – POL-101, Configuration Management SOP POL-117, and Change Management SOP POL 103 which provides guidance around monitoring and maintaining the information technology infrastructure or requesting new technology and maintaining current systems.</li> <li>The Enterprise Governance structure utilizes steering committees to ensure information technology is incorporate into the Authority strategic plans.</li> <li>Internal Audit performs periodic audits of IT related policies and controls.</li> </ul>	Partial (1)





## **SUMMARY OF DC WATER'S ENTITY-LEVEL CONTROLS (CONTINUED)**

### **CONTROL ACTIVITIES (CONTINUED)**

COSO Points of Focus		
Control Objectives	DC Water's Control	<b>Effective</b>
Establishes relevant security management process control activities - There is a security officer function that monitors IT processing activities.	The Senior Cyber Security Coordinator within the IT organization has developed / implemented policies and procedures to establish an information security management program.  Tools (e.g. SysInternal, Security Incident and Event Management, etc.) are utilized to monitor, detect, analyze, and report security events throughout the information system environment.	Yes
Establishes relevant technology acquisition, development, and maintenance process control activities – The organization has controls specifically for handling and operating technology.	<ul> <li>The Authority has developed and implemented "IT POL 101 Acquisition of IT Hardware, Software and Services Standard Operating Procedure" which provides guidance in acquiring IT systems and solutions ensure interoperability of systems and IT cost are appropriately managed and controlled.</li> <li>The Authority has developed and implemented "Information Systems - System Development Policy IT POL 114" which provides guidance around the implementation of new systems or the upgrading of current systems.</li> </ul>	Yes





## **SUMMARY OF DC WATER'S ENTITY-LEVEL CONTROLS (CONTINUED)**

### **CONTROL ACTIVITIES (CONTINUED)**

Principle 12: The Authority deploys control activities through policies that establish what is expected and in procedures that put policies into action.

COSO Points of Focus		
Control Objectives	DC Water's Control	<b>Effective</b>
Establishes policies and procedures to support deployment of management's directives — The organization creates and implements applicable policies and procedures to help accomplish their objectives.	Authority-wide policies and procedures are housed on DC Water's intranet, Pipeline.	Partial (1)
Establishes responsibility and accountability for executing policies and procedures – The organization clearly defines the roles and responsibilities for internal controls surrounding policies and procedures.	<ul> <li>Operational procedures are developed, reviewed and approved at a Department Level. Employee policies and procedures are established and owned by Human Capital Management.</li> </ul>	Partial (1)
Reassesses policies and procedures – The organization periodically re-examines their existing policies and procedures to make sure they are still applicable to their objectives.	<ul> <li>Periodically, Authority-wide policies and procedures are reviewed. Most recently, these policies have been reviewed and approved internally for union negotiations.</li> </ul>	Partial (1)

(1) - See Observations and Recommendations #1





### SUMMARY OF DC WATER'S ENTITY-LEVEL CONTROLS (CONTINUED)

#### **INFORMATION AND COMMUNICATION**

Information and communication systems support the identification, capture and exchange of information in a form and time frame that enables management and other appropriate personnel to carry out their responsibilities. Information is identified, captured, processed and reported by information systems. Relevant information includes industry; economic and regulatory information obtained from external sources, and internally generated information.

Principle 13: The Authority obtains or generates and uses relevant, quality information to support the functioning of internal controls.

COSO Points of Focus		
Control Objectives	DC Water's Control	<b>Effective</b>
Identifies information requirements - A process is in place to identify the information required and expected to support the functioning of the other components of internal control and the achievement of the entity's objectives.  Captures internal and external sources of data - Information systems capture internal and external sources of data.	<ul> <li>Through the Maturity Assessment process, DC Water is evaluating information required to develop metrics and assess the maturity of business processes.</li> <li>The Authority has developed and implemented a Data Classification Policy POL 105" which provides guidance regarding how data should be identified, categorized, and managed on a daily basis.</li> <li>The Authority has implemented three (3) levels of data classification based on the level of risk from the unauthorized disclosure, access, modification and or use of the data. The data classification levels are Level 1 – Private Information, Level 2 – Confidential information and Level 3 – General or Public information. The Authority does not process or store any classified data.</li> </ul>	Yes
<b>Processes relevant data into information</b> - Information systems process and transform relevant data into information.	<ul> <li>Within the Authority information system environment there are multiple critical systems utilized to process data into relevant information which is utilized to manage the organization. Critical systems such as Asset Management System (Maximo), Supervisory Control and Data Acquisition (SCADA) software, the Lawson Financial System and Customer Information System (CIS) are vital to the Authority's operations.</li> </ul>	Yes





## **SUMMARY OF DC WATER'S ENTITY-LEVEL CONTROLS (CONTINUED)**

**INFORMATION AND COMMUNICATION (CONTINUED)** 

COSO Points of Focus		
Control Objectives	DC Water's Control	<b>Effective</b>
<b>Maintains quality throughout processing</b> - Information systems produce information that is timely, current, accurate, complete, accessible, protected, and verifiable and retained. Information is reviewed to assess its relevance in supporting the internal control components.	<ul> <li>When new systems or processes are established involving information systems, DC Water conducts appropriate user acceptance testing. For larger implementations, such as the rates change or new meter installations, a Steering committee is established to govern the project.</li> <li>The Authority has developed and implemented an "Information Technology Policy – POL 100" which provides guidance to ensure information systems are process information accurately, completely, and timely.</li> </ul>	Yes





### SUMMARY OF DC WATER'S ENTITY-LEVEL CONTROLS (CONTINUED)

### **INFORMATION AND COMMUNICATION (CONTINUED)**

Principle 14: The Authority internally communicates information, including objectives and responsibilities for internal control, necessary to support the functioning of internal control.

COSO Points of Focus		
Control Objectives	DC Water's Control	<b>Effective</b>
Communicates internal control information with personnel - A process is in place to communicate required information needed for all personnel to understand and carry out their internal control responsibilities.	intranet, Pipeline.	Partial (1)
Communicates with the Board of Directors - Communication exists between Executive Management and the Board of Directors so that both have the information needed to fulfill their roles with respect to the entity's objectives.	On a monthly basis, the Board of Directors meet to review reports from the Board Committees, obtain updates from Executive Leadership and approve contracts, as applicable.	Yes
<b>Provides separate communication lines</b> - Separate communication channels, such as whistle-blower hotlines, are in place and serve as fail-safe mechanisms to enable anonymous or confidential communication when normal channels are inoperative or ineffective.	<ul> <li>A fraud, waste and abuse (ethics) hotline is available to all employees to anonymously report instances of non-ethical behavior to a third-party (Internal Auditors).</li> </ul>	Yes
<b>Selects relevant method of communication</b> - The method of communication considers the timing, audience, and nature of the information.	<ul> <li>DC Water maintains an Emergency Management Plan, which includes incident-specific procedures and communication guides. Emergency alerts can be sent by email or direct phone call.</li> <li>DC Water has a weather hotline for information for employees, contractors and customers.</li> </ul>	Yes

(1) - See Observations and Recommendations #1





## **SUMMARY OF DC WATER'S ENTITY-LEVEL CONTROLS (CONTINUED)**

### **INFORMATION AND COMMUNICATION (CONTINUED)**

Principle 15: The Authority communicates with external parties regarding matters affecting the functioning of internal control.

COSO Points of Focus		
Control Objectives	DC Water's Control	<b>Effective</b>
Communication to external parties - Processes are in place to communicate relevant and timely information to external parties including shareholders, partners, owners, regulators, customers, and financial analysts and other external parties.	their website for general information and news.	Yes
<b>Enables inbound communications</b> - Open communication channels allow input from customers, consumers, suppliers, external auditors, regulators, financial analysts, and others, providing Executive Management and the Board of Directors with relevant information.	<ul> <li>DC Water maintains various hotline for inbound communications, including the fraud, waste and abuse hotline, specific phone numbers for media inquiries, and customer service concerns.</li> <li>Goal 4 of the Blue Horizon 2020 Strategic Plan is to increase customer satisfaction. To address this goal, DC Water has conducted a customer survey and customer stakeholder focus groups to develop recommendations for areas to improve upon.</li> </ul>	Yes





# **SUMMARY OF DC WATER'S ENTITY-LEVEL CONTROLS (CONTINUED)**

#### **MONITORING**

Monitoring is a process that assesses the quality of internal control performance over time.

**Principle 16:** The organization selects, develops, and performs ongoing and/or separate evaluations to ascertain whether the components of internal control are present and functioning.

COSO Points of Focus		
Control Objectives	DC Water's Control	<b>Effective</b>
Considers a mix of ongoing and separate evaluations - Management includes a balance of ongoing and separate evaluations.	<ul> <li>During FY 2016, DC Water established the Maturity Assessment initiative. The purpose of this initiative is to define key business processes and roles and responsibilities within each Department and then define the current state of maturity for these processes. After current state is identified, strategies are identified to advance the maturity of the business process and metrics are developed to measure maturity. Todate the maturity assessments have been completed for Human Capital Management, Information Technology and Facilities.</li> <li>On an annual basis, Internal Audit conducts an entity-wide risk assessment, identifies key business areas, and high risk processes to be included in the internal audit plan.</li> </ul>	Yes
<b>Considers rate of change</b> - Management considers the rate of change in business and business processes when selecting and developing ongoing and separate evaluations.	<ul> <li>During the annual risk assessment process, Internal Audit evaluates changes of business processes and organization to determine if a review of the business process is necessary.</li> </ul>	Yes
<b>Establishes baseline understanding</b> - The design and current state of an internal control system are used to establish a baseline for ongoing and separate evaluations.	<ul> <li>As part of the Internal Audit process, the design and current state of internal controls are documented and evaluated for effectiveness.</li> <li>Additionally, the current state of internal controls are utilized as the baseline for the Maturity Assessment.</li> </ul>	Yes





# **SUMMARY OF DC WATER'S ENTITY-LEVEL CONTROLS (CONTINUED)**

## MONITORING (CONTINUED)

COSO Points of Focus		
Control Objectives	DC Water's Control	<b>Effective</b>
<b>Uses knowledgeable personnel</b> - Evaluators performing ongoing and separate evaluations have sufficient knowledge to understand what is being evaluated.	<ul> <li>Internal Audits and the annual External Audit are performed by competent public accounting firms that follow applicable AICPA standards.</li> </ul>	Yes
<b>Integrates with business processes</b> - Ongoing evaluations are built into the business processes and adjust to changing conditions.	<ul> <li>As new technology is implemented, business processes are evaluated by DC Water through the establishment of steering committees and project management offices.</li> <li>Subsequent to the issuance of an internal audit report, Internal Audit conducts follow-up on the implementation of management action plans and evaluates modifications to business processes.</li> </ul>	Yes





# SUMMARY OF DC WATER'S ENTITY-LEVEL CONTROLS (CONTINUED)

## **MONITORING (CONTINUED)**

**Principle 17:** The Authority evaluates and communicates internal control deficiencies in a timely manner to those parties responsible for taking corrective action, including senior management and the board of directors, as appropriate.

COSO Points of Focus			
Control Objectives	DC Water's Control	<b>Effective</b>	
Assesses results - Executive Management and the Board of Directors, as appropriate, assess results of ongoing and separate evaluations.	<ul> <li>On a monthly basis, the General Manager &amp; CEO present metrics to the Board of Directors on the operational and financial performance of the Authority</li> <li>As the Maturity Assessments continue, additional metrics are being developed for Executive Leadership to assess.</li> </ul>	Yes	
<b>Communicates deficiencies to management</b> - Deficiencies are communicated to parties responsible for taking corrective action and to at least one level of management above.	<ul> <li>Internal Audit communicates audit findings to DC Water Management who creates a management action plan prior to presenting audit findings to the Audit Committee.</li> <li>On a quarterly basis, the Audit Committee obtains updates on the fraud, waste and abuse hotline. As needed, deficiencies and corrective actions are reported to the Board of Directors.</li> </ul>	Yes	
<b>Monitors corrective actions</b> - Management tracks whether deficiencies are remedied on a timely basis.	<ul> <li>Corrective actions from prior internal audits are followed up and tracked by Internal Audit and progress is reported to the Audit Committee on a quarterly basis.</li> </ul>	Yes	





# **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).	





## APPENDIX B - COSO PRINCIPLES

## The COSO Framework sets out the following 17 principles (summarized):

# Control Environment

- Demonstrates committment to integrity and ethical values
- Exercises oversight responsibilities
- Establishes structure, authority and responsibility
- Demonstrates commitment to competence
- Enforces accountability

# Risk Assessment

- · Specifies suitable objectives
- Identifies and analyzes risk
- Assesses fraud risk
- · Identifies and analyzes significant change

## **Control Activities**

- Selects and develops control activities
- Selects and develops general controls over technology
- · Deploys through policies and procedures

# Information & Communication

- · Uses relevant information
- Communicates internally
- · Communicates externally

# Monitoring

- Conducts ongoing and/or separate evaluations
- · Evaluates and communicates deficiencies



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# Internal Audit Report Materials Management – Inventory & Operations

October 2017





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## TRANSMITTAL LETTER

October 2017

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

Pursuant to the approved fiscal year 2017 internal audit plan for the District of Columbia Water and Sewer Authority ("DC Water" or the "Authority"), we hereby present our assessment of Materials Management – Inventory & Operations. We will be presenting this report to the Audit Committee of DC Water at the next scheduled meeting on October 26, 2017. Our report is organized in the following sections:

Executive Summary	This section provides a summary of the observations and related to our internal audit of the Materials Management – Inventory & Operations process.	
Background	This section provides an overview of the Materials Management – Inventory & Operations processes.	
Objectives and Approach  The internal audit objectives and focus are expanded upon in this section, as well as a review of the various phases approach.		
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





## **EXECUTIVE SUMMARY**

#### **Background**

The DC Water Materials Management team within the Department of Procurement is responsible for managing warehouse operations and all inventory stored within Authority warehouses. The goal of Materials Management operations is to provide a supply chain of materials to enable DC Water maintenance and service operations to perform scheduled and emergency work orders without delay. On time delivery and accuracy is to exceed 98% and approach 100%, respectively, based on the Materials Management policies and procedures.

DC Water currently operates two warehouses, one at the Blue Plains Advanced Wastewater Treatment Plant and the other at the Bryant Street Pumping Station. The Blue Plains warehouse was recently constructed as a part of the new 30,000 square foot building that includes the Visitor's Center, the Department of Security, the Office of External Affairs, as well as the new warehouse and all Materials Management staff. The new building was opened in March of 2014. Materials Management began utilizing the Bryant Street warehouse location in 2013, however the space was used by DC Water prior to 2013 to store other inventory items.

Demand for materials has steadily increased, with a monthly average of 305 shipments being sent to customers in FY 2014 to 648 monthly shipments in FY 2017. Even with the increased demand, the Materials Management team has been able to improve overall performance. A more formalized process was introduced to Materials Management in FY 2015 and has been a key factor in these improvements.

## **Objective and Scope**

Our procedures were performed in accordance with the internal audit scope and approach set forth in our audit notification letter, dated June 15, 2017, and were limited to those procedures described therein. Our scope included the following:

- Develop an understanding of the materials management operations and inventory processes through review of policies and procedures;
- Understand changes that have been implemented as a result of the asset management and reliability program;
- Review prior audit findings related to materials management and inventory:
- Validate that goods are acquired through the Authority's approved procurement process;
- Assess appropriateness of warehouse operations controls to capture all materials management movement at the Authority;
- Assess the safety and security of warehouses; including:
  - Physical state of warehouses;
  - Physical safeguards of warehouses such as alarm systems and security personnel on hand; and
  - Emergency procedures in place;
- Validate that all materials movements are appropriately recorded within the Authority's Asset Inventory Management system;
- Analyze the economic order quantity of frequently utilized items, including rolling truck stock;
- Verify that the disposal of assets is properly documented and approved; and
- Identify process improvement opportunities and recommend internal control enhancements to improve the overall materials management processes.

## **Overall Summary / Highlights**

The observations identified during our assessment are summarized on the next few pages. We have assigned relative risk or value factors to each observation. Risk ratings are the evaluation of the severity of the concern and the potential impact on the operations of each item. Observations will require management action plans with estimated completion dates that will be included in the routine follow-up of internal audit observations.

Fieldwork was performed June 2017 through August 2017

Overall Rating (See Appendix A for definitions)				
Number of Observations by Risk Rating				
	High Moderate Low			
Materials Management	1	2	1	

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





# **EXECUTIVE SUMMARY (CONTINUED)**

## **Ratings and Conclusions**

The following is a summary of all observations noted in the areas reviewed (see "Detailed Observations" section for additional information). Definitions of the rating scales are included in the Appendices.

Summary of Observations	
Observations	Rating
1. Variance Review and Root Cause Analysis  For 2 out of 25 receiving samples and for all 25 inventory count samples, we identified that variances were present either between the purchase order and the packing slip, or internally within the Lawson system and the actual inventory on-hand amount in the warehouse. These variances were not documented appropriately, nor was there any indication that a review was performed to identify a root cause. Currently, there are no procedures requiring the documentation of variances and related follow-up.	High
2. Documentation for Transfer of Inventory Custody  For all 25 work orders sampled, a signed WH32 pick list was not able to be provided to validate receipt of goods by the customer. Currently, the materials management procedures do not adequately define what documentation is required to be maintained.	Moderate
3. Process Inconsistencies Between Warehouse Locations  The current materials management processes are not uniform across the two warehouse locations. The Bryant Street location currently employs a more automated process than the Blue Plains warehouse. The current materials management procedures do not appropriately document the difference in the processes.	Moderate
4. Truck Stock Inventory Monitoring  There is currently no inventory count oversight process in place for items maintained in DC Water vehicles (truck stock). The current process requires the vehicle operators to report the inventory on their trucks at the end of each week; however, the accuracy of these counts is not confirmed by a third party.	Low

Process Improvement Opportunities have been provided to Management for consideration.





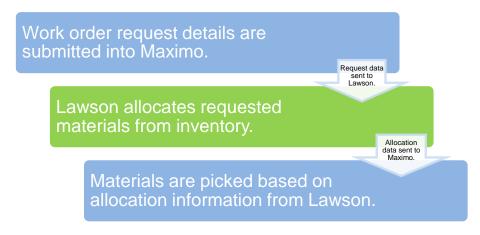
# **BACKGROUND, OBJECTIVES AND APPROACH**

#### **Background**

#### Materials Management Overview

The DC Water Materials Management team within the Department of Procurement is responsible for managing warehouse operations and all inventory stored within Authority warehouses. The goal of Materials Management operations is to provide a supply chain of materials to enable DC Water maintenance and service operations to perform scheduled and emergency work orders without delay. On time delivery and accuracy is to exceed 98% and approach 100%, respectively, based on the Materials Management policies and procedures.

Materials Management utilizes the Maximo work order system for obtaining order requests and work flow design, as well as the Lawson financial system to keep track of inventory within the warehouses. Materials requests are submitted through Maximo and trigger the materials management work flow. Lawson is updated on a continuous basis as materials are received, picked for requests, or following spot, cycle, and annual counts. The two systems work concurrently, as the status of work order request changes in Maximo are based on items received or removed from inventory. Lawson also maintains all financial data of the inventory and tracks actual costs incurred to budgeted values.



Warehouse operations expands past fulfilling work order requests, as inventory is required to be continuously restocked to meet the needs of the maintenance and service teams. These operations also include the sub-processes of purchasing, receiving, and inventory counts. The expectation is that all warehouse employees are able to adequately perform duties within each sub-process.

Additionally, Materials Management is responsible for overseeing the disposal process of any excess or obsolete inventory. A disposal policy has been drafted to create a process to identify potential scrap or excess materials, maximize the investment recovery value of surplus items, and provide a means for proper documentation when a disposal occurs.



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# **BACKGROUND, OBJECTIVES AND APPROACH**

## Background, continued

#### Materials Management Warehouses

DC Water currently operates two warehouses, one at the Blue Plains Advanced Wastewater Treatment Plant and the other at the Bryant Street Pumping Station. The Blue Plains warehouse was recently constructed as a part of the new 30,000 square foot building that includes the Visitor's Center, the Department of Security, the Office of External Affairs, as well as the new warehouse and all Materials Management staff. This building was opened in March of 2014. Materials Management began to utilize the Bryant Street warehouse location in 2013; however, the space was utilized by DC Water prior to 2013 to store other inventory items.



Blue Plains Warehouse



Bryant Street Pumping Station Warehouse

#### Materials Management – Warehouse Security

DC Water has installed cameras along each row within the warehouses and at each bay door, as well as an alarm system which is armed at all times during off-business hours. The Authority has also contracted with Allied Barton to have armed security guards on site at both Blue Plains and Bryant Street 24 hours a day to ensure that the warehouses are not tampered with. The materials housed in these warehouses are vital to all maintenance and service employees at the Authority to ensure that they are able to perform scheduled and emergency work orders without delay.



Bay Door Camera



Row Camera



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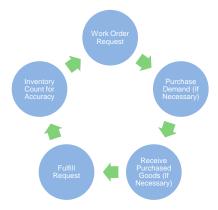
## **BACKGROUND, OBJECTIVES AND APPROACH**

#### **Background**, continued

#### Materials Management Process

All materials requests are processed through Maximo, the Authority's work order management system. As requests are submitted, they are committed into the Materials Management work flow and a requisition is created from the work order file. If there is a sufficient level of inventory on hand, a warehouse demand is initiated. The Materials Manager will receive the WH32 pick list, detailing items needing to be selected from inventory to fulfill the request. The warehouse employees will pick the listed inventory and update the work order status to "materials ready" within Maximo. If there are any concerns regarding the request, the requestor will be contacted and the work order will be updated accordingly. Once the request has received the "materials ready" status, an email is sent to the requestor that the materials are ready for pick-up. The requestor will pick-up the materials at the supplying warehouse, and the work order will be released within Maximo.

If a work order request includes items that do not have the necessary amount on-hand or if a request causes the on-hand quantity of an item to drop below the designated restock quantity, a purchase demand is generated queuing the DC Water approved purchasing process. All purchase demands are reviewed by the Materials Manager for reasonableness and adjusted as necessary. Following this review, a purchase order is generated. If the vendor requests any changes, they will contact the initial requestor directly regarding a possible replacement item. Each purchase order is required to receive sign-off by both the Materials Manager and the Director of Procurement. Once approval has been granted, the vendor will fulfill the order and ship the items to the applicable warehouse.



As materials are moving in and out of the warehouses on a daily basis, the Materials Management team must also validate that that inventory levels are accurate between quantity on-hand and quantity in the Lawson system by performing periodic inventory counts. As a baseline, all items must be counted at least once annually. Some items are counted more often if they are highly utilized and a higher degree of confidence in the inventory levels is required. As items are identified to be counted, the racks in which they are housed are frozen after hours as the counts take place. The count will be performed by the warehouse staff and the on-hand count will be recorded on the count sheets. Any variances between the on-hand count and the current count in Lawson will be identified and the count sheets will be provided to the Materials Manager. The count in Lawson will be updated to reflect on-hand quantity in the warehouse and the inventory count status is updated to complete. Variances are to be followed up on by the Materials Manager to identify the root cause, however based on our finding, it is not.





# **BACKGROUND, OBJECTIVES AND APPROACH**

## **Background**, continued

#### Materials Disposals

The final step in the materials life-cycle is the disposal of items that are defective or obsolete. Identification of items for disposal is the responsibility of the Materials Management Data Analyst or the Materials Manager. A listing of items identified for disposal is sent to department heads impacted by the disposal, and a dispose or no-dispose recommendation is made. If a disposal recommendation is made by all department heads, a Property Disposal Action (PDA) Form will be completed for each item to be disposed of and the Director of Procurement will provide authorization to proceed with the disposal activity.

The Materials Manager will then retrieve the value of the disposed item(s) from Lawson and recommend a disposal method. The PDA form will be submitted by the Data Analyst for final approvals by the Department Heads, the Materials Manager, and the Director of Procurement. Once all approvals are received, the Data Analyst will forward the PDA to the warehouse staff to notify them of the disposal. The PDA form is attached to the identified item and the item is then disposed of via the agreed upon method. The warehouse staff sign off on the PDA form to confirm that the disposal has taken place, the PDA form will be filed along with all other disposal related documents, and the Budget & Finance department will be notified of the disposal. No items were disposed of during FY 2016 nor FY 2017.





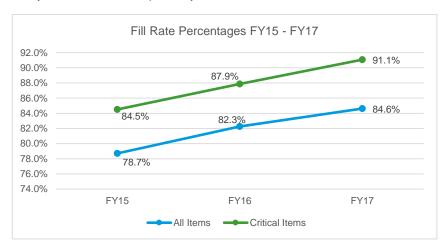
# **BACKGROUND, OBJECTIVES AND APPROACH**

## **Background, continued**

#### Materials Management Performance

From October 1, 2015 to July 31, 2017, a total of 3,224 work order requests were submitted by a wide variety of departments including, but not limited to, Water Services, Water Quality, Maintenance Services, Utility Services, and Sewer Services. The use of these two systems, Maximo and Lawson, as well as the introduction of new materials management processes in 2015 have improved the efficiency of warehouse operations. This improved performance is evidenced by metrics maintained by the Materials Manager, including fill rate percentages, average days from request to shipment, and supplier lead time, all of which have shown positive trends over the last three years.

Fill rate measures the percentage of requests that are able to be filled directly from inventory on hand. This measurement represents the ability of materials management to effectively manage inventory and predict future usage of items. DC Water is also in the process of implementing a new Asset Reliability initiative which will have a direct effect on inventory management regarding criticality of assets and proper inventory levels. As identified below, the fill rate percentage for all items as well as critical items have improved by 5.9% and 6.6% respectively.



An item is defined as critical, as opposed to other items, based on both the time frame and consistency of the need for an item. If the customer determines an item is needed immediately to support a work order request, the item is flagged as critical for that specific request. Additionally, there are some items that are always deemed as critical if they are required to be available 24 hours a day, 7 days a week. All items, as depicted in the above graph, includes both critical items as well as non-critical items.



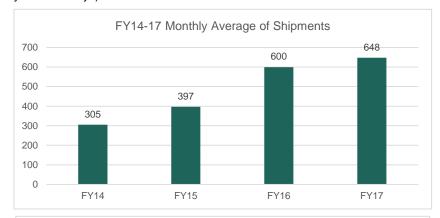


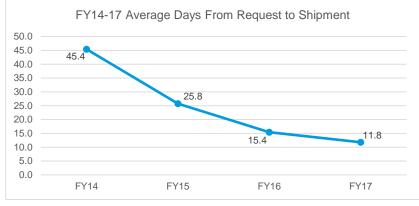
# **BACKGROUND, OBJECTIVES AND APPROACH (CONTINUED)**

## Background, continued

#### Materials Management Performance, continued

Additionally, the performance of fulfilling materials requests has drastically improved since the implementation of the new materials management initiative. Even as requests steadily increased year-over-year, the efficiency of Materials Management has increased as well. Average monthly shipments to customers have increased by 343 shipments, from 305 shipment per month in FY 2014 to 648 shipments per month in FY 2017; however, the total time from request date to shipment date has decreased by 33.6 days (from 45.4 days to 11.8 days).







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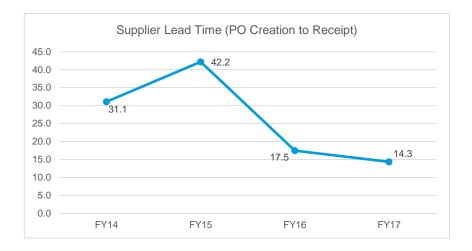


# **BACKGROUND, OBJECTIVES AND APPROACH (CONTINUED)**

## Background, continued

#### Materials Management Performance, continued

The increased demand of materials has had a direct effect on the purchasing process within materials management. The number of purchase orders generated per month increased greatly from FY 2014 to FY 2015, but has been consistent from FY 2016 to FY 2017. This consistency is attributable to Materials Management's ability to predict inventory usage and seasonality of items. Purchases are able to be made more concisely based on historical usage analysis.







# **BACKGROUND, OBJECTIVES AND APPROACH (CONTINUED)**

#### **OBJECTIVES AND APPROACH**

#### **Objectives**

The purpose of this review was to obtain an understanding of how the Authority manages the materials management operations and inventory processes; however, a review of financial processes associated with materials management was not performed. Any risks not appropriately addressed by controls were identified and recommendations were made to introduce new controls or modify those already in place.

The audit scope was based on the following objectives:

- Develop an understanding of the materials management operations and inventory processes through review of policies and procedures;
- Understand changes that have been implemented as a result of the asset management and reliability program;
- Review prior audit findings related to materials management and inventory;
- Validate that goods are acquired through the Authority's approved procurement process;
- Assess appropriateness of warehouse operations controls to capture all materials management movement at the Authority;
- Assess the safety and security of warehouses; including:
  - Physical state of warehouses;
  - o Physical safeguards of warehouses such as alarm systems and security personnel on hand; and
  - Emergency procedures in place;
- Validate that all materials movements are appropriately recorded within the Authority's Asset Inventory Management system;
- Analyze the economic order quantity of frequently utilized items, including rolling truck stock;
- Verify that the disposal of assets is properly documented and approved; and
- Identify process improvement opportunities and recommend internal control enhancements to improve the overall materials management processes.

#### Approach

Our audit approach consisted of the following phases:

#### Understanding of the Process

The purpose of this phase was to gain an understanding of DC Water's Materials Management – Inventory & Operations process. This phase included a process walkthrough with the Materials Manager and inquiry of documentation.

Specific procedures performed include:

- Inquired and documented Materials Management processes including, item creation, work order processing, purchasing, receiving, and inventory counts.
- Developed process flowcharts based on the inquiry and documentation (walkthroughs) included above, including flowchart verification with applicable personnel.
- Obtained standard operating procedures (SOP) currently being used in the materials management processes.
- Identify controls utilized and inherent in the materials management processes.





# **BACKGROUND, OBJECTIVES AND APPROACH (CONTINUED)**

## **Objectives and Approach, continued**

#### Detailed Testing

The purpose of this phase was to test internal controls and process effectiveness based on our understanding of the Work Order Processing, Purchasing, Receiving, Inventory Counts, and System Access processes. This included transactional testing to validate controls were operating effectively as described during walkthroughs. The time period covered by testing was October 1, 2015 through July 31, 2017.

Specific procedures performed include validating that:

- Work order requests were reviewed for accuracy and approved.
- Work order requests do not violate budget thresholds.
- · Customers acknowledged receipt of requested materials.
- Work orders were appropriately released in Maximo upon fulfillment.
- Purchases orders were created for all purchases.
- All purchase orders were reviewed and approved by the appropriate personnel.
- All purchases demands were reviewed by the Materials Manager for reasonableness.
- Received goods were validated via comparison to purchase order.
- Received goods were appropriately entered into the Lawson asset management system.
- Periodic inventory counts were performed.
- Inventory count sheets were provided to the Materials Manager.
- Any required inventory adjustments were appropriately entered into Lawson.
- Variances within any of the identified sub-processes were investigated and documented appropriately.

#### Reporting

We have summarized our observations related to the Materials Management – Inventory & Operations Internal Audit. We have reviewed the results of our testing and our recommendations with management and included their responses in the detailed observations section.





# **DETAILED OBSERVATIONS**

Materials	Management – Inventory & Operations Internal Audit			
1.	Variance Review and Root Cause Analysis	Recommendation	Management's Action Plan	
	Observation Rating: High			
	For 2 out of 25 received shipments tested and for all 25 inventory counts tested, a variance was present either between the purchase order and the packing slip, or internally within the Lawson system and the actual on-hand amount in the warehouse. The adjustments required due to these variances reflected a total of \$20,160. None of the 27 identified variances were documented appropriately nor was there any indication that a review was performed to identify a root cause for the variances.  For received shipments, the variances existed between the packing slip provided by the supplier and the purchase order. The inventory level in Lawson was not subsequently updated in Lawson following receipt of the missing items for one; however, was appropriately updated for another. Receipt of the missing items was not documented and inventory corrections within Lawson were not consistent upon receipt.  Specific to the inventory counts, the variances existed between the count within Lawson and the actual on-hand count. These variances were appropriately updated in Lawson to reflect the on-hand count; however, follow up to identify the root cause was not performed. Additionally, all hard copy count sheets provided include a field to identify any variances; however, this field was not properly utilized.  Without consistent documentation of variances and review to determine root cause, accountability for consistent monitoring of inventory levels is not maintained. Root cause investigation can discover if materials have been lost, stolen, or just	All material variances should be reviewed by the appropriate Materials Management personnel and the findings of the investigation should be appropriately documented. A threshold should be defined, whether that be of dollar value or criticality of use, to identify variances that require further investigation.  Specifically for inventory counts, the field that is currently on the count sheet should be expanded upon to include the variance amount, cost information for variances that are undetermined or deemed lost or stolen.  If management believes that individual variances are immaterial and should not require specific root cause analysis, management should consider developing a semi-annual inventory adjustment analysis report, identifying the number and dollar amount of all inventory adjustments made as a result of cycle count variances. This report should identify trends and evaluate whether the variance rate is consistent with management expectations and the generally accepted practice. This oversight activity could be performed by the data analyst as a part of routine monitoring procedures already in place.	Response:  For future physical inventory counts, the MM data analyst will review count discrepancies prior to finalizing the count. The investigation will review all IC50 transactions to determine if a transaction did not get properly recorded. All discrepancies for variances of +/- 2% on count or +/-\$75.00 total variance will be investigated. The materials manager will review investigation for implementation of corrective action.  The count sheets utilized during the physical inventory process are standard forms in Lawson. We will need to research to see if standard Lawson forms exist that include the cost information. The reconciliation to include cost information will require additional research.	



inaccurately input into the Lawson system.



Materials	Management – Inventory & Operations Internal Audit		
1.	Variance Review and Root Cause Analysis (continued)	Recommendation	Management's Action Plan
	Observation Rating: High		
			It should be noted that the FY17 physical inventory/cycle count was 92.85% accurate by count. This represents an increase in accuracy of 6.43% from the 86.42% achieved for FY16. The accuracy for the first full physical in FY15 was 43.4%.
			Responsible Party:
			Materials Management
			Target Date:
			January 17, 2018





Materials Management – Inventory & Operations Internal Audit			
2.	Documentation for Transfer of Inventory Custody	Recommendation	Management's Action Plan
	Observation Rating: Moderate		
	Per our walkthroughs with the Materials Manager, the WH32 pick list is utilized as verification that all requested materials have been picked and are ready for pick-up by the customer. Per the Materials Manager, the customer is required to sign-off on this report when they physically receive the materials at the warehouse. Though this control is not documented in the materials management policies and procedures we tested the existence and sign off as part of our testing of work orders. Of the 25 samples of work orders, none of the signed WH32 pick lists were able to be produced. The pick lists was not consistently retained and there are no procedures regarding where these forms should be retained.  Inconsistent retention of this form leaves the Authority vulnerable to a customer claiming they did not receive the requested materials. If materials are required to be provided multiple times, the Authority is at risk for inconsistent inventory levels, reduced efficiency, and employees being unable to complete service requests timely.  Also reference observation 3, inconsistent processes and documentation of controls.	All attachments that are not initially electronic should be converted to an electronic version and attached to the work order request within Maximo. This includes both the packing slip provided by the vendor as well as the WH32 pick list that is signed by the customer as acknowledgement of receiving requested materials.  Additionally, the Materials Management policies and procedures should be updated to reflect this practice as well as the use of the WH32 pick list as customer acknowledgement.	Response:  As discussed during the audit process, MM identified the need to attach the signed pick lists to Maximo work orders. Permissions to add attachments were requested and tested during September 2017. As of 2-Oct-17, all signed WH32s are attached to Maximo work orders by the MM data analyst.  Also during the audit process, MM identified the need to create electronic copies of the packing lists. As of 7-Aug-17, all packing slips are scanned by location and retained on the DC Water I drive/Procurement/Material Management (New)/Packing Slips.  Procedures/Processes will be updated to reflect use of the WH32 by 30-Nov-17.  Responsible Party:  Materials Management  Target Date:  November 30, 2017





Process Inconsistencies Between Warehouse Locations (continued)	Recommendation	Management's Action Plan
Observation Rating: Moderate		
Per our walkthroughs with the Materials Manager as well as our follow-up procedures, it was determined that the Materials Management policies and procedures currently in place apply to both the Blue Plains and Bryant Street warehouse locations. Both locations; however, do not follow a uniform set of procedures, specifically for the inventory count and receiving processes.  For example, both the inventory count and receiving processes are fully automated within Maximo and Lawson at the Bryant Street location, without utilizing hard copy count sheets and utilizing WH32 pick lists. However, at Blue Plains the pick lists are utilized to confirm receipt by the customer via signature and the count sheets support count performance, variances, as well as confirm that the Materials Manager received notice that the count took place.  Additionally, controls and processes that were documented as part of our walkthrough are not captured in the current version of the Materials Management procedures (reference observation 2). For example, the use of the WH32 pick list for receipt confirmation by the customer, inventory count frequency of items maintained in the warehouse and trucks, and validation of received goods via comparison of purchase order and packing slip are not included in the current policies and procedures.  Without uniform, or separate procedures for the Blue Plains and Bryant Street locations, the policies and procedures in place may not apply adequately to both locations.	The Materials Management team and applicable DC Water Management should review the processes at both the Bryant Street and Blue Plains warehouse locations and align them where possible as well as validate that all current processes are included. Following this review, the policies and procedures should be updated to reflect any changes made to more closely align the two processes as well as identify and areas in which the processes are unable to exactly align.  If management believes alignment of processes is achievable, the fully electronic processes at Bryant Street are recommended to be adopted at the Blue Plains location.	Response:  Based upon this recommendation, t BP1 allocation process has be updated to the auto-allocation proce utilized at Bryant Street.  Additionally as of 7-Aug-17, packing slips are scanned by locati and retained on the DC Water drive/Procurement/Material Management (New)/Packing Slips.  Bryant Street uses the handhe functionality of Lawson to a great extent than does Blue Plains. Items Bryant Street are managed mot through stock than work orders th the stock locations tend to rema more constant than at Blue Plain This constancy lends itself to the ha held process. It should be noted th the hand held inventory process utilized for the physical inventory the VLM.





Materials Management – Inventory & Operations Internal Audit				
3.	Process Inconsistencies Between Warehouse Locations (continued)	<u>Recommendation</u>	Management's Action Plan	
	Observation Rating: Moderate			
			Materials Management will develop site specific procedures as warranted by the business models at each site by 1-Mar-18.  Responsible Party: Materials Management  Target Date: March 1, 2018	





Materials Management – Inventory & Operations Internal Audit				
4.	Truck Stock Inventory Monitoring	Recommendation	Management's Action Plan	
	Observation Rating: Low			
	Per discussion with the Materials Manager, there is currently no inventory count process in place for items maintained in DC Water vehicles (truck stock). All requests for truck stock materials are made through a Maximo work order similar to any other materials requests. As these work order requests are fulfilled, the materials are expensed and no longer tracked within the Lawson system, regardless of whether they are immediately used for a specific service request or if they are held on the truck year-round.  The current process in place requires the vehicle operators to report the inventory on their trucks at the end of each week; however, there is no oversight over the accuracy of these counts.  Without this third party oversight, such as by a member of the materials management team, it is difficult for the Authority to be confident that truck stock inventory is accurate and materials requested are allocated appropriately to service requests as needed. Additionally, if inventory counts are not accurate, unreasonable material requests may not be identified as such.	Management should perform a full physical inventory of truck stock at least annually to ensure that the Lawson system is updated to reflect actual assets on hand as of fiscal year end. Management should consider more frequent counts, and the frequency of the count should be documented within the Materials Management SOP.  If management determines that the total value of truck stock is immaterial and the counts are unnecessary, an additional exception policy should be drafted detailing why the counts are not taking place.	Response:  Truck stock is analogous to consumables consumption. Items requested for truck stock are expensed at the time of order fulfillment. Management of the truck stock levels and review of the appropriateness of requests are a departmental responsibility. Departments should review on a monthly basis the material issued to the truck stock work orders. The management of the departments is in the best position to determine if the use of a given item is in line with expectations. MM will provide a quarterly report to requesting departments detailing usage by item and cost of items issued.  Responsible Party:  DDCS, Sewer Services  Target Date:  December 1, 2017	





# **PROCESS IMPROVEMENT RECOMMENDATIONS**

Materials Management – Inventory & Operations Internal Audit			
<u>Opportunity</u>	Recommendation		
Per our review of the Materials Management procedural documentation as well as walkthroughs with relevant personnel, the Materials Management team does not currently provide any formalized training for the data analyst position. As data analysts are hired, the Materials Manager decides how they should be trained; however, there are no written policies and procedures specific to the data analyst role. Without specific training or policies and procedures in place, the Authority runs the risk of inconsistent training as well as inconsistent expectations of this position.	The Materials Management team should identify specific roles and responsibilities of a Materials Management Data Analyst and document training and processes and procedures where necessary.		





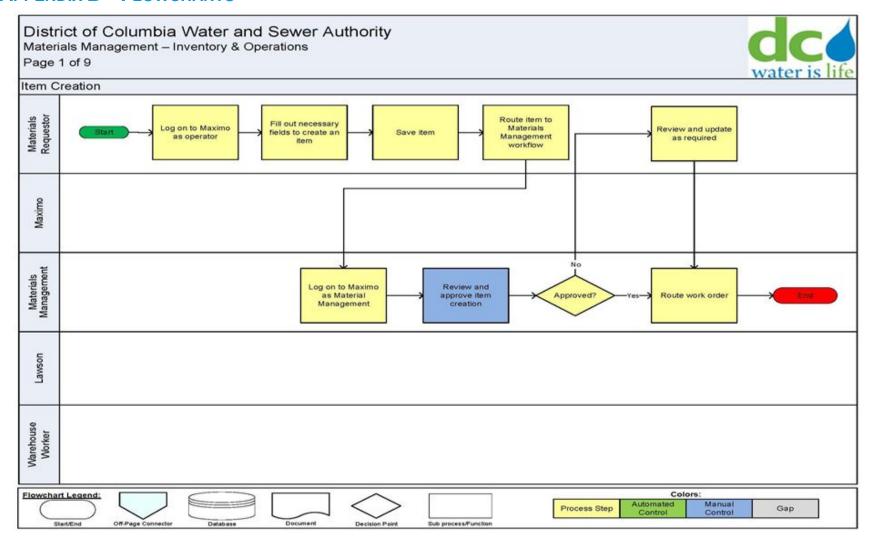
# **APPENDIX A - RATING DEFINITIONS**

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).			



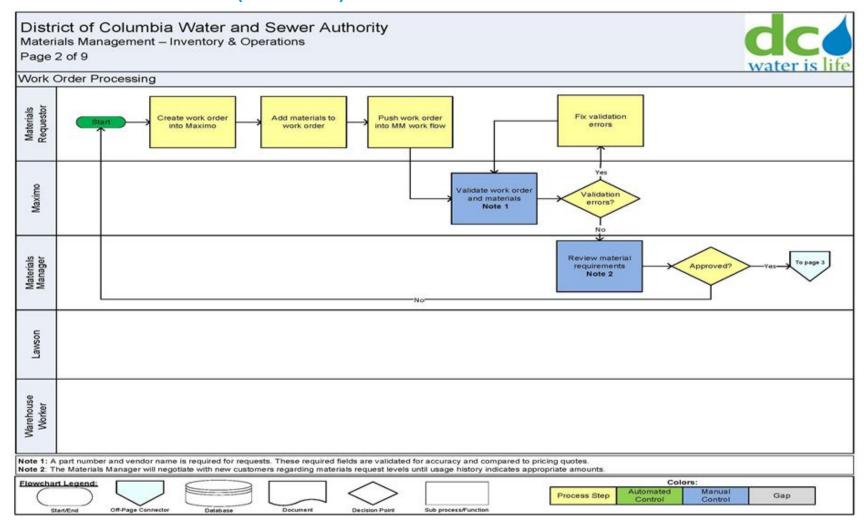


# **APPENDIX B - FLOWCHARTS**



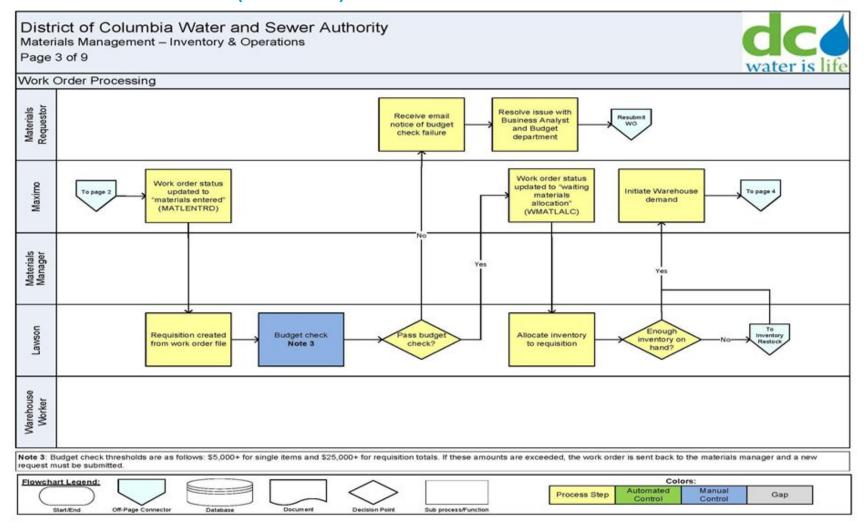






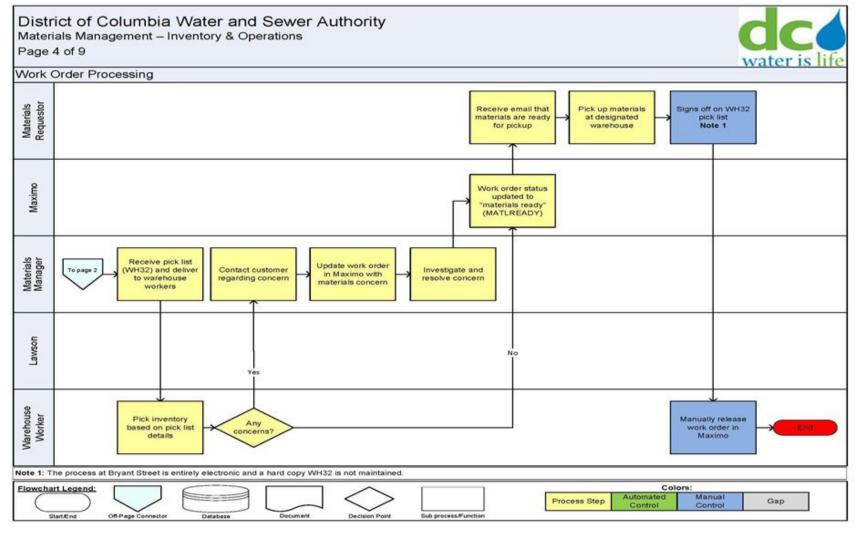






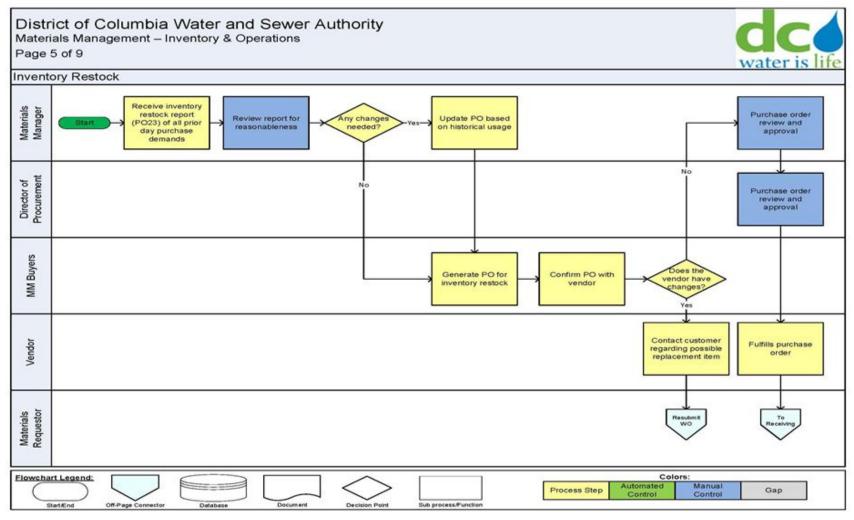






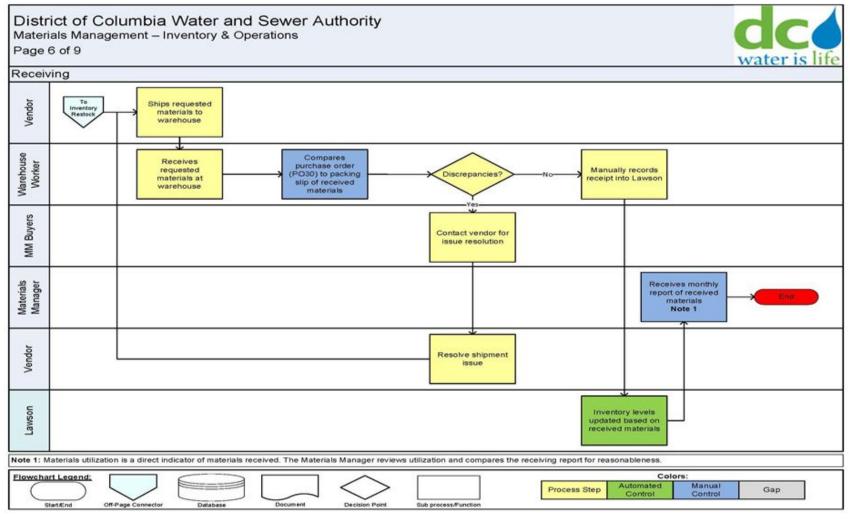






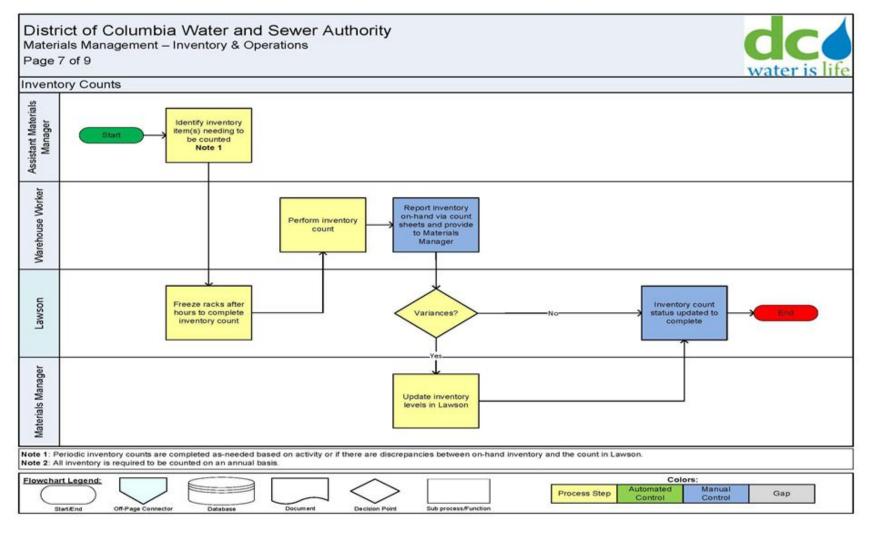






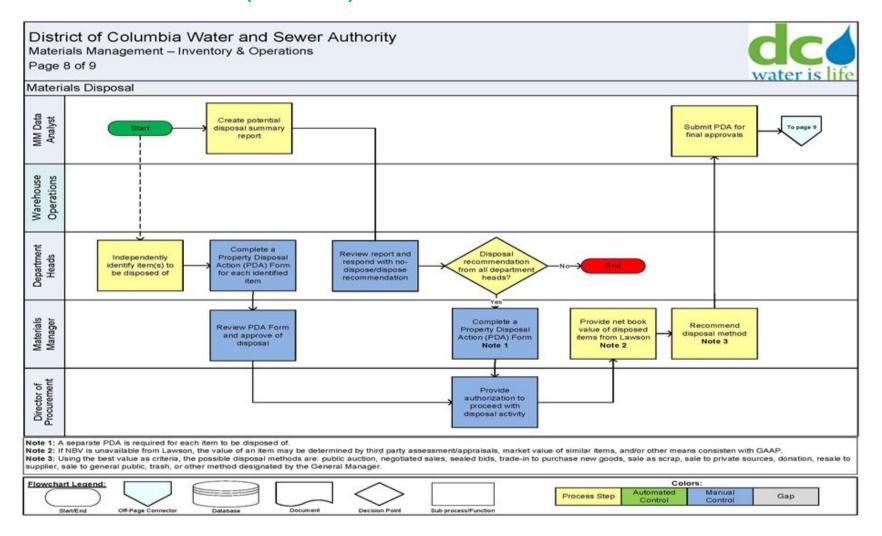






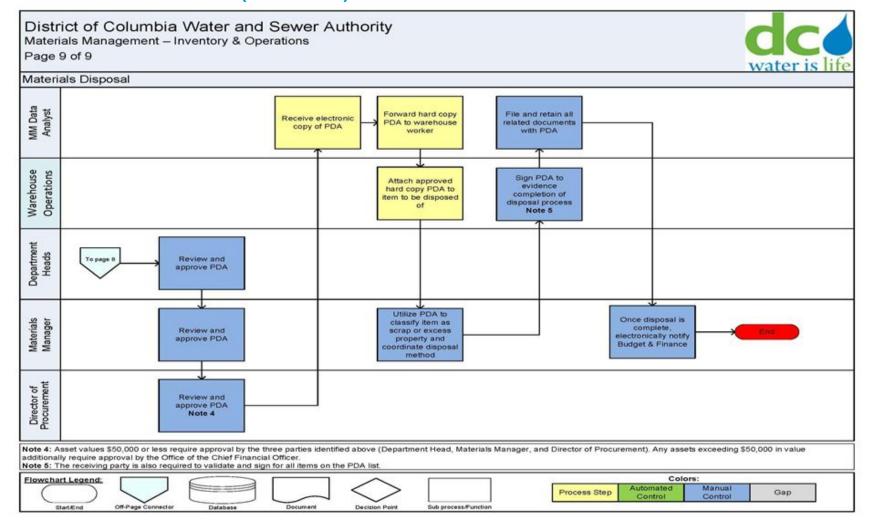














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