DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Board of Directors

Audit and Risk Committee

April 25, 2024

11:00 a.m.

Microsoft Teams Meeting

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Meeting ID: 247 012 872 881
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Phone Conference ID: 889 207 929#

1. **Call to Order**……………………………………………. .... Floyd Holt, Chairperson

2. **Roll Call**……………………………………… .... Michelle Rhodd, Board Secretary

3. [**Enterprise Risk Management Briefing**]. .... Francis Cooper, Director EPMO

4. [**Internal Audit Update**]………..………………… .... RSM Internal Audit
    A. FY 2024 Internal Audit Plan Status Update
    B. Status Update on Prior Audit Findings
    C. [Contract Compliance Audit]
    D. [Work Order Management Audit – Pumping Branches]
    E. Permit Operations Management Assessment
    F. Hotline Update

5. **Executive Session*** ……………………………….......................... Floyd Holt, Chairperson
    - To discuss a facility security matter under DC Official Code § 2-575(b)(8)

6. **Adjournment**……………………………………………....................... Floyd Holt, Chairperson

This meeting is governed by the Open Meetings Act. Please address any questions or complaints arising under this meeting to the Office of Open Government at opengovoffice@dc.gov

1The 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 certain matters, including but not limited to: matters prohibited from public disclosure pursuant to a court order or law under D.C. Official Code § 2-575(b)(1); terms for negotiating a contract, including an employment contract, under D.C. Official Code § 2-575(b)(2); obtain legal advice and preserve attorney-client privilege or settlement terms under D.C. Official Code § 2-575(b)(4)(A); collective bargaining negotiations under D.C. Official Code § 2-575(b)(5); facility security matters 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); third-party proprietary matters under D.C. Official Code § 2-575(b)(11); train and develop Board members and staff under D.C. Official Codes § 2-575(b)(12); adjudication action under D.C. Official Code § 2-575(b)(13); civil or criminal matters or violations of laws or regulations where disclosure to the public may harm the investigation under D.C. Official Code § 2-575(b)(14); and other matters provided under the Act.

Strategy & Performance
Enterprise Risk Management Briefing to Audit & Risk Committee
April 25, 2024

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Francis Cooper, Director EPMO

Helen Hagos, RIMS-CRMP, PMP
Manager, Enterprise Risk, Policy & Internal Audit

Agenda

1 | **Bottom-up risk assessment approach**
- Development of the high-level process

2 | **Review DC Water Risk Register**
- New Risk | Artificial Intelligence

Where We Are Today

1. Established ERM Function with a clear governance structure

2. Advanced a top-down enterprise risk assessment (ERA), DC Water leadership came to consensus on the Authority's top risks.

3. Performed deep dives into two Enterprise Risks to better understand the Authority's top risks, their underlying root causes and drivers to enable more effective risk-informed decisions.
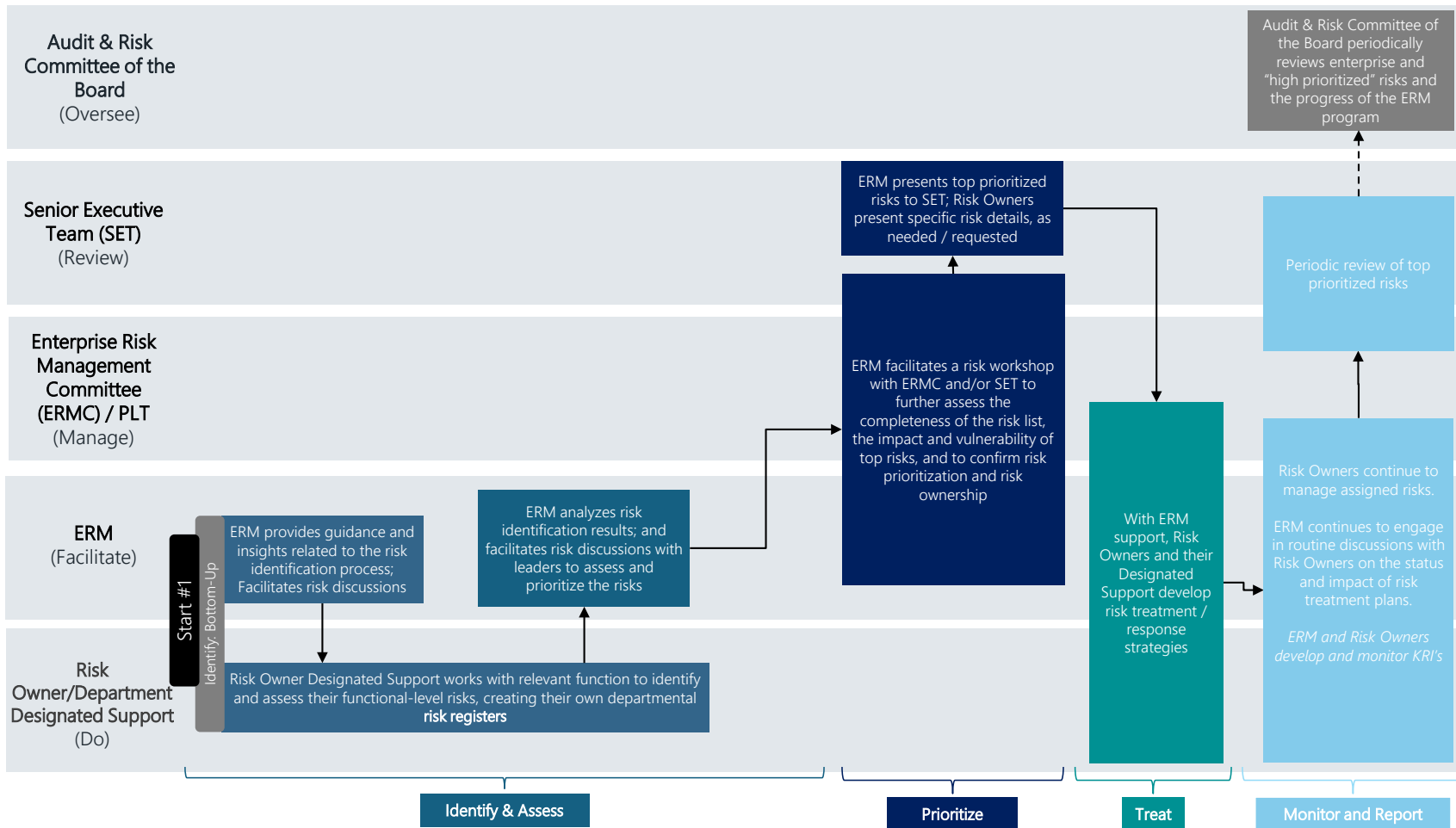
4. Implemented a Risk module to provide timely identification of risks and visibility into risk responses activities. Additionally, configured the Policy module to manage policy revisions and reviews and serve as a repository for Board Resolutions.

5. Developing the foundational elements of the Bottom-up risk assessment approach - *Where we are today*

Enterprise Risk Management Approach | Bottom-Up high-level Process Flow

This approach refers to starting risk management activities at the functional, operational and/or department level. Advancing this method of risk Management will support the Authority in gaining a more detailed and nuanced understanding of the specific/functional risks, allowing for targeted and effective risk management strategies

Audit & Risk Committee of the Board (Oversee)
Audit & Risk Committee of the Board periodically reviews enterprise and "high prioritized" risks and the progress of the ERM program

Senior Executive Team (SET) (Review)
ERM presents top prioritized risks to SET; Risk Owners present specific risk details, as needed / requested

Periodic review of top prioritized risks

Enterprise Risk Management Committee (ERMC) / PLT (Manage)
ERM facilitates a risk workshop with ERMC and/or SET to further assess the completeness of the risk list, the impact and vulnerability of top risks, and to confirm risk prioritization and risk ownership

ERM (Facilitate)
ERM provides guidance and insights related to the risk identification process; Facilitates risk discussions

ERM analyzes risk identification results; and facilitates risk discussions with leaders to assess and prioritize the risks

With ERM support, Risk Owners and their Designated Support develop risk treatment / response strategies

Risk Owners continue to manage assigned risks.

ERM continues to engage in routine discussions with Risk Owners on the status and impact of risk treatment plans.

ERM and Risk Owners develop and monitor KRI's

Risk Owner/Department Designated Support (Do)
Start #1
Identify: Bottom-Up
Risk Owner Designated Support works with relevant function to identify and assess their functional-level risks, creating their own departmental **risk registers**

Identify & Assess | Prioritize | Treat | Monitor and Report

Enterprise Risk Management Process | Bottom-Up Approach

In a bottom-up approach, risks are **identified** at a **functional/department level**, and the ERM function aggregates and prioritizes risks and supports risk mitigation efforts.

PREPARATION: Before beginning an assessment for the first time, revisit department-level strategic roadmap to direct focus on risks specific to the department, update the tools for each function, including criteria for rating risks and risk registers. If a risk assessment has already been conducted, revisit tools at the start of the process cycle to determine relevance.

Steps		Tools & Techniques	ERM Function Role
1. IDENTIFY & ASSESS: Using a combination of identification methods: surveys, interviews, and internal and external research, identify risks to DC Water. The output at the end of the identification process is a **risk register** that lists all risks that have been identified through this process.			
a. Develop and administer survey and open-ended questions (Bottom-up) b. Interviews (Bottom-up)	• Develop and administer the survey. Update the survey with the latest list of top risks • Include open-ended questions to help identify emerging risks and perspectives on risk management capabilities • Consolidate survey results and provide the following information: new/emerging risks, impact, vulnerability, themes • Conduct interviews with selected stakeholders to discuss and expand upon survey responses	• Utilize a survey tool • Origami risk assessment • Existing DC Water Documentation • External Research • Stakeholder Interviews	• Develop survey • Identify stakeholders to include in the process • Administer survey • Consolidate and analyze survey results • Organize data and conduct interviews
2. PRIORITIZE:	• Organize and evaluate the departmental risk register to establish a preliminary list of priorities. Prioritize them based on their potential impact and vulnerability. This helps focus resources on addressing the **most significant** risks that pose the greatest threat to objectives.	• Reference enterprise risk register to identify owners of similar risks; aligning responses	• Facilitate prioritization workshop and train teams on facilitation techniques • Dialogue between ERM function and departments to identify risks needing enterprise attention
3. TREAT:	• Strategy to manage or mitigate identified risks. Risk treatment options may include avoiding, transferring, mitigating, or accepting risk. Determine which risks merit a full treatment plan, departments still should monitor their less critical risks. Risk treatment teams then create response plans with strategies to address the risk's root causes and business cases for additional resources. The output from this activity is risk treatment plans with action owners.	• Reference risk treatment types (exploit, accept/monitor, share/transfer, avoid, mitigate)	• The ERM Function lead should be responsible for challenging the assumptions used in determining the drivers and engaging risk owners and subject matter experts (SMEs) in collaborative discussions
4. MONITOR & REPORT	• **Tracking** and **assessing** the effectiveness of risk mitigation measures, reassessing risks, and adjusting risk management strategies as necessary. Engage in routine discussions with leadership on the status and impact of risk treatment plans.	• Reference status reporting template	• Aggregate risk treatment performance information and dashboards from various departments

DC Water Enterprise Risk Register (*updated as of April 2024*)

Blueprint 2.0 Strategic Imperatives

Healthy, Safe and Well	*Reliable*	*Resilient*	*Sustainable*	*Equitable*

Financial	Operational	Reputational	Regulatory	External Ecosystem	Strategic	Technological	Talent
★ Revenue Erosion & Expenditure Increase	★ Reliability (e.g., single source of water, asset failure, aging infrastructure)	★ Stakeholder Management (e.g., agencies, customers, unions)	★ New & Changing Regulations (e.g., federal, state, local)	★ Catastrophic Events	★ External Oversight of DC Water	★ Cybersecurity	★ Talent Management (e.g., development, succession planning, skills)
Budgeting & Forecasting	★ Decision Making (e.g., major project execution)	Customer Expectations (e.g., customer affordability)	Legal	★ Third-Party Management	Success of New Products / Services	System Failures	★ Attract Top Talent
Collections & Payments	★ Health & Safety	Public Trust	Compliance	Climate Change (e.g., heavy precipitation)	Strategic Plan Execution	IT Systems Strategy (e.g., ERP implementation)	Culture
	Resiliency & Continuity		Fraud	Counterparty Risk (e.g., quality, performance)	Customer Behavior (e.g., social norms)	Data Governance / Privacy	Talent Operating Model / Posture
	Processes & Controls		Policy Management		Environmental, Social, & Governance	Artificial Intelligence	Diversity, Equity and Inclusion
	Water Quality (Contaminants)						Union Relations
	Physical Security						

★ Tier 1 Enterprise Risk
★ Tier 2 Enterprise Risk
Emerging Risk

Note: Yellow Highlighted areas represent risks impacted by **EPA's ruling on April 10, 2024**. EPA announced the final National Primary Drinking Water Regulation (NPDWR) for six PFAS. The final ruling requires Public water systems must monitor for these PFAS and have three years to complete initial monitoring (by 2027), followed by ongoing monitoring. Public water systems have five years (by 2029) to implement solutions that reduce these PFAS if monitoring shows that drinking water levels exceed these maximum contaminant levels.

Reference: https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas

Artificial Intelligence Defined | There is no single definition of AI, but broadly speaking, the **capacity** of computers or other machines to **exhibit** or **simulate intelligent behavior**.

Risk Name	*What is the risk?*
Artificial Intelligence	Risks associated with **Artificial Intelligence** are diverse and multi-layered. Some key risks include: 1. Bias and Discrimination 2. Privacy Violations 3. Security Vulnerabilities 4. Loss of Human Oversight

Current Risk Mitigation Measures
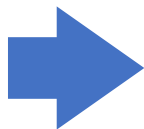
✓ **Established Community of Practice:**

  ✓ 50+ employees from across DC Water volunteered to be part of an enterprise-wide Community of Practice. The aim was to learn and promote the use of Gen AI as an advanced tool to complement how job activities can potentially be performed in new, smarter ways.

✓ **Launched Lead & Learn sessions**

  ✓ May 2023 | approximately 200 attendees

  ✓ November 2023 | 27 attendees

✓ **Developing AI policy & User guide**

  ✓ Empower employees to effectively utilize the technology while promoting understanding, efficiency and responsible use.

Next Steps

1
- Continue to refine the bottom-up risk assessment approach through input from stakeholders and participants

2
- Develop Bottom-up survey and open-ended questions
- Craft a communication strategy to socialize the bottom-up risk assessment process

3
- Promote ongoing education, dialogue and awareness initiatives around AI
- Finalize and socialize the AI policy and user guide

Appendix

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2022 Enterprise Risk Assessment Results

DC Water Top Enterprise Risks & Risk Statements

Risk	Risk Statement
★ Decision Making (e.g., major project execution)	Inability to streamline decision making and culture to prioritize or execute on its major projects may lead to operational inefficiencies and increased cost.
★ New and Changing Regulations	The risk that DC Water is unable to anticipate, influence and/or adequately respond to legislations and/or regulations (federal, state, local).
★ Reliability (e.g., single source of water, asset failure, aging infrastructure)	Inability to provide reliable service due to water supply shortages, asset failure or aging infrastructure, may lead to unsatisfied customers and regulatory scrutiny.
★ Revenue Erosion & Expenditure Increase	The risk of potential inefficiencies in internal processes and resource prioritization and/or unfavorable external factors (e.g., increasing costs, continued water loss) may lead to revenue erosion.
★ Stakeholder Management (e.g., agencies, customers, unions)	Failure to manage its stakeholders, including local and federal agencies, customers, and unions, may lead to reputational harm, project delays, and budgetary issues for the Authority.
★ Talent Management	The risk that DC Water is not able to retain a skilled, diverse and inclusive workforce that meets the current and future human capital needs of world-class water utility.
★ Attract Top Talent	Inability to attract top talent may result in insufficient resourcing or misalignment with roles, significantly impacting the Authority's ability to maintain reliability, affordability, and achieve its overall corporate objectives.
★ Catastrophic Events	Inability to respond quickly and effectively to catastrophic events, e.g., pandemics, extreme weather events, etc., may negatively impact annual budgets, disrupt operations, and erode public trust.
★ Cybersecurity	Failure to support and protect technology, systems, and critical data assets from a cyber attack could lead to significant disruptions to our business operations and potential loss of stakeholder trust and confidence.
★ External Oversight of DC Water	Inability of DC Water to maintain its independence from the Washington, DC government or increased oversight efforts around rate approvals and key operational decisions may impact available resources or ability to borrow money at lower rates.
★ Health & Safety	Failure to ensure the safety of the workforce or the broader community may result in serious injury / illness, financial losses, and/or reputational damage.
★ Third-Party Management	Risk that third parties' (e.g., partners, vendors, suppliers, and contractors) poor performance, the Authority's ineffective management, or excessive reliance may have negative impacts to the Authority's reputation and/or operations.
★ Washington Aqueduct Contract	Inability to negotiate favorable terms in the contract negotiation for purchasing water from the Washington Aqueduct may result in unfavorable financial and reliability performance.

★ Tier 1 Enterprise Risk   ★ Tier 2 Enterprise Risk

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Summary of Top Enterprise Risks – Tier 1

Scale to rate Impact and Vulnerability:

Low	Med.-Low	Medium	Med.-High	High

Risk Statement	Risk Drivers and Considerations	What We Heard	Rating
Reliability (e.g., single source of water, asset failure, aging infrastructure) *Inability to provide reliable service due to water supply shortages, asset failure or aging infrastructure, may lead to unsatisfied customers and regulatory scrutiny.*	• **Reliance on single water source**, which DC Water does not own • High cost to **replace aging infrastructure** • Potential for **asset failure**	*"We only have a 24–36-hour water supply if something happens on the Potomac."* *"I worry about asset failure."*	High **Impact** Med.-High **Vulnerability**
Revenue Erosion & Expenditure Increase *The risk of potential inefficiencies in internal processes and resource prioritization and/or unfavorable external factors (e.g., increasing costs, continued water loss) may lead to revenue erosion.*	• **~1% annual decrease in water consumption**, likely due to conservation efforts • **Mandated** capital improvement projects • **Late fees paused** due to COVID-19 • Global **supply chain and inflation** effects on costs	*"With the rise in cost of materials and supplies, either we ask more from rate payers, or have to do fewer capital projects."*	Med.-High **Impact** Med.-High **Vulnerability**
Talent Management (e.g., development, succession planning, skills) *The risk that DC Water is not able to retain a skilled, diverse and inclusive workforce that meets the current and future human capital needs of world-class water utility.*	• Impact of contractors on ability to **develop in-house skills** • Institutional knowledge **not shared consistently** • **Key person risk** / single point of failure • **Scarcity of niche talent** needs • **Lack of performance plans** for unionized workforce	*"We have an aging skills profile based on what the organization needed 25 years ago, but as we build new capabilities, we need people with new sets of skills."*	Med.-High **Impact** Med.-High **Vulnerability**

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Summary of Top Enterprise Risks – Tier 1 (cont.)

Scale to rate Impact and Vulnerability:

Low | Med.-Low | Medium | Med.-High | High

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Risk Statement	Risk Drivers and Considerations	What We Heard	Rating
Decision Making (e.g., major project execution) *Inability to streamline decision making and culture to prioritize or execute on its major projects may lead to operational inefficiencies and increased cost.*	• DC Water historically had a **siloed culture** • Focus on meeting regulatory requirements may **delay funding** for other **infrastructure projects**	*"Without all the necessary information, we manage risk by being overly conservative, which is expensive."*	Med.-High **Impact** Med.-High **Vulnerability**
Stakeholder Management (e.g., agencies, customers, unions) *Failure to manage its stakeholders, including local and federal agencies, customers, and unions, may lead to reputational harm, project delays, and budgetary issues for the Authority.*	• Coordination with other **utilities and agencies** • **Managing customers' expectations** as a non-profit • 70% of DC Water workforce is **unionized** • **Operational incident**, caused by DC Water or not • **Public perception management** of projects and products	*"We need to collaborate with other utilities and agencies to fix issues, but if they don't want to play ball, then we are stuck."*	Med. **Impact** Med. **Vulnerability**
New and Changing Regulations *The risk that DC Water is unable to anticipate, influence and/or adequately respond to legislations and/or regulations (federal, state, local).*	• Potential federal or local **regulatory changes**' affect on water standards could have a financial impact • Relative **ease to pass local legislation** in DC • **Federal mandates** for programs (e.g., Clean Rivers)	*"We don't think enough about how we will work to meet future regulatory requirements."*	Med. **Impact** Med. **Vulnerability**

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Summary of Top Enterprise Risks – Tier 2

Scale to rate Impact and Vulnerability:

| Low | Med.-Low | Medium | Med.-High | High |

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Risk Statement	Risk Drivers and Considerations	What We Heard	Rating
Cybersecurity *Failure to support and protect technology, systems, and critical data assets from a cyber attack could lead to significant disruptions to our business operations and potential loss of stakeholder trust and confidence.*	• Status as **critical infrastructure provider** for U.S. capital • Evolving and increasingly **complex nature of cyber threats**	*"Cyber is always going to be a risk, especially as threats become more complex and prevalent."*	Med.-High **Impact** Med. **Vulnerability**
External Oversight of DC Water *Inability of DC Water to maintain its independence from the Washington, DC government or increased oversight efforts around rate approvals and key operational decisions may impact available resources or ability to borrow money at lower rates.*	• Increased DC **government scrutiny** of DC Water and its rates (e.g., Office of People's Counsel) • **Reallocation of resources** to meet demand of DC governmental requests for meetings & inquiries • Potential **impacts to credit and bond ratings** due to increased oversight / scrutiny from regulators	*"Increased government oversight and interaction has forced us to dedicate resources to appease meetings and inquiries"*	Med.-High **Impact** Med. **Vulnerability**
Health & Safety *Failure to ensure the safety of the workforce or the broader community may result in serious injury / illness, financial losses, and/or reputational damage.*	• Lack of comprehensive **safety assessment** • **Lack of accountability** at frontline level • No systematic process to **measure changes in safety culture**	*"We don't have a great safety culture or tools to measure it. We've come a long way in the past three years, but we have a long way to go."*	Med.-High **Impact** Med. **Vulnerability**
Washington Aqueduct Contract *Inability to negotiate favorable terms in the contract negotiation for purchasing water from the Washington Aqueduct may result in unfavorable financial and reliability performance.*	• Water purchase contract with Washington Aqueduct **expires in 2023** and has been in place since the 1990s • DC Water is the Aqueduct's **primary customer** but **relies solely** on it for its water supply	*"Even though we don't operate the Washington Aqueduct, the public would probably blame us if something failed."*	Med. **Impact** Med. **Vulnerability**

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Summary of Top Enterprise Risks – Tier 2 (cont.)

Scale to rate Impact and Vulnerability:

| Low | Med.-Low | Medium | Med.-High | High |

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Risk Statement	Risk Drivers and Considerations	What We Heard	Rating
Catastrophic Events *Inability to respond quickly and effectively to catastrophic events, e.g., pandemics, extreme weather events, etc., may negatively impact annual budgets, disrupt operations, and erode public trust.*	• **Climate change** and weather-related events (e.g., floods) • **Infrastructure failure** (e.g., Blue Plains) • Multiple risks **materializing concurrently**	*"We should be planning for two or more unknowns at the same time, like Japan when it had a tsunami and nuclear reactor go down in the same event."*	Med. **Impact** Med. **Vulnerability**
Attract Top Talent *Inability to attract top talent may result in insufficient resourcing or misalignment with roles, significantly impacting the Authority's ability to maintain reliability, affordability, and achieve its overall corporate objectives.*	• **Competition for talent**, especially in evolving, post-COVID labor market • Requirements to **source talent from DC area** • Difficulty bringing **institutional knowledge in-house**	*"One of the biggest risks we have is that we are too lean. We can't hire enough people."* *"The availability of qualified people is not there."*	Med. **Impact** Med. **Vulnerability**
Third-Party Management *Risk that third parties' (e.g., partners, vendors, suppliers, and contractors) poor performance, the Authority's ineffective management, or excessive reliance may have negative impacts to the Authority's reputation and/or operations.*	• Balance of what is developed **in-house vs. outsourced** • **Reliance on third parties** for critical parts of business • Third parties may be **unable to meet obligations**	*"We don't have a dashboard to monitor vendor performance."*	Med. **Impact** Med.-Low **Vulnerability**

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Risk Deep Dive Output

Revenue Erosion & Expenditure Increase Deep Dive | High Priority Risk Drivers

High Priority Drivers

[1.1]. Difficulties detecting issues in **customer billing** due to internal capacity limitations and/or insufficient systems/technology (e.g., illegal meter connections, new meter installations, large meter accessibility)

[1.4]. **Utilization of third parties** and opportunity to re-evaluate the existing operating model to assess potential duplication of efforts and current uses for external parties

[1.2]. Opportunity to **minimize water loss** by addressing leakages in infrastructure and implementing water shut-offs as necessary

[2.1]. Impact of federally/EPA **mandated capital improvement plan (CIP) programs** on debt service from capital costs without proper federal funding to align with mandated needs

[1.3]. Management and prioritization of unplanned **O&M spending** (i.e., increasing asset maintenance expenses) and **rising capital costs** (i.e., Clean Rivers)

[2.2]. **Supply chain disruptions** and use of **single sourced** materials leading to raw material shortages and increasing the cost of chemicals required to treat wastewater

Note: The numbering of risk drivers signifies the root cause of the driver.

1 – Self-Inflicted
2 – Imposed
3 – Calculated

Ex: Driver [1.2] was the second driver discussed under self-inflicted category.

Note: Drivers were prioritized through 1:1 sessions and a group workshop

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New and Changing Regulations Deep Dive | High Priority Risk Drivers
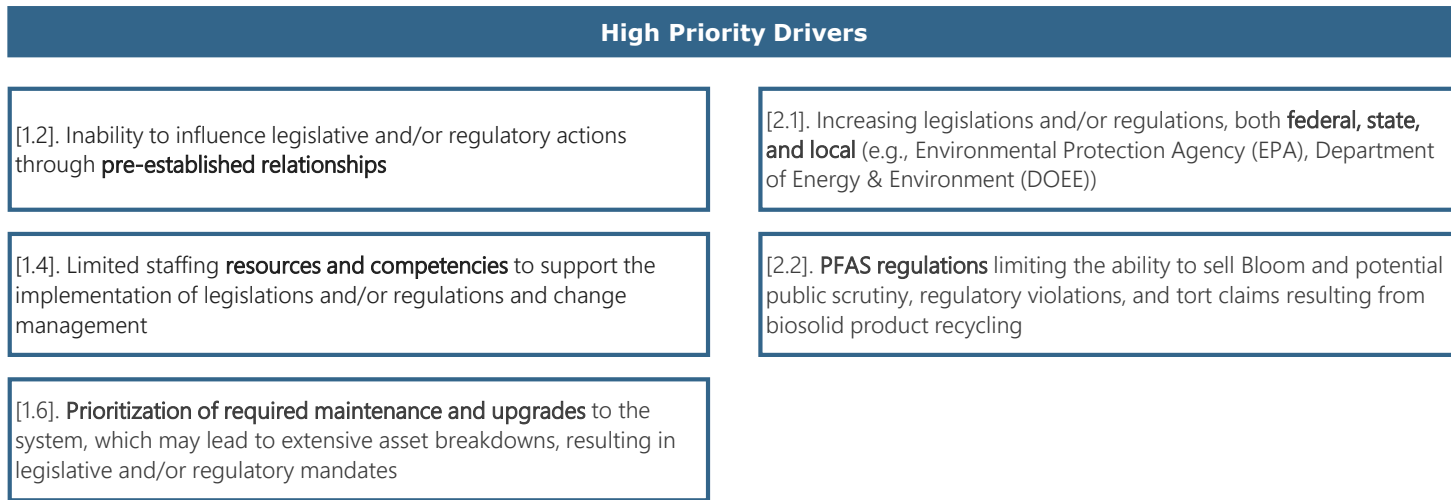
High Priority Drivers	
[1.2]. Inability to influence legislative and/or regulatory actions through **pre-established relationships**	[2.1]. Increasing legislations and/or regulations, both **federal, state, and local** (e.g., Environmental Protection Agency (EPA), Department of Energy & Environment (DOEE))
[1.4]. Limited staffing **resources and competencies** to support the implementation of legislations and/or regulations and change management	[2.2]. **PFAS regulations** limiting the ability to sell Bloom and potential public scrutiny, regulatory violations, and tort claims resulting from biosolid product recycling
[1.6]. **Prioritization of required maintenance and upgrades** to the system, which may lead to extensive asset breakdowns, resulting in legislative and/or regulatory mandates	

Note: The numbering of risk drivers signifies the root cause of the driver.

1 – Self-Inflicted
2 – Imposed
3 – Calculated

Ex: Driver [1.2] was the second driver discussed under self-inflicted category.

Note: Drivers were prioritized through 1:1 sessions and a group workshop

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DC WATER

Audit & Risk Committee Meeting

April 25, 2024

RSM
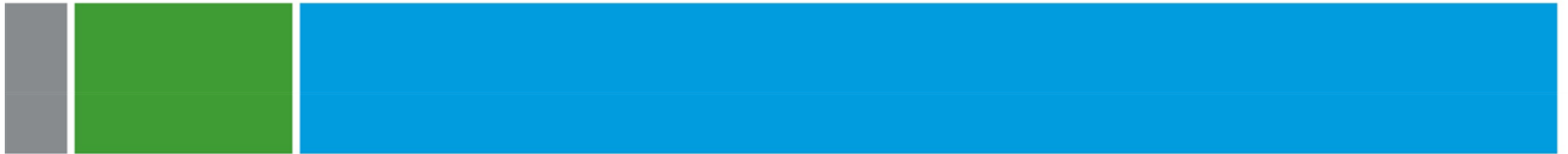
Agenda

- FY 2024 Internal Audit Plan Status Update

- Status Update on Prior Audit Findings

- Report on Completed Audits
  - Contract Compliance Audit
  - Work Order Management Audit – Pumping Branches
  - Permit Operations Management Assessment

- Hotline Update

- Executive Session
  - Mobile Application Penetration Testing

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AUDIT PLAN STATUS UPDATE

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Internal Audit Plan Status Update

Audit	Status
FY 2024	
Purchasing Card and Expense Reimbursement Audit	Report Complete
Contract Compliance Audit	**Report Complete**
Work Order Management Audit - DPO	**Report Complete**
Permit Operations Management Assessment	**Report Complete**
Mobile Application Penetration Testing	**Report Complete**
Genesys IT General Controls Assessment	Fieldwork in Progress
Internal and External Network Penetration Testing	Planning in Progress
Physical Security – Fleet Facility	Not Started
Physical Security - HQO	Not Started
Training and Recruiting Audit	Not Started
FY2025 Risk Assessment	Not Started
Remediation & Follow Up	On-going
Hotline Management	On-going

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Internal Audit Plan FY 2024 Timeline

	Oct – 23	Nov – 23	Dec – 23	Jan – 24	Feb – 24	Mar – 24	Apr – 24	May– 24	Jun – 24	Jul – 24	Aug – 24	Sep - 24	Oct - 24
▶ P-Card and Expense Reimbursement Audit*													
▶ Contract Compliance Audit*													
▶ Work Order Management - DPO*													
▶ Permit Operations													
▶ Mobile Application Penetration Testing*													
▶ Genesys ITGC Review													
▶ Internal and External Network Penetration Testing													
▶ Physical Security – Fleet Facility													
▶ Physical Security - HQO													
▶ Training and Recruiting Audit*													
▶ FY 2025 Risk Assessment													
▶ Ongoing Follow-up Procedures													
▶ Ongoing Hotline Monitoring													

italic * indicates cycle audit

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PRIOR AUDIT FINDINGS – FOLLOW UP STATUS

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Open High Risk Prior Audit Findings

	Audit FY	Issue Date	Audit Report	High Risk Open Finding	Original Target Date	New Target Date	# Extensions
1	2023	7/27/2023	**DWO Work Order Management Audit**	**Failure to capture work order labor and materials data**	8/31/24	N/A	0
				DWO has defined work activities that require material data capturing and developed business processes for capturing both required labor hour and material data capture which have been socialized with DWO branches. Starting in December 2023, DWO began monitoring data integrity biweekly to monitor the effectiveness of new process adoption. In March 2024, missing percentages were around 30 to 40%, which is a significant improvement from the missing percentages noted during the audit. DWO is working to close the gap to meet their department KPI of keeping missing percentages for labor hours and material costs under 10%.			
2	2023	10/26/2023	**Fleet Management Audit**	**Lack of current policies and procedures**	9/1/24	N/A	0
				Fleet is leveraging a writer that has drafted fifteen SOPs. All SOPs have been submitted to collaborating departments. Fleet has submitted milestones to Internal Audit for tracking towards final target date in September that include drafting a RACI and determining Fleet policy needs, finalizing draft of 10 Authority-wide Fleet policies, and submitting policies to review (Legal, Labor Relations, People & Talent).			

Legend	
	Past due
	Original target date has not yet come due

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Status Update on Prior Audit Findings

Audit Report/Subject	Report Issue Date	Corrective Actions			
		Total	Open	Closed	Pending Testing[1]
Prior to FY23 Audit Findings					
Entity Level Review	10/26/2017	7	0	6	1
Occupational Safety and Health	4/25/2019	4	0	3	1
Contract Compliance Audit	7/22/2021	3	0	3	0
Strategic Plan Monitoring Audit	7/28/2022	2	0	0	2
	Total	**16**	**0**	**12**	**4**

FY17 - FY22 Prior Audit Findings Status

Pending Testing 2%

Open 0%
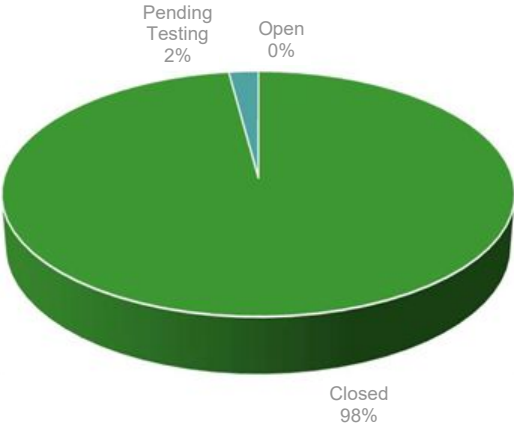
Closed 98%

Note that the audit findings reported above only represent findings prior to FY23 with the status of "Pending Testing" or "Open". Audits conducted prior to FY23 for which all findings have been closed are not represented in this table. However, the pie chart to the right includes status of all audit findings FY17 – FY22.

[1] "Pending Testing" indicates that Management represents that the Action Plan is Completed, but Internal Audit has not yet performed testing to validate the status.

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Status Update on Prior Audit Findings

Audit Report/Subject	Report Issue Date	Corrective Actions			
		Total	Open	Closed	Pending Testing[1]
FY23 Audit Findings					
Procurement Audit	1/26/2023	1	0	1	0
Contract Compliance Audit	4/27/2023	1	0	1	0
Metering, Billing, and Collections Audit	4/27/2023	1	0	1	0
Payroll & Timekeeping Audit	7/23/2023	7	2	5	0
IT Wireless Penetration Testing Audit	7/23/2023	1	0	1	0
Oracle ITGC Testing	7/23/2023	0	0	0	0
Work Order Management Audit – DWO	7/23/2023	3	2	0	1
Fleet Management Audit	10/27/2023	6	3	1	2
Total		**20**	**7**	**10**	**3**
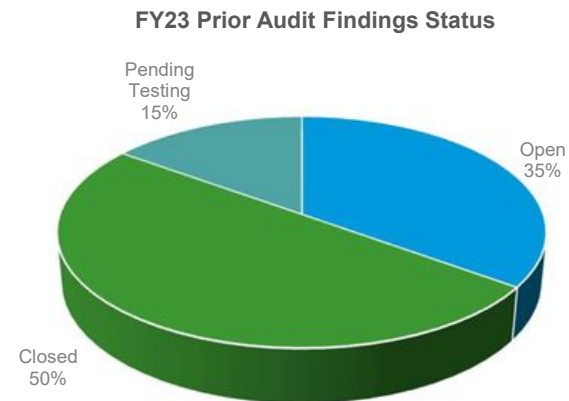
FY23 Prior Audit Findings Status

Pending Testing 15%

Open 35%

Closed 50%

[1] "Pending Testing" indicates that Management represents that the Action Plan is Completed, but Internal Audit has not yet performed testing to validate the status.

Color Key
At least 1 original remediation target date has been extended

In total, 93% of all prior audit findings from FY17 – FY23 are closed. Management's target closure rate is 95%.

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CONTRACT COMPLIANCE AUDIT

Contract Compliance Audit

Purpose

The purpose of this review was to obtain an understanding of how contracts are managed and assess whether the system of internal controls is adequate and appropriate for promoting and encouraging the achievement of management's compliance objectives. The audit testing period was 10/1/2022 – 12/31/2023.

Scope

The audit scope was based upon the following objectives:

- Determine contractor compliance with specific contract terms and provisions, as applicable;
- Identify the monitoring controls and evaluation process in place for each contract, including follow-up on remediation for underperformance;
- Review the invoice and change order approval process;
- Review the Contractor's Safety Plan to confirm it meets all contractual requirements and was properly approved;
- Verify that DC Water maintains a current Certificate of Insurance for each contractor;
- Confirm that DC Water Contracting Officer's Technical Representative ("COTR") have completed COTR training requirements; and
- Identify process improvement opportunities and recommend internal control enhancements to improve the contractor management process.

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Contract Compliance Audit (continued)

Contract #10177 – Water & Sewer System Infrastructure – Construction Management BOA

Contractor	Hazen & Sawyer, P.C.	Hazen & Sawyer, P.C., **provides construction management and related services to DC Water Capital Improvement Projects** for various Water and Sewer System Infrastructures. The scope of work includes tasks and responsibilities in the following phases of the construction projects: design phase, bid phase, and construction management phase.
Award Date	October 8, 2021	
Contract Period	10/08/2021 – 12/10/2024	
Contract Award Amount	$6,000,000	
Contract Type	Capital Procurement	
COR/COTR	Ignatius Ajemba	
Project Manager	Wisal Khan	

Contract #10229 – DCFA #511 Filter Underdrain and Backwash System Upgrades

Contractor	Carollo Engineers, P.C.	Carollo Engineers, P.C., provides **professional architectural/engineering and related services pertaining to the Filter Underdrain and Backwash System Upgrades project**. The project scope of work includes the necessary improvements identified in the *Filter Underdrain and Backwash system Upgrades, Concept Design Report*, prepared by AECOM, dated February 2021.
Award Date	March 7, 2022	
Contract Period	03/07/2022 – 10/26/2029	
Contract Award Amount	$7,999,000	
Contract Type	Capital Procurement	
COR/COTR	Ryu Suzuki	
Project Manager	Rouben Der Minassian	

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Contract Compliance Audit (continued)

1. Insufficient Contract Oversight	High

Management Action Plan:

1. Revise SOP 5110 'Electronic Daily Report' to incorporate requirement for spot checking of consultant generated daily reports by a DC Water full time employee. It will be the COTR's responsibility to ensure the spot checks have occurred. Staff will be trained on the new requirement with training materials and recording posted to an Engineering SharePoint site for future reference.

2. Provide refresher training to PM's on importance of reviewing contract required submittals within the required time frame. The training will include:

    i.   The importance of Unifier to track the submittal reviews.

    ii. Review of Consultant Agreement onboarding submittal requirements.

    iii. Contract compliance Importance and Impact of non-compliance.

    iv. Training will be recorded and posted on an Engineering SharePoint site for future reference. Training materials will be provided and will also be posted on the SharePoint site and made available to current and future Project Managers

Responsible Party: Director of CIP Infrastructure Management

Target Date: September 1, 2024

One additional moderate risk and one low risk finding are included in the full report.

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WORK ORDER MANAGEMENT AUDIT

Department of Pumping and Sewer Operations (DPSO) – Pumping Branches

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Work Order Management Audit

Purpose

The purpose of this audit was to obtain an understanding of how the Department of Pumping and Sewer Operations' ("DPSO") pumping branches work order management process is managed and to validate effective operations in accordance with DC Water requirements. The testing period was 1/1/2023 through 12/31/2023.

Scope

The audit scope was based upon the following objectives:

- Conducted interviews with key personnel and performed analytics over work order data to obtain a detailed understanding of policies and procedures, operating functions, and key performance indicators for the following areas:
  - Work order initiation and screening
  - Work execution and data entry
  - Work order closeout
  - Reporting and monitoring
- Assessed the design and operating effectiveness of key controls. Internal Audit reviewed work orders closed during the testing period. Key areas of focus included:
  - Required workflow steps by work order type
  - Required data fields captured
- Identified strong practices and areas of excellence, as well as potential opportunities for process improvement or control gaps and underlying root causes
- Worked with management to develop action plans to remediate identified control gaps

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Work Order Management Audit (Continued)

The mission of the Department of Pumping and Sewer Operations is to provide resilient delivery of water and sewer system services every minute of the day. During our review, we focused on the pumping-specific branches, as work order management processes for the sewer branches were previously reviewed in FY22. Per the FY24 Approved Budget Departmental Summary, the pumping-specific branches are as follows:

1. Pumping Operations
- Operate water, sewer, and stormwater pumping stations, water storage facilities and water towers
- Remove screenings and debris from pump stations and prepare work order for equipment in need of repair
- Perform Stormwater Pollution Prevention Plan inspections and reports
- Inspect inflatable dams to maintain proper function during rain events

2. SCADA PCS
- Operate and maintain Supervisory Control and Data Acquisition (SCADA) computer system, applications, hardware, and network support
- Operate and maintain all process instrumentation and controls, including completion of all related preventative and corrective maintenance
- Ensure integrity of SCADA, disaster recovery planning, implementation, and testing
- Administer and manage service contracts and special projects for the department

3. Maintenance
- Plan and coordinate corrective, emergency, preventive, and predictive maintenance for pump stations
- Maintain, troubleshoot, and repair mechanical and electrical process systems and equipment
- Plan, schedule, and perform condition monitoring for process equipment, including vibration, infra−red, and oil analysis

4. Potomac Interceptor
- Manage risk, operation, and maintenance of Potomac Interceptor (PI) Sewer, and the Clean River Tunnel Ventilation Control Vault (VCV)
- Operate and maintain PI flow meters and odor control facilities and manholes
- Manage Miss Utility service in Virginia and Montgomery County in Maryland; monitor right-of-way to maintain integrity and prevent encroachment

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Work Order Management Audit (Continued)

The below charts illustrate the breakdown of the 6,064 work orders in the **closed** status for the review period (1/1/2023 - 12/31/2023). Work orders are categorized by the branch performing the work, and the work order type denotes the nature of the work conducted.

Work Orders Closed by Branch
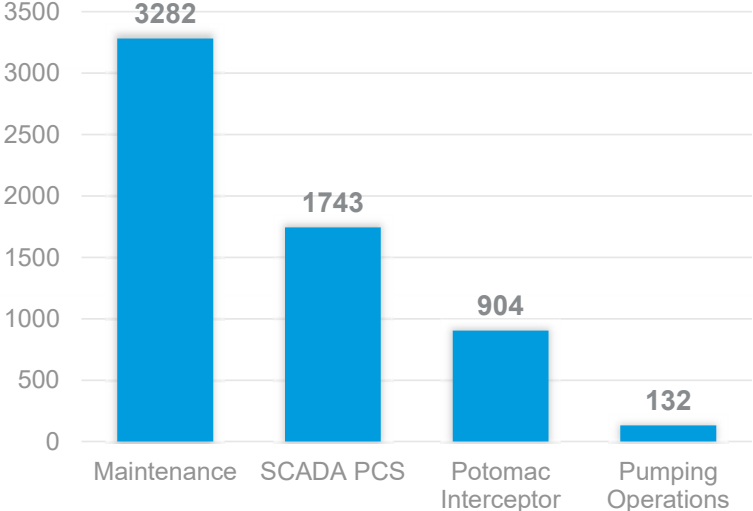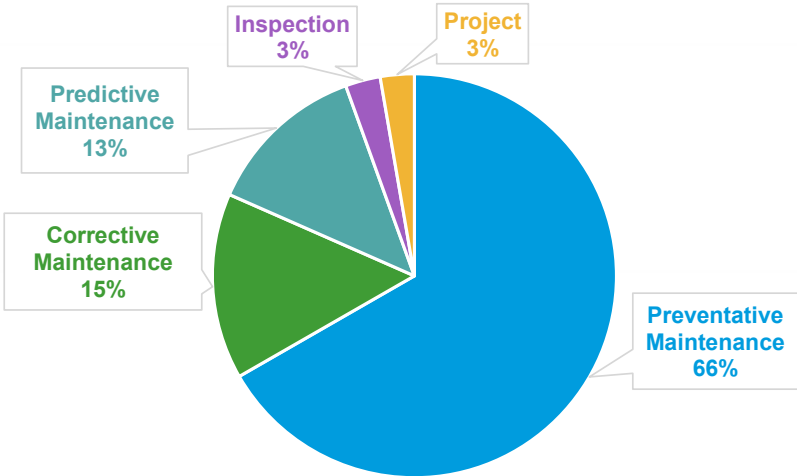
Branch	Work Orders
Maintenance	3282
SCADA PCS	1743
Potomac Interceptor	904
Pumping Operations	132

Work Orders Closed by Type

- Inspection 3%
- Project 3%
- Predictive Maintenance 13%
- Corrective Maintenance 15%
- Preventative Maintenance 66%

Two moderate risk and one low risk finding are included in the full report.

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Note: 3 work orders were not tagged to a branch within Maximo. These 3 work orders are not included in the above graphs.

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PERMIT OPERATIONS MANAGEMENT ASSESSMENT

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Permit Operations Management Assessment

Purpose

The purpose of this review was to obtain an understanding of the Permit Operations processes and provide recommendations for process improvement opportunities and internal control enhancements.

Scope

The in-scope process reviewed were:
- Customer application submission
- Permit plan review and approval
- Inspection work order creation and completion
- Plan review and inspection fee calculation and collection
- Refund request and permit project closeout

The assessment was focused on evaluating the planned future-state processes that have been designed to utilized the new permit information management system (PIMS) and did not include transactional testing to determine operating effectiveness of internal controls.

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Permit Operations Management Assessment (Continued)

Procedures:

- Internal Audit's procedures included the following:
    - Conducted walkthroughs with key personnel within the Permit Operations department to obtain an understanding of the future state control environment for the in-scope processes
    - Documented process risks and planned future-state internal control activities as designed
    - Developed high-level process flowcharts to provide management visibility into future-state processes as designed for utilizing the new PIMS system
    - Identified current process challenges and limitations and evaluating the effectiveness of the future-state process design to address those pain points.
    - Proposed additional process and risk considerations for the Permit Operations department as they move forward with implementing PIMS.

- Internal Audit provided management with a report highlighting the current challenges faced by the department and the future-state process plans in PIMS that will improve the control environment.

Assessment conclusion highlight:

Implementation of PIMS is on-track to go-live in Q4 of FY24. Based on procedures performed, Internal Audit is comfortable that the Permit Operations department has appropriate control objectives defined to mitigate the significant risks within the future-state process, as all identified risks within the current manual permitting process have a corresponding or enhanced future-state control objective designed to mitigate the impact and/or likelihood of the risk occurring.

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HOTLINE UPDATE

Hotline Call Analysis

We conducted an analysis of the 58 hotline calls that have been received FY 2021 to date (October 1, 2020 – April 18, 2024), to identify any trends, evaluate the quantity of calls (allegations) that were substantiated, and other quantitative metrics. The following charts represent the breakdown of calls by Department and Case Type.

Calls by Department

- Other*, 2
- Safety/Facilities, 4
- Labor Relations, 3
- Finance/Payroll, 4
- Engineering, 8
- Office of the CEO, 9
- Fleet, 4
- Water Services, 24
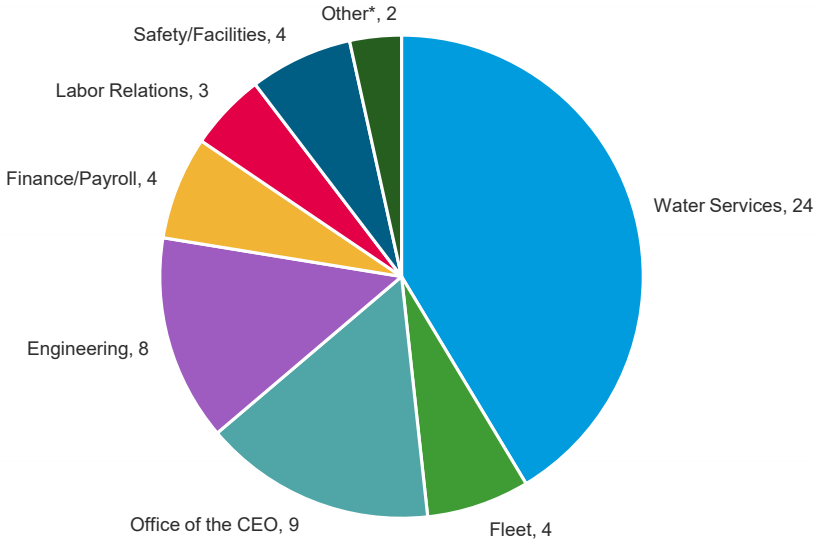
* Both of the following departments received one call: Maintenance Services and Permit Operations.

Calls by Case Type

- Theft of Time, 2
- Safety Issues and Sanitation, 4
- Fraud, 2
- Misuse of DC Water Vehicles, 3
- Policy Issues, 11
- Theft or Misuse of Company Assets/Services, 4
- Sexual Harassment, 2
- Employee Relations, 11
- Discrimination, 4
- Product Quality, 1
- Workplace Violence/Threats, 2
- Substance Abuse, 4
- Wage/Hour Issues, 8

Results as of April 18, 2024

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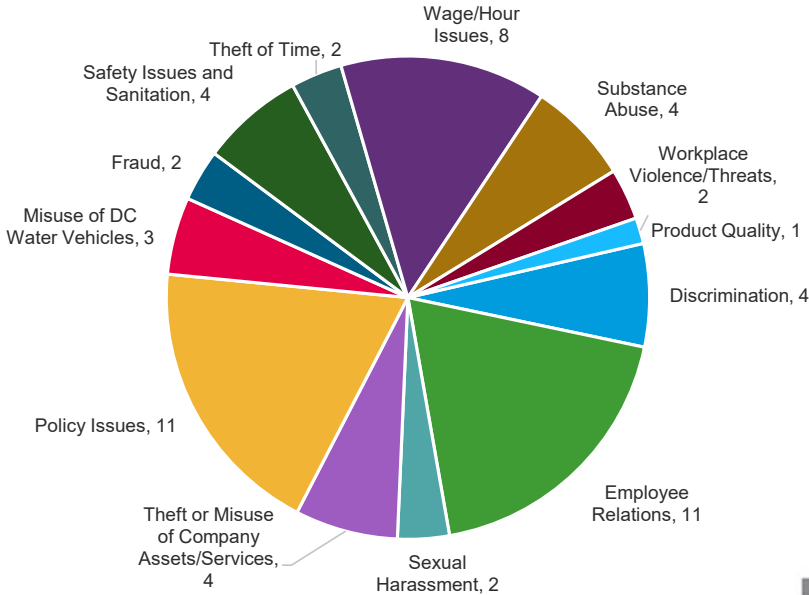
Hotline Call Analysis (continued)

Calls by Type and Department
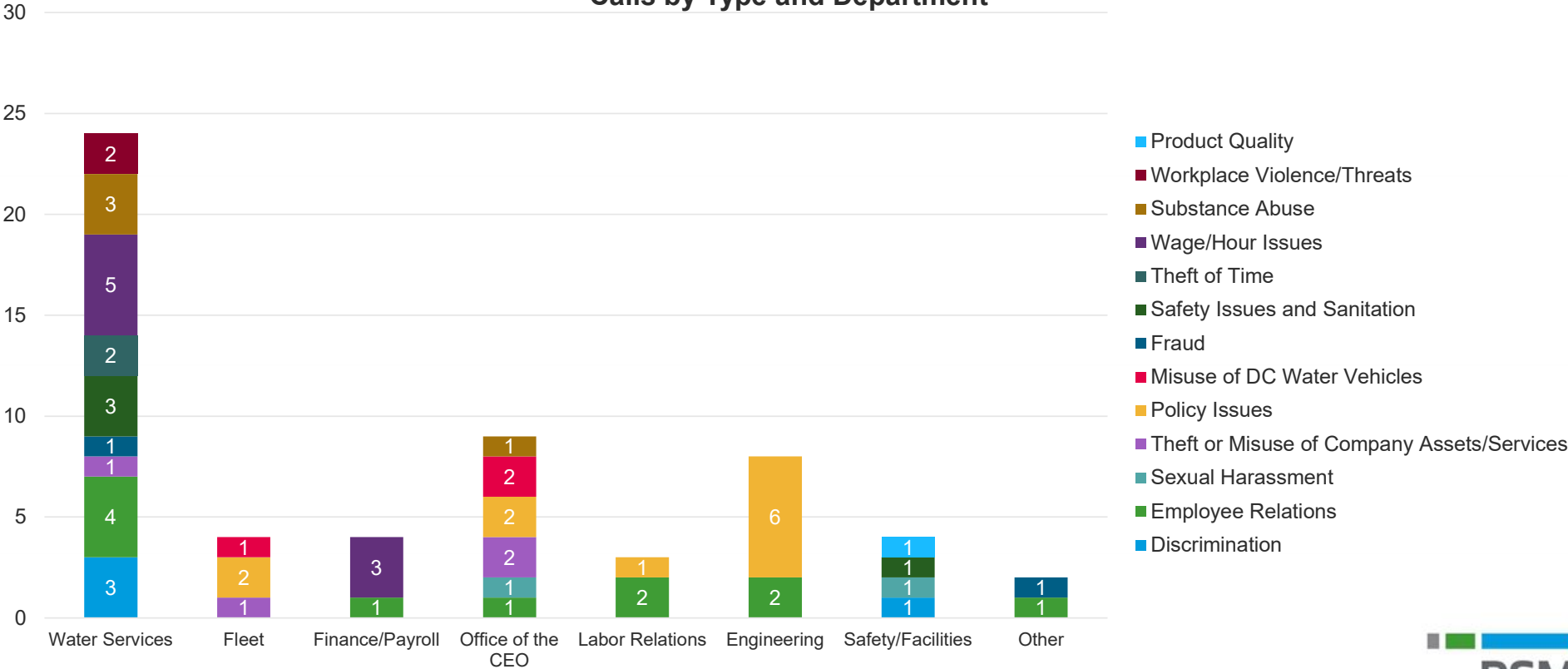
Legend:
- Product Quality
- Workplace Violence/Threats
- Substance Abuse
- Wage/Hour Issues
- Theft of Time
- Safety Issues and Sanitation
- Fraud
- Misuse of DC Water Vehicles
- Policy Issues
- Theft or Misuse of Company Assets/Services
- Sexual Harassment
- Employee Relations
- Discrimination

Results as of April 18, 2024

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Hotline Call Analysis (continued)

Calls by Type and Outcome

■ Corrective Action Required ■ No Internal Audit Investigation Necessary ■ No Corrective Action Required ■ Still Open
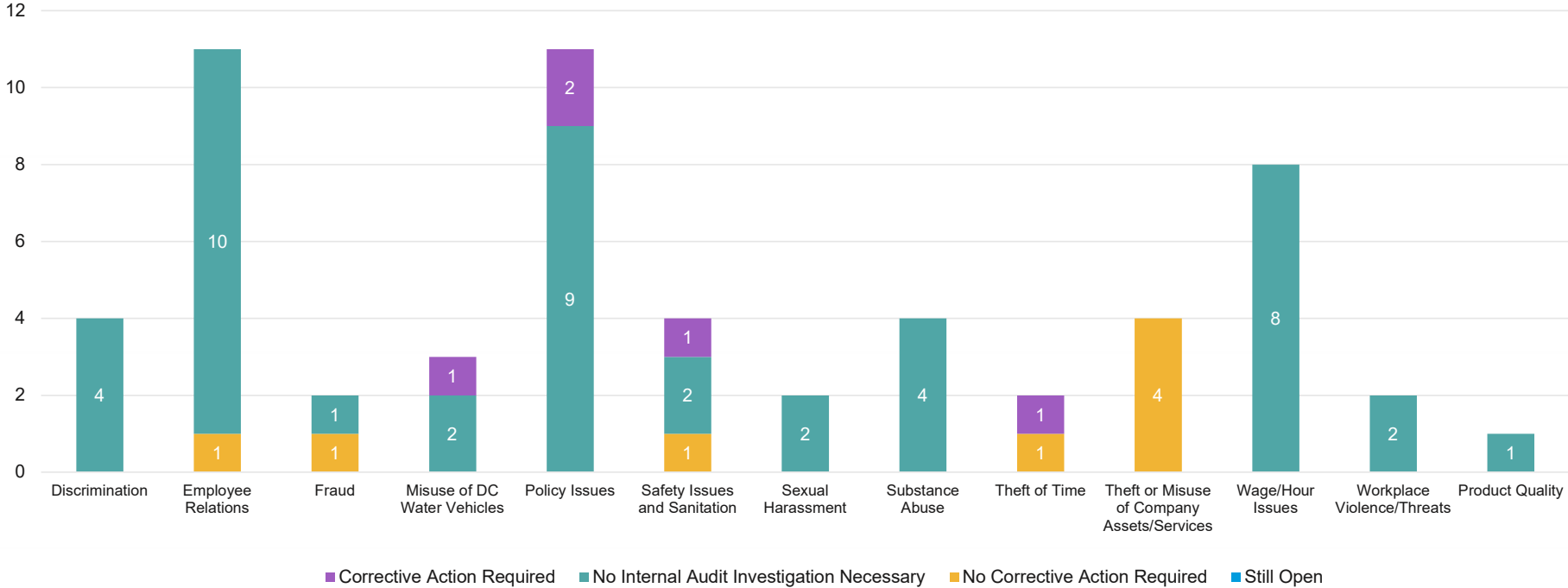
*Calls marked as No Internal Audit Investigation Necessary contain allegations that are not fraud, waste, and/or abuse related in nature. As such, they were forwarded to the appropriate DC Water department per the Hotline SOP with no investigation conducted by Internal Audit. The referred department may have then performed an investigation based on the nature of the call.

Results as of April 18, 2024

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Hotline Call Analysis (continued)

The following tables represent the breakdown of hotline calls that were substantiated and required corrective action. Of the 58 hotline calls received from FY 2021 to date (October 1, 2020 – April 18, 2024), 9% or 5 calls resulted in corrective action.

Calls by Outcome Type

No Internal Audit Investigation Necessary 77%

Corrective Action Taken 9%

No Corrective Action Taken 14%
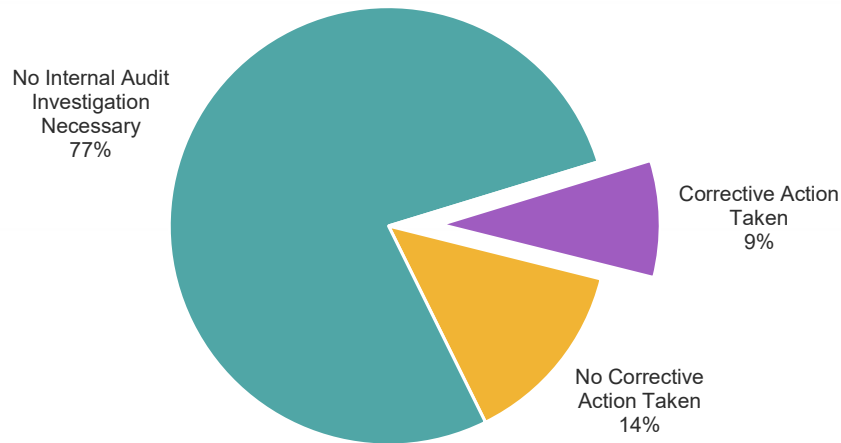
Case Type	# of Calls
Misuse of DC Water Vehicles	1
Policy Issues	2
Safety Issues and Sanitation	1
Theft of Time	1
Total	**5**

Department	# of Calls
Water Services	2
Fleet	1
Office of the CEO	2
Total	**5**

*Calls that are deemed as non-fraud, waste, or abuse related are forwarded to the appropriate DC Water department per the Hotline SOP and closed by Internal Audit. These calls are noted as 'No Internal Audit Investigation Necessary'.

Results as of April 18, 2024

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Hotline Call Analysis (continued)

Calls that are received but deemed as non-fraud, waste, or abuse related are forwarded to the appropriate DC Water department per the Hotline SOP and closed by Internal Audit. Of the 58 hotline calls received from FY 2021 to date (October 1, 2020 – April 18, 2024), only 13 calls (22%) have been allegations of fraud, waste, or abuse.

Calls by Category and Fiscal Year

Legend:
- Fraud, Waste, or Abuse related
- Non-Fraud, Waste, or Abuse related

FY21: Fraud 1, Non-Fraud 6
FY22: Fraud 5, Non-Fraud 13
FY23: Fraud 4, Non-Fraud 11
FY24: Fraud 3, Non-Fraud 15

Results as of April 18, 2024

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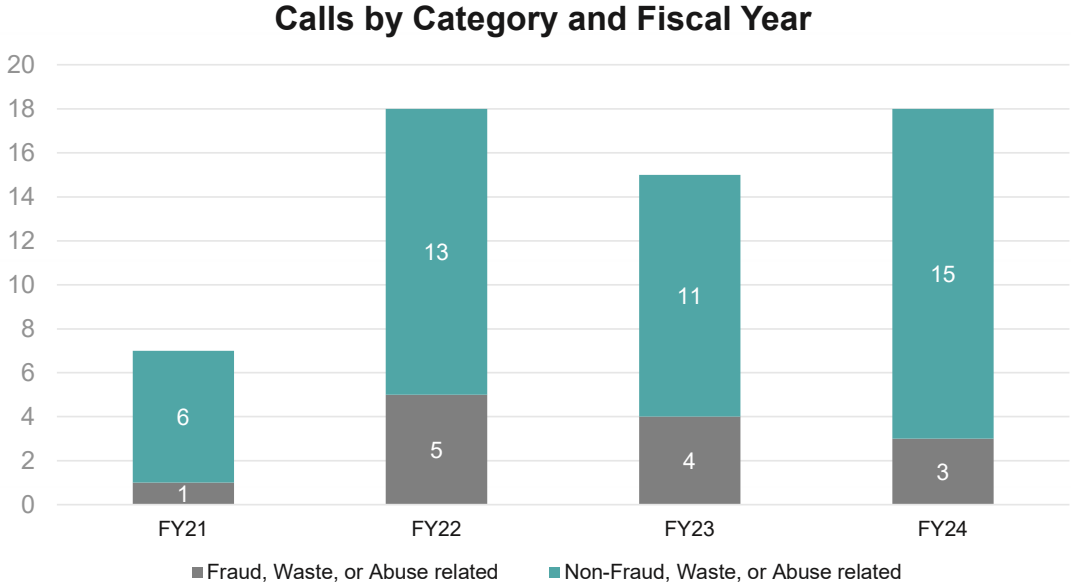
Hotline Update

13 calls have been received since the last Audit & Risk Committee meeting. Below are calls received in FY24 to date as of 4/18/24:

FY 24 Hotline Call Summary	
FY 24 Calls Received	18
FY 24 Cases Closed	18
FY 24 Calls Open	0
FY 24 Open Call Breakdown	
No Open Calls	

FY24 Calls Received by Quarter	
Q1 2024	5
Q2 2024	13

FY 24 Closed Call Breakdown	
Fraud, Waste, and Abuse Related:	
Theft of Time	*2*
Theft or Misuse of Company Assets	*1*
Non-Fraud, Waste, and Abuse Related[1]:	
Policy Issues[2]	*8*
Employee Relations	*1*
Sexual Harassment	*1*
Substance Abuse	*1*
Wage/Hour Issues[3]	*3*
Workplace Violence/Threats	*1*

Total calls by Fiscal Year:

Year	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY19	FY20	FY21	FY22	FY23	FY24
# of calls	10	20	16	36	31	21	28	10	7	18	15	18
Action Taken[1]	0	2	7	7	2	0	1	0	0	2	2	1

[1]Calls that do not pertain to fraud, waste, or abuse are automatically referred to the appropriate department head and closed by Internal Audit. These calls will not result in corrective action noted by Internal Audit.
[2]Six Policy Issue complaints related to violation of the Authority's telework policy
[3]Three Wage/Hour Issue complaints related to unfair assignment of overtime within the same department

QUESTIONS AND ANSWERS

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DC WATER

Contract Compliance Internal Audit

February 2024

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EXECUTIVE SUMMARY, BACKGROUND AND APPROACH

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Executive Summary and Objectives

Objective and Scope

The purpose of this review was to obtain an understanding of how contracts are managed and assess whether the system of internal controls is adequate and appropriate for promoting and encouraging the achievement of management's compliance objectives. The audit testing period was 10/1/2022 – 12/31/2023. 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 each contract, including follow-up on remediation for underperformance;
- Review the invoice and change order approval process;
- Review the Contractor's Safety Plan to confirm it meets all contractual requirements and was properly approved;
- Verify that DC Water maintains a current Certificate of Insurance for each contractor;
- Confirm that DC Water Contracting Officer's Technical Representative ("COTR") have completed COTR training requirements; and
- Identify process improvement opportunities and recommend internal control enhancements to improve the contractor management process.

Fieldwork was performed November 2023 – February 2024.

Overall Summary and Highlights

There was one high, one moderate, and one low risk observation identified during our assessment:
1) Insufficient Contract Oversight
2) Inconsistent Pay App Reviews
3) Untimely COTR Training

These observations are described in the detailed observations section of the report (pages 8 – 14). We have assigned relative risk or value factors to each observation. Risk ratings are the evaluation of the severity of the observation 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.

Summary of Observation Ratings
(See Appendix for risk rating definitions)

Number of Observations by Risk Rating

High	Moderate	Low
1	1	1

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

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Background

Contract Sample Selection

- Internal Audit selected a sample of two capital procurement contracts to review and validate compliance with applicable terms and conditions.

- A designated Contracting Officer Representative (COR) and/or Contracting Officer's Technical Representative (COTR) is responsible for ensuring contract compliance at DC Water. 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. COTRs are trained by the Department of Procurement on their responsibilities as it relates to contract monitoring and compliance.

Total Contract Value for Active Contracts as of 10/5/2023

Contract Type	Total Contract Value with Option Years
Capital Procurement	$2,008,767,061
Goods and Services Procurement	$880,010,147

Contract #10177 – Water & Sewer System Infrastructure – Construction Management BOA

Contractor	Hazen & Sawyer, P.C.
Award Date	October 8, 2021
Contract Period	10/08/2021 – 12/10/2024
Contract Award Amount	$6,000,000
Contract Type	Capital Procurement
COR/COTR	Ignatius Ajemba
Project Manager	Wisal Khan
IA Testing Period	1/1/2023 - 12/31/2023

Hazen & Sawyer, P.C., provides construction management and related services to DC Water Capital Improvement Projects for various Water and Sewer System Infrastructures. The scope of work includes tasks and responsibilities in the following phases of the construction projects: design phase, bid phase, and construction management phase.

Contract #10229 – DCFA #511 Filter Underdrain and Backwash System Upgrades

Contractor	Carollo Engineers, P.C.
Award Date	March 7, 2022
Contract Period	03/07/2022 – 10/26/2029
Contract Award Amount	$7,999,000
Contract Type	Capital Procurement
COR/COTR	Ryu Suzuki
Project Manager	Rouben Der Minassian
IA Testing Period	10/1/2022 - 9/30/2023

Carollo Engineers, P.C., provides professional architectural/engineering and related services pertaining to the Filter Underdrain and Backwash System Upgrades project. The project scope of work includes the necessary improvements identified in the *Filter Underdrain and Backwash system Upgrades, Concept Design Report*, prepared by AECOM, dated February 2021.

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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 the selected contracts. The following procedures were conducted as part of the first phase of our review:
- Submitted requests to the CORs and/or COTRs to gain a better understanding of the contract terms and determine how the contract is monitored.
- 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 second phase of our review consisted of an assessment of the design of key controls and testing of the operating effectiveness of those controls. For both selected contracts, Internal Audit conducted the following testing:
- Reviewed the invoice submission and approval process to verify:
  - Invoices are submitted on the required cadence.
  - Invoices include the required documentation (progress reports, expense receipts, timesheets, and applicable checklists).
  - Invoices define the period of service provided and describe the services provided.
  - Invoices were approved by the appropriate personnel before payment.
- Reviewed the Contractors' Safety Plan to ensure it met all contractual requirements and was properly approved.
- Verified that DC Water maintained a current Certificate of Insurance for the Contractors.
- Reviewed the reporting processes to verify that Contractors are submitting required documentation completely and timely, per contractual requirements.
- Examined the monitoring of subcontractors to verify that subcontractors are approved before commencing work on the contract.
- Verified that COTRs completed training requirements.
- Verified periodic progress meetings and workshops were held and attended by the appropriate individuals, per contract requirements.

Reporting

At the conclusion of this audit, we summarized our observations related to the contract monitoring and compliance process. We have reviewed the results of our testing with management.

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OBSERVATIONS AND RECOMMENDED ACTION

Observation 1: Insufficient Contract Oversight

Risk Rating: High

Observation: Internal Audit identified deficiencies in DC Water's review procedures over required contract documentation submitted by contractors. Testing of both contracts (Contract #10229 and Contract #10177) revealed a lack of DC Water scrutiny over **initial contractor documentation submissions** (i.e., work plans, quality plans, work schedules, etc.). Specific to Contract #10177, Internal Audit also identified **a lack of review of daily field reports**, which are key work outputs of Hazen & Sawyer that detail contract progression, work quality, and more.

Details around both areas of deficiency are expanded upon below:

- Inadequate initial submission oversight (Contract #10229 and Contract #10177):
    - Contract #10229 – The COTR did not evidence review and approval of initial contracting submissions by Carollo Engineers, including the work plan, quality management plan, and work schedule. These documents were uploaded to Unifier, DC Water's system of record for contracting documentation and activities, but they were not approved within the Unifier workflow.
    - Contract #10177 – The COTR did not evidence review and approval of initial contracting submissions by Hazen & Sawyer (the Consultant), including the quality management plan and work schedule. Instead, these documents were collected from the Consultant and stored as information only.
- Inadequate daily field report oversight (Contract #10177 only):
    - Hazen & Sawyer (the Consultant) operates as an on-site inspector for DC Water construction projects, and the purpose of the Consultant's involvement is to be on-site with construction contractors that are performing fieldwork in support of DC Water's capital improvement program (CIP). The Consultant provides DC Water visibility and comfort over construction progress by monitoring performance and compliance with the construction contractual terms and with DDOT regulations through on-site, real-time inspections. Daily field reports are submitted to Oracle Unifier and, as field events dictate, often include photos of work performed on-site that day, material slips, and quantity reports to validate appropriateness of work performed and quantity of material received and utilized by the construction contractor for the day. The Unifier workflow requires approval of submitted daily field reports by the Consultant inspector who verifies the completeness and accuracy of the reports. The scope of Contract #10177 included the Consultant's oversight of construction projects contracted with Capitol Paving, Spiniello Companies, and Sagres Construction Corporation.
    - There is no internal control designed for DC Water to review or spot check the daily field reports submitted by the Consultant inspector for each construction contract they oversee. Through testing, Internal Audit discovered that, although daily reports were compiled, the Consultant has at times missed submission of required documentation to Oracle Unifier in specific daily reports, including photos of work performed, material slips, and quantity reports. Due to the lack of a review process by DC Water, these incomplete field reports were not identified or followed-up on in a timely manner.

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Observation 1: Insufficient Contract Oversight (cont'd)

Root Cause Analysis:

- Inadequate initial submission oversight (Contract #10229 and Contract #10177): Training or guidance provided to Project Managers regarding the contract onboarding process for engineering contracts is inconsistent. Project Managers are not consistently trained or made aware of the expectations and requirements surrounding review, approval, and maintenance of contract documentation.

- Inadequate daily field report oversight (Contract #10177 only): There is no standard operating procedure outlining DC Water's oversight roles and responsibilities regarding Consultant construction management inspector-submitted daily field reports, and as a result, there is a lack of documented accountability over the completeness and accuracy of Consultant inspector-submitted daily reports.

Impact Analysis:

- Inadequate initial submission oversight (Contract #10229 and Contract #10177): Failure to adequately and promptly review initial submissions, such as work plans, quality management plans, and work schedules, may lead to inconsistencies in the implementation of these plans across different projects managed by DC Water. Although each engineering consultant firm operates with its own robust quality and safety protocols and the responsibility for adhering to all relevant standards, codes, and regulations lies with registered professional engineers, DC Water's capacity to efficiently oversee multiple projects simultaneously will be undermined without thorough review and enforcement of these plans.

- Inadequate daily field report oversight (Contract #10177 only): If DC Water does not spot check daily field report submissions, the Consultant is not held accountable for submitting adequate documentation required to satisfy contractual terms. Inconsistent documentation of daily construction activities (photos, material slips, quantity reports) results in insufficient evidence to support the quality and compliance (e.g., with DDOT standard specifications) of the construction work performed by construction contractors the Consultant is tasked with overseeing. DC Water may then be at risk of paying for substandard inspection and construction work. Although contractors are ultimately contractually responsible for work quality, DC Water's ability to hold contractors accountable is inconsistent when using Consultant inspectors.

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Observation 1: Insufficient Contract Oversight (cont'd)

Recommendation:

Internal Audit recommends that the Department of Engineering develop an onboarding and inspection procedural document to provide to all employees involved in contract management. The document should complement / supplement COTR training, and outline the basic duties/requirements of a Project Manager throughout the lifecycle of the contract (i.e., document submission, consultant/contractor oversight procedures, review procedures, etc.). This procedural document should also address the expectations for DC Water individuals tasked with overseeing a Consultant construction management team, including how to oversee daily field report submissions. This procedural document should be communicated to all individuals involved in the execution of a contract to provide employee awareness of expectations and requirements.

Management Action Plan:

1. Revise SOP 5110 'Electronic Daily Report' to incorporate requirement for spot checking of consultant generated daily reports by a DC Water full time employee. It will be the COTR's responsibility to ensure the spot checks have occurred. Staff will be trained on the new requirement with training materials and recording posted to an Engineering SharePoint site for future reference.
2. Provide refresher training to PM's on importance of reviewing contract required submittals within the required time frame. The training will include:
    i.   The importance of Unifier to track the submittal reviews.
    ii. Review of Consultant Agreement onboarding submittal requirements.
    iii. Contract compliance Importance and Impact of non-compliance.
    iv. Training will be recorded and posted on an Engineering SharePoint site for future reference. Training materials will be provided and will also be posted on the SharePoint site and made available to current and future Project Managers

Responsible Party: Director of CIP Infrastructure Management

Target Date: September 1, 2024

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Observation 2: Inconsistent Pay App Reviews

Risk Rating: Moderate

Observation: Contract payments for Contract #10177, Construction Management BOA, adhere to the following process: Monthly, Hazen & Sawyer (the Consultant) submit payment applications (pay apps) to DC Water. The pay apps include a variety of documentation from the Consultant that detail work performed during the month and the value of the monthly invoice to DC Water. The pay application is expected to be reviewed and approved by DC Water prior to payment to confirm DC Water's comfort over the activities performed and amount due to the Consultant. Internal Audit noted two deficiencies in pay application review for Contract #10177:

1. For each pay application, the DC Water Project Manager completes a Project Manager Invoice Review and Approval Form, which outlines all the items that the Consultant needs to submit with the monthly pay application and outlines the Project Manager's review procedures that must be completed prior to issuing payment. For one of the four pay applications reviewed, the Project Manager did not complete the Project Manager Invoice Review and Approval Form.

2. Per the Professional Service Agreement Standard Provisions in the contract, overtime work must be specifically requested and justified by the Consultant and expressly agreed to in writing by DC Water. For all four of the pay applications reviewed, the Consultant did not provide justification of overtime hours, and as such, the Project Manager did not evidence their review and approval. Across the four pay applications that Internal Audit reviewed and tested, the total overtime paid amounted to $6,641. Note: Approval of overtime prior to overtime being incurred is not feasible given the nature of overtime for construction management contracts. This observation is related to the lack of retroactive justification and review of overtime hours prior to invoice payment.

Root Cause Analysis: Through inquiry with contract management, the instance in which the Project Manager Invoice Review and Approval Form was not completed occurred due to Project Manager oversight. The missing form was identified after payment was issued. A reminder was provided to the Project Manager to ensure completion of the form for future invoices. Additionally, the process is not enforced for overtime justification submission by the Consultant and subsequent review by DC Water for construction management contracts.

Impact Analysis: Without adequate review of pay applications and overtime hours, DC Water could unknowingly pay for services that have not been completed or for unnecessary or inaccurate overtime hours.

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Observation 2: Inconsistent Pay App Reviews (cont'd)

Recommendation: Internal Audit recommends the following:

1) For each pay application, a Senior Manager or above is required to provide approval in Unifier prior to Accounts Payable issuing payment for the monthly invoice. Internal Audit recommends that the Senior Manager confirm the completion of the Project Manager Invoice Review and Approval Form prior to approving the pay application in Unifier. If it has not been completed, the Senior Manager should return the pay application for modifications/completion prior to payment.

2) The Construction Management Consultant (Hazen & Sawyer) incurs overtime hours when the Construction Contractor has to work overtime, as the Consultant must be on-site to inspect the work performed by the Construction Contractor. A process should be established for the Consultant to submit justification for overtime hours within monthly pay applications. DC Water should review and approve, or deny, the overtime incurred based on the hours and schedule submitted by the Construction Contractor to confirm reasonableness of Consultant overtime.

Management Action Plan:

1. The current pay application approval workflow requires a Senior Manager to review and approve the invoice. Training of staff will be conducted to reinforce the need for Senior Managers to confirm the completion of the Project Manager Invoice Review and Approval form prior to approving the pay application. Training recording and materials will be posted to an Engineering SharePoint site for future reference.
2. The consultant agreement requires overtime approval prior to it taking place. When prior approval of overtime is not practical, overtime will be retroactively reviewed and approved as part of the pay application. Additionally, the Project Manager Invoice Review and Approval (A/E) form requires a sign off by the PM that 'Hours & Overtime (if any) are reviewed and accepted'. Training will be conducted to remind staff of these requirements. Training recording and materials will be posted to an Engineering SharePoint site for future reference.

Responsible Party: Director of CIP Infrastructure Management

Target Date: September 1, 2024

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Observation 3: Untimely COTR Training

Risk Rating: Low

Observation: Contracting Officer Technical Representatives (COTRs) are designated by the Department that owns a given contract. For Contract #10229, Filter Underdrain and Backwash System Upgrades, no COTR had been assigned to the contract by the Department of Engineering until September 29, 2023. All COTRs assigned to a project are required to complete COTR training (developed by the Department of Procurement). DC Water hosts an annual COTR training for all currently assigned COTRs. In the event an employee is assigned to the COTR role in between annual trainings, the employee should be immediately assigned the off-cycle COTR training module in Oracle to enable the COTR to complete training within the first 30 days of COTR assignment, as is expected by the Department of Procurement. The COTR assigned to Contract #10229 on September 29, 2023 was not assigned the off-cycle COTR training until December 13, 2023. As a result, the new COTR did not complete training within 30 days of the COTR assignment.

Root Cause Analysis: Prior to FY24, the Department of Engineering did not have a COTR assigned to Contract #10229, and there was no identification or escalation of the unassigned COTR role. As a result, there was no communication between the Department of Engineering, the Department of Procurement, and People & Talent regarding COTR training assignment specific to Contract #10229. Generally, DC Water did not have an established formal communication process for Department leads to communicate COTR assignments and changes to the Department of Procurement and People & Talent. Without up-to-date, timely knowledge of COTR assignments, People & Talent is unable to enroll individuals tasked with contract oversight to the COTR training module. Currently, off-cycle COTR training enrollment is a manual process facilitated via email.

Impact Analysis: Contracts without a COTR assigned do not have a person charged with oversight responsibility of the contract's technical requirements. Likewise, COTRs that have not received formalized training may not be aware of critical COTR monitoring duties and responsibilities. Both a lack of COTR assignment and an improperly trained COTR increase the risk that DC Water and/or its vendors are non-compliant with agreed-upon contractual terms, requirements, and deliverables, which can impact contract cost, timeliness, work product quality, vendor relationships, and recordkeeping.

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Observation 3: Untimely COTR Training (cont'd)

Recommendation: Per inquiry with the Department of Procurement, going forward, the Director of Procurement of Capital Programs will include the People and Talent Department on the COTR assignment notification e-mail. After receiving the notification, the People and Talent Department will assign the newly appointed COTR to the COTR training module within Oracle. In addition to this process, Internal Audit also recommends that the COTR designation letter include information about COTR training and instruct the new COTR to reach out to the People and Talent Department if they do not receive a link to the COTR training within a set number of days of assignment. Additionally, the Department of Engineering should develop a process to communicate any position changes that require a change in COTR assignment to the Director of Procurement of Capital Programs in a timely manner to ensure no lapses in contract management occur.

Management Action Plan:

Department of Procurement
Response: After Department of Engineering confirms new COTR to Procurement, Procurement will notify People and Talent who will assign new COTR to the COTR training module within Oracle within 30 days. Once the completion of training is confirmed, Procurement will issue the COTR designation letter.

Responsible Party: VP of Procurement

Target Date: April 1, 2024

Department of Engineering
Response: Ensure the current list of COTRs is saved on a SharePoint site accessible to both the Procurement and Engineering Management teams. If a COTR leaves their position, the Engineering team will inform Procurement accordingly.

Responsible Party: Director of Wastewater Engineering

Target Date: April 2024

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APPENDIX

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Appendix A – Rating Definitions

RSM defined observations based on the following risk 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).

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DC WATER

DPSO Pumping Branches Work Order Management Internal Audit

April 2024

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EXECUTIVE SUMMARY, BACKGROUND AND APPROACH

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Executive Summary and Objectives

Objective and Scope

The purpose of this audit was to obtain an understanding of how the Department of Pumping and Sewer Operations ("DPSO") work order management process is managed and to ensure effective operations in accordance with DC Water policy. Our procedures were performed in accordance with the internal audit scope and approach set forth in our audit notification letter and were limited to those procedures described therein. The testing period was 1/1/2023 through 12/31/2023. The audit scope included the following objectives:

- Conducted interviews with key personnel and performed analytics over work order data to obtain a detailed understanding of policies and procedures, operating functions, and key performance indicators for the following areas:
  - Work order initiation and screening
  - Work execution and data entry
  - Work order closeout
  - Reporting and monitoring
- Assessed the design and operating effectiveness of key controls. Internal Audit reviewed work orders closed during the period 1/1/2023 - 12/31/2023. Key areas of focus included:
  - Required workflow steps by work order type
  - Required data fields captured
- Identified strong practices and areas of excellence, as well as potential opportunities for process improvement or control gaps and underlying root causes
- Worked with management to develop action plans to remediate identified control gaps

Fieldwork was performed January 2024 through March 2024

Overall Summary and Highlights

There were three observations identified during our assessment:
1) Inconsistent review of work orders
2) Failure to consistently capture material costs
3) Ineffective escalation of missing labor hours

These observations are described in the detailed observations section of the report (pages 8 – 14). We have assigned relative risk or value factors to each observation. Risk ratings are the evaluation of the severity of the observation 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.

Summary of Observation Ratings
(See Appendix for risk rating definitions)

Number of Observations by Risk Rating

High	Moderate	Low
-	2	1

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

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Background

The mission of the Department of Pumping and Sewer Operations is to provide resilient delivery of water and sewer system services every minute of the day. During our review, we focused on the pumping-specific branches, as work order management processes for the sewer branches were previously reviewed in FY22. Per the FY24 Approved Budget Departmental Summary, the pumping-specific branches are as follows:

1. Pumping Operations
- Operate water, sewer, and stormwater pumping stations, water storage facilities and water towers
- Remove screenings and debris from pump stations and prepare work order for equipment in need of repair
- Perform Stormwater Pollution Prevention Plan inspections and reports
- Inspect inflatable dams to maintain proper function during rain events

2. SCADA PCS
- Operate and maintain Supervisory Control and Data Acquisition (SCADA) computer system, applications, hardware, and network support
- Operate and maintain all process instrumentation and controls, including completion of all related preventative and corrective maintenance
- Ensure integrity of SCADA, disaster recovery planning, implementation, and testing
- Administer and manage service contracts and special projects for the department

3. Maintenance
- Plan and coordinate corrective, emergency, preventive, and predictive maintenance for pump stations
- Maintain, troubleshoot, and repair mechanical and electrical process systems and equipment
- Plan, schedule, and perform condition monitoring for process equipment, including vibration, infra−red, and oil analysis

4. Potomac Interceptor
- Manage risk, operation, and maintenance of Potomac Interceptor (PI) Sewer, and the Clean River Tunnel Ventilation Control Vault (VCV)
- Operate and maintain PI flow meters and odor control facilities and manholes
- Manage Miss Utility service in Virginia and Montgomery County in Maryland; monitor right-of-way to maintain integrity and prevent encroachment

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Background (continued)

The below charts illustrate the breakdown of the 6,064 work orders in the **closed** status for the review period (1/1/2023 - 12/31/2023). Work orders are categorized by the branch performing the work, and the work order type denotes the nature of the work conducted.
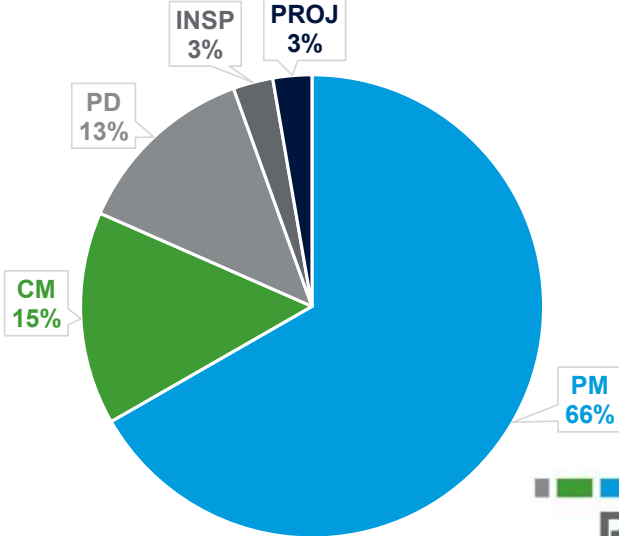
WORK ORDERS BY BRANCH
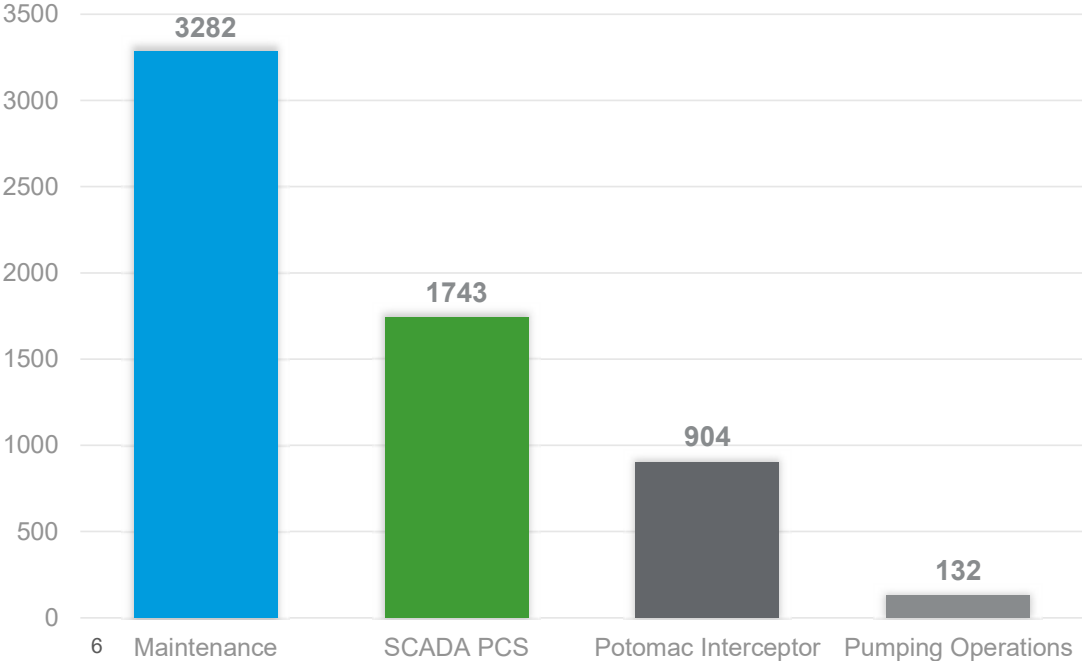
Closed Work Orders Reviewed:
6,064

Work Orders By Type

Approach

Our audit approach consisted of the following phases:

Understanding of the Process

The first phase of our review consisted primarily of inquiry with management to obtain an understanding of the Authority's structure and key processes within our scope. The following procedures were conducted as part of the first phase of our review:
- Conducted interviews with key personnel to obtain a detailed understanding of policies and procedures, operating functions, and key performance indicators for the following areas:
    - Work order initiation and screening
    - Work execution and data entry
    - Work order closeout
    - Reporting and monitoring
- Based on our interviews, we identified key risks and controls and developed a detailed control testing script.

Detailed Testing

The second phase of our review consisted of an assessment of the design of key controls and testing of the operating effectiveness of those controls. This process was facilitated using process mining software and supplemented with testing of manual controls. Our procedures during this phase included:
- Performed detailed analytics over work order data to derive insights into the Maintenance Branch, SCADA PCS Branch, Potomac Interceptor Branch, and Pumping Operations Branch.
- Detail tested a sample of 25 work orders that we would have expected to capture material costs.
- Tested a sample of one to ensure that Maximo prevents users from advancing work orders until all required fields are completed.
- Reviewed 9 samples of the Maximo zero labor hour report and selected work orders from each report to review whether labor hours were added to the work order in Maximo.
- Reviewed the source data and compilation process for key performance indicators (KPIs) reported in the CEO monthly report

Reporting

At the conclusion of the internal audit, we summarized our observations related to the work order management function and reviewed the results of our testing with management. Additionally, internal audit conducted a process mining analysis of work orders and has compiled the results of this analysis, along with identified process improvement opportunities, in a management supplemental report.

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OBSERVATIONS AND RECOMMENDED ACTION

Observation 1: Inconsistent review of work orders

Risk Rating: Moderate

Observation: For the Maintenance branch, Potomac Interceptor branch, and Pumping Operations branch, work orders are inconsistently reviewed by shop supervisors and operations foreman as required.

After fieldwork is complete, shop supervisors or foremen are required to review work orders for the inclusion of key data elements such as materials, tools, etc. *(to evidence their review, shop supervisors or foremen advance work orders to the "field complete" or "maintenance complete" statuses in Maximo after confirming inclusion of key data elements).* Following this review, operations foremen conduct a review in the field to ensure adequacy of the work performed *(to evidence their review, operations foremen advance the work order to "operations complete" status in Maximo).*

Internal Audit performed data analysis over the population of closed parent work orders from 1/1/23 through 12/31/23 and detailed observations are below:

➤ 1,648 parent work orders were required to be reviewed by shop supervisors *(evidenced via the work order flowing through the "field complete" status).* Of these 1,648 work orders, 691 (41.9%) were reviewed by shop supervisors as expected.

➤ 1,217 parent work orders were required to be reviewed by operations foreman *(evidenced via the work order flowing through the "operations complete" status).* Of these 1,217 work orders, 781 (64.2%) were reviewed by operations foreman as expected.

Root Cause Analysis: Management expectations related to required work order review steps appear to not be formalized or enforced. This is causing a breakdown in expectations between the department managers and the shop supervisors and foremen, resulting in frequent deviations between expected and performed review steps.

Impact Analysis: If work orders are not properly reviewed, it can lead to an increased risk of missing, incorrect, or incomplete work order data. Additionally, the "operations complete" status provides comfort over the adequacy of the work performed. Omission of this operational review could result in faulty or inadequate work not being identified by the branch in a timely manner.

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Observation 1: Inconsistent review of work orders

Recommendation: Internal Audit recommends the following:

1) Management should formalize the requirements for work order reviews in a standard operating procedure.

2) Management should provide training for all field workers, shop supervisors, and foremen on the required work order reviews for each work order type.

Management Action Plan:

1) DPSO will re-distribute and make easily accessible to all its personnel The Work Management SOP. The SOP
detail the roles and responsibilities of DPSO personnel; who is responsible for handling the work orders at each status from WAPPR through OPSCOMP.
Responsible Party: Program Manager, DPSO Asset Management
Target Date: June 2024

2) DPSO will schedule a refresher training for all its Maximo Users
Responsible Party: Program Manager, DPSO Asset Management
Target Date: August 2024

3) Modify DPSO Monthly Work and Asset Management to include a metric that trends the percentage of work orders completed the previous month (in COMP and CLOSE status) that missed FLDCOMP and OPSCOMP status altogether.
Responsible Party: Program Manager, DPSO Asset Management
Target Date: June 2024

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Observation 2: Failure to consistently capture material costs

Risk Rating: Moderate

Observation: Based on our review of the population of work orders closed during the testing period of 1/1/2023 through 12/31/2023, Internal Audit noted that the DPSO Pumping Branches are not capturing material costs within Maximo consistently when required. Note that not all work orders are expected to include material costs, as not all work orders require the usage of materials to complete.

Internal Audit selected a judgmental sample of 25 work orders based on work order type where material costs may have been required based on the description of the work performed. Of the 25 work orders reviewed, 3 of the work orders should have had material costs captured, but they did not. For 1 work order, the field technician added the materials to the work order, but the warehouse team did not populate the corresponding material costs, resulting in no captured costs. The remainder did not require material costs.

Root Cause Analysis: Field technicians not consistently populating the materials used for each work order. Without the materials populated, the warehouse team is unable to assign the corresponding material costs, resulting in work orders without any material costs captured.

Impact Analysis: If material costs associated with work orders are not captured consistently, the DPSO Pumping Branches are unable to quantify the true total cost of performing the tasks associated with work orders and are therefore unable to accurately capture the true costs of maintaining each asset. This limits management's ability to monitor trends, assess performance, complete budget and forecasting activities, identify areas of concern for further investigation, identify opportunities for efficiencies, and inform priority focus areas for the Authority's asset management program.

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Observation 2: Failure to consistently capture material costs

Recommendation: Internal Audit recommends the following:

1) Management should communicate a reminder of expectations to field technicians and the warehouse team regarding material cost data capturing requirements.

2) Management should design and implement a detective control to periodically review materials and material costs to identify trends in missing information and escalate as necessary.

Management Action Plan:

1) Set up a committee of relevant stakeholders from DPSO, Materials Management Team and IT to streamline the Material transactions between Oracle and Maximo.
Responsible Party: DPSO Managers, Program Manager, DPSO Asset Management
Target Date: September 2024

2) Develop and distribute Work Material Management SOP to detail the appropriate PLAN, ISSUE, RETURN and other material transactions in Maximo.
Use the SOP to train DPSO planners and shop foremen on how to request for spare parts and handle material transaction in Maximo.
Responsible Party: Program Manager, DPSO Asset Management
Target Date: August 2024

3) Develop a monthly report that will aid the DPSO managers to review materials and material costs to minimize the impact of missing information.
Responsible Party: Program Manager, DPSO Asset Management.
Target Date: September 2024

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Observation 3: Ineffective escalation of missing labor hours

Risk Rating: Low

Observation: Labor hours are required on all work orders for the DPSO Pumping Branches. However, based on our review of the population of work orders closed during the testing period of 1/1/2023 through 12/31/2023, labor hours were not captured on 36% of inspection work orders and 19% of preventative maintenance work orders within Maximo (note that predictive maintenance, corrective maintenance, and projects work order types all appropriately captured labor hours as required over 98% of the time). The DPSO Pumping Branches have implemented a weekly control to validate the capture of labor hours on all work orders, however, we found that this control is not designed effectively to escalate missing labor hours identified.

Weekly, Maximo automatically generates a report that checks whether work orders in the statuses "field complete", "operations complete", and "complete" have labor hours captured. Every Monday, this report is automatically sent to all shop supervisors or foremen. The shop supervisors and foremen are responsible for following up on and updating work orders that do not have labor hours. However, the following has prevented the weekly reporting from enforcing labor hour capture on all work orders:

1. Although these reports are sent out weekly, there is no follow-up performed to confirm that shop supervisors and foremen have updated all identified work orders to include labor hours. Internal Audit selected a sample of work orders from these weekly reports and reviewed whether labor hours had been added to the work order in Maximo. 26 of the 42 selected work orders (62%) did not have labor hours populated in Maximo, meaning that the shop supervisor or foreman did not retroactively add the labor hour details to the work order after receiving the weekly report.

2. Maximo automatically moves work orders from the "complete" to the "closed" status after 90 days. As a result, work orders in the "complete" status without labor hours could fall off the weekly report once Maximo moves it into the "closed" status.

Root Cause Analysis: The detective control to confirm the capture of labor hours is not designed effectively. Although the report is automatically sent weekly to shop supervisors and foremen, the control is not designed to include follow-up activities that need to be performed to confirm that shop supervisors and foremen have updated all identified work orders to include labor hours after receiving the weekly report.

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Observation 3: Ineffective escalation of missing labor hours

Impact Analysis: If labor hours associated with work orders are not captured consistently, management is unable to quantify the true total cost of performing the tasks associated with work orders and is therefore unable to accurately capture the true costs of maintaining each asset. Typically, this limits management's ability to monitor trends related to asset useful lives, complete budget and forecasting activities, identify areas of concern for further investigation, and more.

However, management is consistently capturing labor hour detail for non-routine work orders. The inconsistent capture of labor hours on inspection and preventative maintenance work orders, which are routine and easier to estimate level of effort, introduces less variability into strategic decision making, thereby reducing the risk of this observation.

Recommendation: Internal Audit recommends the following:

1) Management consider establishing a key performance indicator (KPI) to track the percentage of work orders capturing labor hours. Management would need to establish a threshold that they are comfortable with; i.e. 95% of work orders are capturing labor hours. This may vary by work order type given the variability and volume of labor hours anticipated for each.

2) Management should expand its detective control to include a review and escalation protocol if the department is missing established KPI targets and work orders do not have labor hours added within 1 week of notification.

Management Action Plan:

1) Develop a KPI to track the percentage of work orders capturing labor hours across the branches of DPSO.
Responsible Party: Program Manager, DPSO Asset Management
Target Date: May 2024

2) DPSO Management will continue to reiterate the importance of entering labor hours for all its maintenance activities in Maximo during the daily 2PM and other meetings. Expand the agenda of the Daily 2PM meeting to include a recurring item to review the Zero Labor hour report.
Responsible Party: Program Manager, DPSO Asset Management, and DPSO Managers

Target Date: Continuous

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APPENDIX

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Appendix A – Rating Definitions

RSM defined observations based on the following risk 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).

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