



District of Columbia Water and Sewer Authority Board of Directors

Audit and Risk Committee April 23, 2026 / 1:00 pm

Microsoft Teams meeting

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Meeting ID: 267 022 981 570 60

Passcode: yU7j6pf7

Call in (audio only) **202-753-6714, 287388867#**

Phone Conference ID: 287 388 867#

- 1. **Call to Order** _____ Christopher Herrington, Vice Chair
- 2. **Roll Call** _____ Michelle Rhodd, Board Secretary
- 3. **Enterprise Risk Management Briefing** _____ Janai Pinkney, Manager
EPMO and Mark Reid, Senior Manager EPMO
- 4. **Internal Audit Update** _____ Cherry Bekaert, Internal Audit
 - A. FY 2026 Internal Audit Plan Status Update
 - B. Status Update on Prior Audit Findings
 - C. Hotline Update
- 5. **Executive Session*** _____ Christopher Herrington
 - A. To discuss investigative reports concerning alleged misconduct or violations of law or regulations under D.C. Official Code § 2-575(b)(14).
- 6. **Adjournment** _____ Christopher Herrington

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.

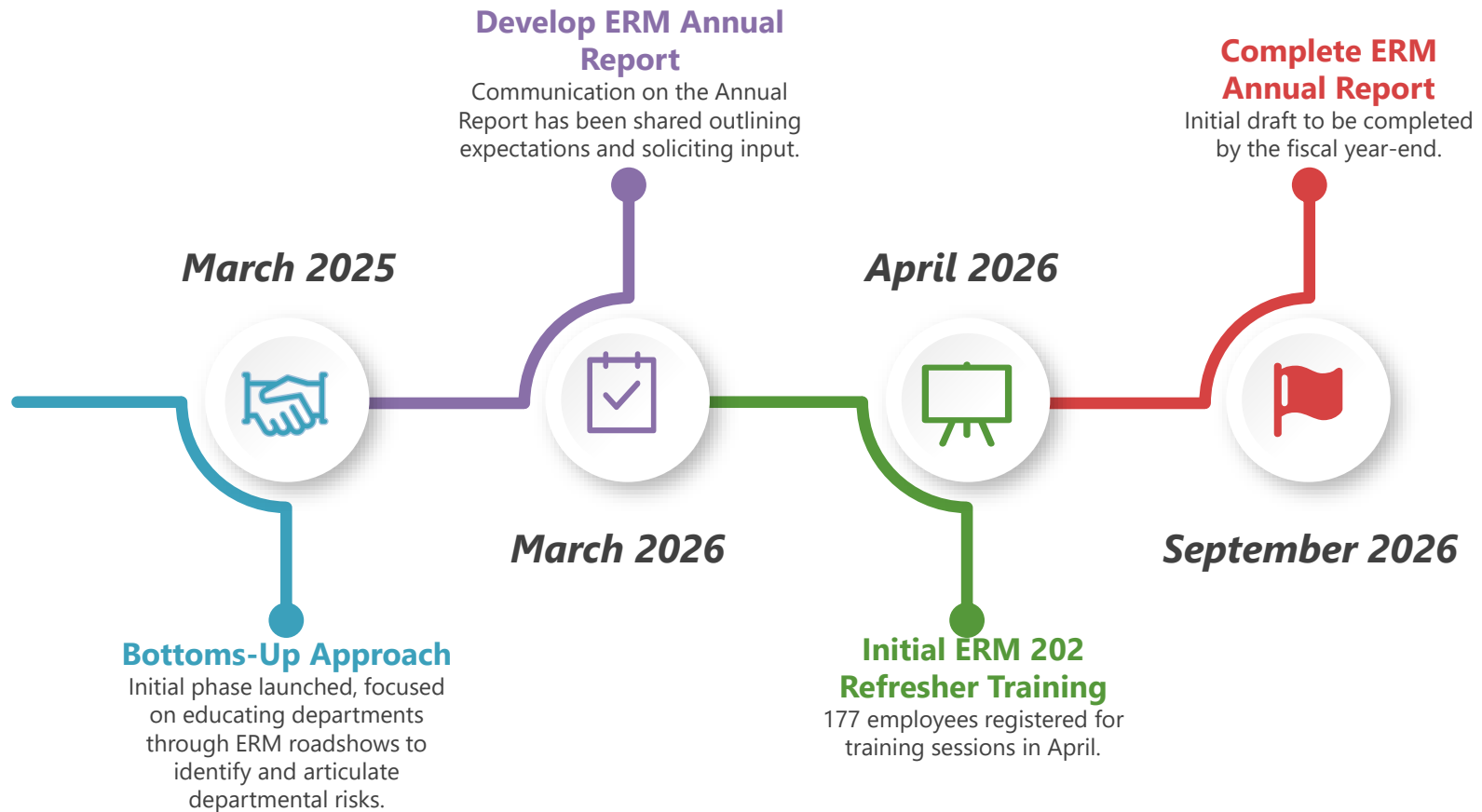


Enterprise Risk Management (ERM)


Janai Pinkney

Manager, Enterprise Risk, Policy Management & Internal Audit
Enterprise Program Management Office

dc Enterprise Risk Management Timeline




dc Enterprise Risk Management (ERM) Annual Report




Key Components

Letter from the CEO	2
Letter from the CFO	3
Executive Summary	4
DC Water ERM Program Framework	5
Supporting DC Water's Core values and strategic plan	6
ERM's History at DC Water	7
Year in Review	8
Department of Safety and Health	9
Department of Security *	10
Office of Emergency Management	11
Department of Information Technology (Cybersecurity)	12
FY2024 Action Priorities	13
Closing Statement (Program Accomplishments)	14
Risk Registry	16
ERM Policy	20
ERM Membership	21

- Executive letters from the CEO and CFO setting tone and strategic direction
- Departmental narratives providing high-level risk insights across the Authority.
- Enterprise-wide view of key risks, themes, and mitigation strategies.
- Alignment with strategic priorities and Board oversight expectations



Key Elements



- Consolidated enterprise risk landscape (non-sensitive, public-facing)
- Summary of risk assessment approach and governance structure.
- High-level mitigation activities and progress indicators.
- Integration of cross-functional risk inputs

FY Next Year: Quarterly Risk Visibility Integrated into Annual Report



Non-Revenue Water Initiative

Mark Reid

Senior Manager | Enterprise Performance Management Office

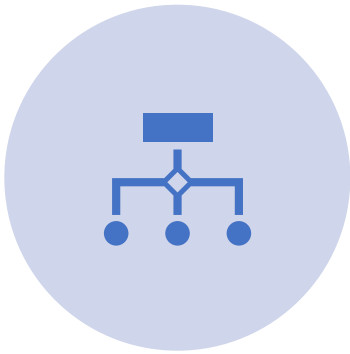
Chris Collier

Vice-President | Water Operations



Background and Purpose

*On May 27th, Mr. Gadis authorized the Enterprise Program Management Office team to provide facilitation and risk/performance management support across all participating DC Water clusters to remediate Non-Revenue Water Loss. Implementing our demonstrated DC Water ERM approach, which leverages existing **risk governance** structures and frameworks, documenting and coordinating **risk treatment and mitigation** plans, and monitoring progress through **risk and performance reporting**.*



RISK GOVERNANCE

Enhancing risk governance, coordination, and accountability across all non-revenue water loss mitigation activities within the Authority.



RISK TREATMENT AND MITIGATION

The EPMO team will lead the organization in risk management efforts designed to leverage our collective experience and knowledge as One DC Water to treat and mitigate varying identified risk drivers resulting in significant Non-Revenue Water Losses.



RISK AND PERFORMANCE REPORTING

Efficient and accurate risk and performance reporting is integral to managing to results.



Non-Revenue Water Risk Exposure

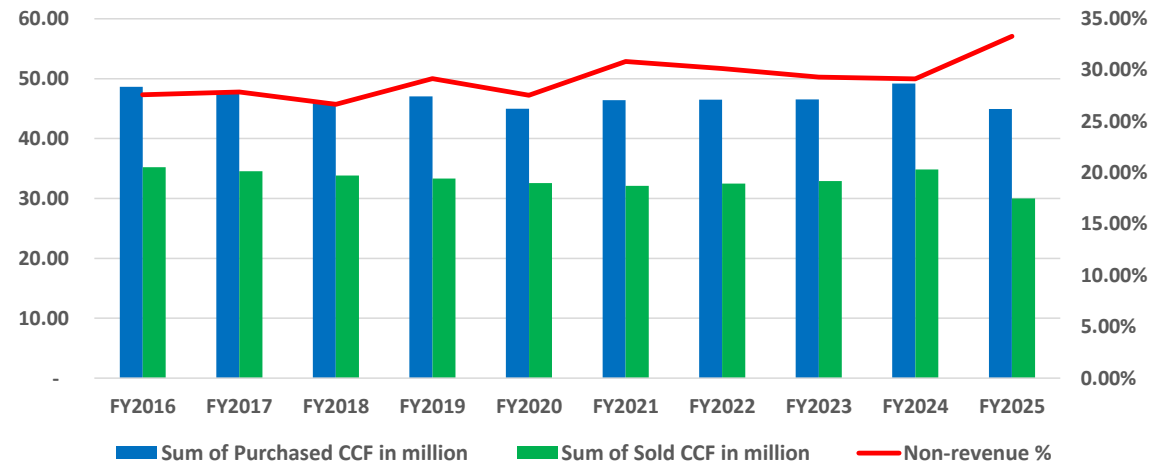
Strategic Risk - Revenue Erosion and Expenditure Increase:

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.

Sub-Risk – Non-Revenue Water Loss (NRWL):

The risk of revenue losses due to **Apparent Losses** (nonphysical revenue losses) and **Real Losses** (physical volumes lost). It can also be derived by calculating the difference between water supplied and water billed. (Ref. AWWA M36)

Annual Water Balance Data Non Revenue Water (ccf)



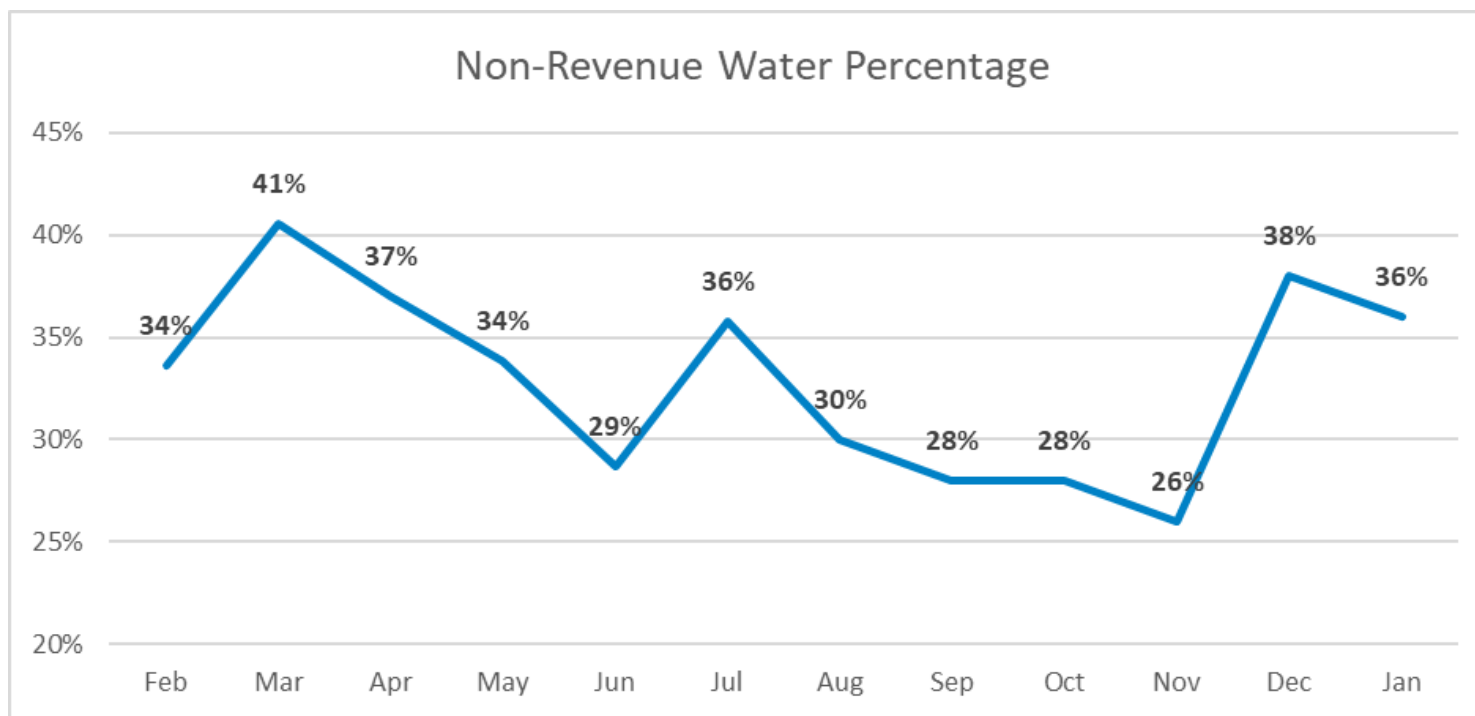
$$\text{NRW} = \text{System Input Volume (Purchased)} - \text{Billed Consumption}$$

- **Authorized unbilled consumption** (flushing)
- **Real Losses** (infrastructure)
- **Apparent Losses** (unauthorized consumption, meter issues)

**Data provided by Finance*



Non-Revenue Water Risk Exposure



**Data provided by Finance; there is a 2-month delay*



AWWA M36 Water Audit Results (FY24)

AWWA Free Water Audit Software						FWAS v6.0
Water Balance						American Water Works Association. Copyright © 2020, All Rights Reserved.
		Water Audit Report for: DC Water		Oct 01 2023 - Sep 30 2024		
		Audit Year: 2024				
		Data Validity Tier: Tier III (51-70)				
Volume from Own Sources (VOS) (corrected for known errors)	System Input Volume	Water Exported (WE) (corrected for known errors)	Billed Water Exported			Revenue Water (Exported)
		12,135.010				12,135.010
0.000	48,916.240	Water Supplied	Authorized Consumption	Billed Authorized Consumption	Billed Metered Consumption (BMAC) (water exported is removed)	Revenue Water
			36,781.230	27,134.859	26,902.619	26,134.479
		Water Losses		Unbilled Authorized Consumption	Billed Unmetered Consumption (BUAC)	Non-Revenue Water (NRW)
			9,646.371	232.240	768.140	
Water Imported (WI) (corrected for known errors)				Unbilled Metered Consumption (UMAC)	9,878.611	
				48,916.240		232.240
				Unbilled Unmetered Consumption (UUAC)		
						67.257
				Systematic Data Handling Errors (SDHE)		
						984.416
				Customer Metering Inaccuracies (CMI)		
						67.257
				Unauthorized Consumption (UC)		
						67.257
				Leakage on Transmission and/or Distribution Mains		
						8,527.442
				Leakage and Overflows at Utility's Storage Tanks		
						8,527.442
				Leakage on Service Connections		
						8,527.442
				Real Losses		
						8,527.442
				Leakage on Transmission and/or Distribution Mains		
						8,527.442
				Leakage and Overflows at Utility's Storage Tanks		
						8,527.442
				Leakage on Service Connections		
						8,527.442

*Awaiting 2025 Water Audit results



Water Operations Update

Stabilizing the Foundation and Diagnosing Root Causes

- **Completed comprehensive AMI system assessment** covering technology performance, meter-to-cash processes, field operations, warehouse practices, and policy alignment. Identified root causes behind declining AMI performance and operational inefficiencies.
- **Quantified the business impact of AMI underperformance**, including a ~91% read success rate versus a 98.5% industry benchmark, rising estimated bills, excessive manual reads, and warehouse backlogs of potentially functional meters and MTUs.
- **Established direct linkage between AMI performance and Non-Revenue Water (NRW)**, identifying AMI-related apparent losses tied to meter inaccuracies, billing workarounds, access constraints, and data handling practices.



Water Operations Update Continued

Stabilizing the Foundation and Diagnosing Root Causes

- **Completed FY2024 AWWA NRW Audit**, providing a defensible baseline:
 - NRW = **26.86%** (\approx **9.9 billion gallons, \$35.5M annually**)
 - Infrastructure Leakage Index (ILI) = **12.5**
 - Data Validity Score = **51 / 100 (Tier III)**
- **Leak Detection**
 - Water Operations successfully deployed Gutermann correlating leak detection equipment with multiple leaks identified and repaired (or in the process of being repaired).
- **Developed actionable “to-be” processes** for:
 - MTU and meter warranty/RMA handling
 - Field investigation prior to replacement
 - Exception billing, zero-consumption handling, and desktop investigations
(These processes are designed to recover value, reduce backlog, and prevent future degradation.)



Water Operations Update Continued

Transitioning from Reactive Fixes to Reliability & Revenue Recovery

- **Execute targeted AMI system cleanup and recovery (Procurement in process)**
 - Address ~14,000 locations requiring investigation, repair, or replacement using disciplined deployment management
 - Restore AMI read performance toward industry standard (>98%) to materially reduce estimated billing and manual reads
- **Operationalize new warehouse and field practices (Active process)**
 - Fully implement MTU and meter RMA processes
 - Dedicate resources to triage existing warehouse backlog and prevent recurrence
 - Shift field culture from “replace” to “investigate and repair first.”
- **Strengthen access, billing, and customer accountability (FY26 task)**
 - Enforce meter access and valve ownership policies consistently
 - Reduce long-running estimated bills and eliminate practices that mask consumption (e.g., zero-out reconciliations) that contribute to NRW
 - Install a new flow meter at the Washington Aqueduct



Water Operations Update Continued

Transitioning from Reactive Fixes to Reliability & Revenue Recovery

- **Advance NRW control maturity (FY26 task)**
 - Develop a formal **Water Loss Control Plan** integrating AMI, valve & hydrant programs, billing controls, and data governance
 - Implement targeted data-validity improvements to raise NRW audit score from **Tier III (51-70) to Tier IV (71-90)**
 - Begin the process of developing DMA's (District Metered Areas), enhancing pressure zone monitoring and control
 - **Develop and establish a dedicated, proactive leak detection team** using AMI data and targeted field investigations to identify and reduce real losses early—shifting from reactive repairs to planned, reliability-focused NRW reduction.
- **Institutionalize performance management (FY26 task)**
 - Track KPIs for AMI read success, estimated billing rates, apparent losses, warranty recovery, and NRW trends
 - Align AMI and NRW outcomes to reliability, resilience, and financial stewardship objectives
 - Complete the FY25 M36 Water Audit by the end of March 2026

Project Name: Non-Revenue Water Risk Mitigation Report Date: 04/14/26
% Complete: Ongoing

Overall Project Status: Ongoing

The project continues to mature through structured collaboration, standardized reporting, and transparent governance. With foundational risk treatment plans in place and enterprise reporting advancing toward completion, the next phase will emphasize data integration, KPI/KRI validation, and sustained executive oversight to ensure measurable reduction in NRW exposure across DC Water.

Decisions Required

- SET approval on risk mitigation activities

Milestones	Start Date	End Date	Status
NRWL presented to Audit and Risk Committee	10/23/25	10/23/25	●
Audit & Risk Committee Meeting	01/22/26	01/22/26	●

Accomplishments

- AWWA ERM NRW Performance Dashboard approved by ERMC
- Completed FY24 Water Audit

Upcoming Activities

- Next ERMC Meeting – April 27
- Next Audit and Risk Committee briefing – April 23
- FY25 Water Audit (In Progress)

Potential Risks, Issues, & Current Mitigation

- Due to competing priorities of the Potomac Interceptor collapse NRW operational focus was slowed.



Status Legend: ● Completed ● On Target ● At Risk ● Behind ● Not Started



FY 2026 Internal Audit Plan

Audit and Risk Committee Report April 23, 2026

Audit and Risk Committee - IV. Internal Audit Update (Cherry Bekaert)

	Oct - 25	Nov - 25	Dec - 25	Jan - 26	Feb - 26	Mar - 26	Apr - 26	May - 26	Jun - 26	Jul - 26	Aug - 26	Sept - 26	Oct - 26	Status	
Customer Billing and Collections Audit		▶													Started
Emergency Management Policy Gap Analysis			▶											Started	
Legal Operational Audit		▶												Started	
Recruitment, Performance Evaluation, Compensation Analysis & Training/ LMS Assessment				▶										Started	
Asset Management Lifecycle														Moved FY2027	
Cloud Security					▶									Started	
Work Order Management - Pumping Operations						▶								Started	
Procurement, Contracting, & Contract Compliance Audit							▶							Not Started	
Physical Security - HQO & Fort Reno										▶				Not Started	
Operational Technology Resiliency Audit								▶						Not Started	
FY 2027 Risk Assessment								▶						Not Started	
Ongoing Follow-up Procedures	▶													Ongoing	
Ongoing Hotline Monitoring	▶													Ongoing	

Legend			
▶	Cycle Audits	▶	Management Assessment
▶	Ad Hoc Audits	▶	Ongoing Procedures

Contract Compliance Audit

Based upon the DC Water FY2025 Risk Assessment results, we conducted an audit to understand how the contract monitoring process is managed and assess whether the system of internal controls are adequate and appropriate, at the authority level, for promoting and encouraging the achievement of management's objectives in monitoring and oversight. The audit was performed from June 2025 through October 2025.

A sample was selected from the full population of all active DCW contracts between January 1, 2024, to July 31, 2025. The three selected contracts were evaluated from an administration perspective as of the contract execution date through July 31, 2025. The audit included the following objectives:

1. Ensure that both parties are fulfilling all contractual obligations.
2. Evaluate the organization's contract management framework.
3. Assess the adequacy and effectiveness of the organization's invoice review and approval processes (all contract payments).
4. Evaluate the organization's approach to identifying and mitigating risks related to contract non-compliance.
5. Assess the completeness, accessibility, and maintenance of contract documentation.

Contract Compliance Audit – Findings Summary

During the audit, we identified 4 findings. These findings have been categorized and assigned a risk rating of High, Medium, or Low. The detailed recommendations are further described in Appendix A of this report.

- **Finding #1** – Oracle ERP and Unifier System Integration (Low)
- **Finding #2** – Inadequate Delegation of Authority, Segregation of Duties & Missing Invoice Supporting Documentation (High)
- **Finding #3** – Deficient Risk Management Process (High)
- **Finding #4** – Lack of Reoccurring Mandatory Trainings (High)

Findings (Total:4)	Risk Rating		
	HIGH	MEDIUM	LOW
Policies and Procedures	1	0	0
Risk Management	1	0	0
Training and Awareness	1	0	0
Technology	0	0	1
Totals	3	0	1

Themes:

- **Policies and Procedures:** Assesses the adequacy, clarity, and implementation of an organization’s operational processes. It looks at whether they are up-to-date, aligned with best practices, and effectively communicated and enforced.
- **Risk Management:** Refers to issues or deficiencies identified in an organization's processes for identifying, assessing, and mitigating risks. It highlights areas where an organization may be exposed to potential threats due to inadequate or ineffective risk management practices.
- **Training and Awareness:** Evaluates the effectiveness of instructional programs and awareness initiatives aimed at ensuring employees understand organizational policies, procedures, and their roles. It evaluates whether training is comprehensive, periodic, and tailored to different levels of staff.
- **Technology:** Assesses risk, controls, and processes to ensure alignment with business objectives, regulatory requirements, and industry standards related to IT governance, system efficiency and validity, and digital compliance.

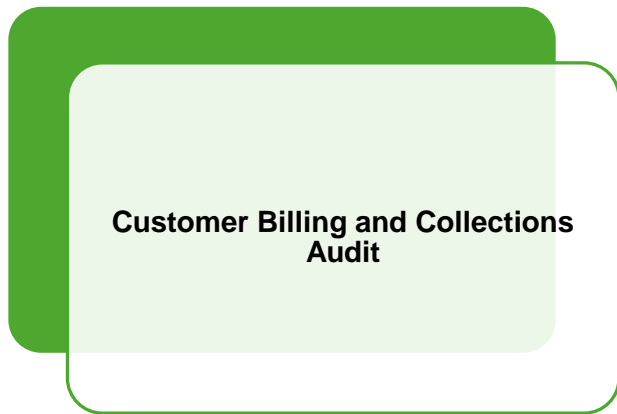
Contract Compliance Audit – Process Improvement Opportunity Summary

During the audit, we identified 4 findings. This opportunity has been assigned a risk rating of Low.

- **Opportunity #1** – Inconsistent Records Retention Practices (**Low**)
- **Audit Objective #5:** Assess the completeness, accessibility, and maintenance of contract documentation in accordance with organizational policies, and review records of communications between contracting parties to ensure clarity, transparency, and mutual understanding of contract terms and obligations.

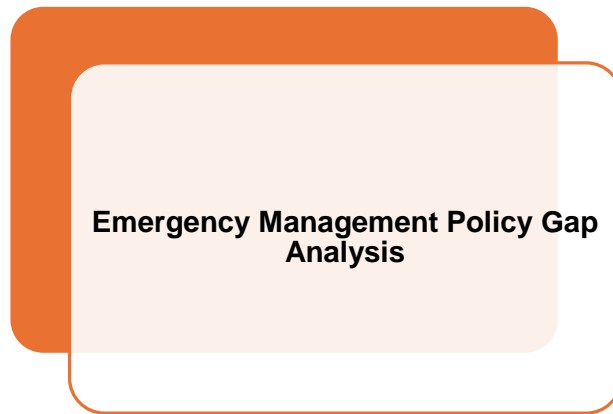
The detailed recommendations are further described in Appendix A of this report.

Opportunity (Total: 1)	Risk Rating		
	HIGH	MEDIUM	LOW
Objective #5	0	0	1
Totals	0	0	1



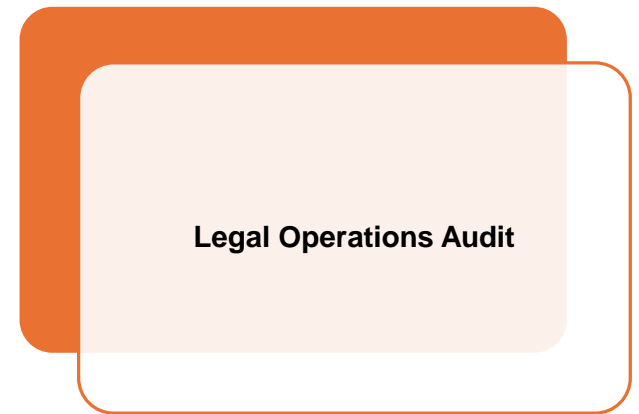
Customer Billing and Collections Audit

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

Emergency Management Policy Gap Analysis

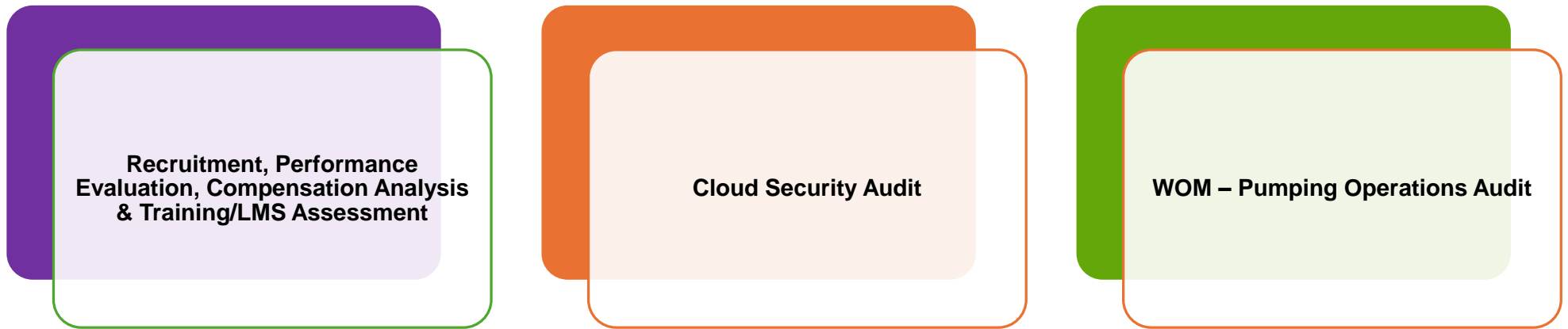
This box features an orange header and a light orange body, indicating it is an Ad Hoc Audit.



Legal Operations Audit

This box features an orange header and a light orange body, indicating it is an Ad Hoc Audit.

Legend			
	Cycle Audits		Management Assessment
	Ad Hoc Audits		Ongoing Procedures



Legend	
Cycle Audits	Management Assessment
Ad Hoc Audits	Ongoing Procedures

Asset Management Lifecycle Assessment - This engagement was deferred to FY2027 based on management input and Internal Audit risk prioritization.

Legend	
Cycle Audits	Management Assessment
Ad Hoc Audits	Ongoing Procedures

PRIOR AUDIT FINDINGS- FOLLOW UP STATUS

One prior moderate-risk audit finding was closed during the quarter.

Moderate Risk

- FY25 Safety Audit: Safety hotline not being tracked.

All high risk findings prior to FY25 have been completed.

The status for prior audit findings has been updated by removing FY17-FY22 from the totals since all audit findings from FY17 through FY22 have been addressed and closed.

There are a total of 20 open findings, which include four high-risk findings across two audits, detailed below.

Audit FY	Issue Date	Audit Report and Open Finding	Target Completion Date
2025	4/15/2025	Work Order Management-Facilities Audit <ul style="list-style-type: none"> <i>Lack of Current Asset Retirement and Disposal Standard Operating Procedures (SOPs)</i> 	8/31/2026
2025	12/16/2025	Contract Compliance Audit <ul style="list-style-type: none"> <i>Inadequate Delegation of Authority, Segregation of Duties & Missing Invoice Supporting Documentation Finding</i> <i>Deficient Risk Management Process Finding</i> <i>Lack of COTR Designation and Training Completion Finding</i> 	5/31/2026* TBD 7/31/2026

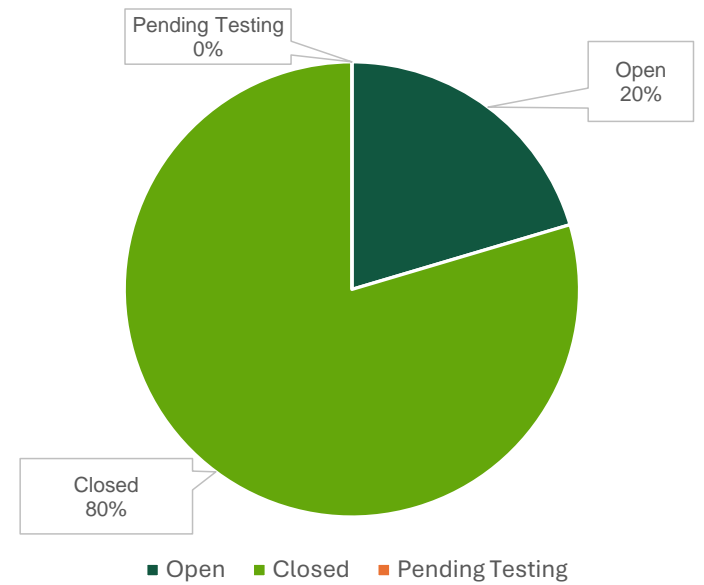
Legend	
	Target date has not yet come due
	Target date has passed

**Target completion date is in reference to conducting a refresher training to remediate the portion of the finding that Management will address.*



Audit Report/Subject	Report Issue Date	Corrective Actions			
		Total	Open	Closed	Pending Testing
FY2023 to FY2025 Audit Findings*					
Work Order Management Audit-DWO	7/23/2023	3	1	2	0
Fleet Management Audit	10/27/2023	6	1	5	0
Work Order Management-Facilities Audit	4/11/2025	13	6	7	0
Safety Audit	6/18/2025	8	1	7	0
Strategic Plan Monitoring Audit	9/29/2025	3	3	0	0
SCADA Penetration Testing	10/6/2025	4	0	4	0
Third-Party Vendor Management Audit	11/6/2025	3	3	0	0
Budget Monitoring Audit	11/12/2025	2	1	1	0
Contract Compliance Audit	12/16/2025	4	4	0	0
Total Closed Audit Findings		52	0	52	0
Total		98	20	78	0

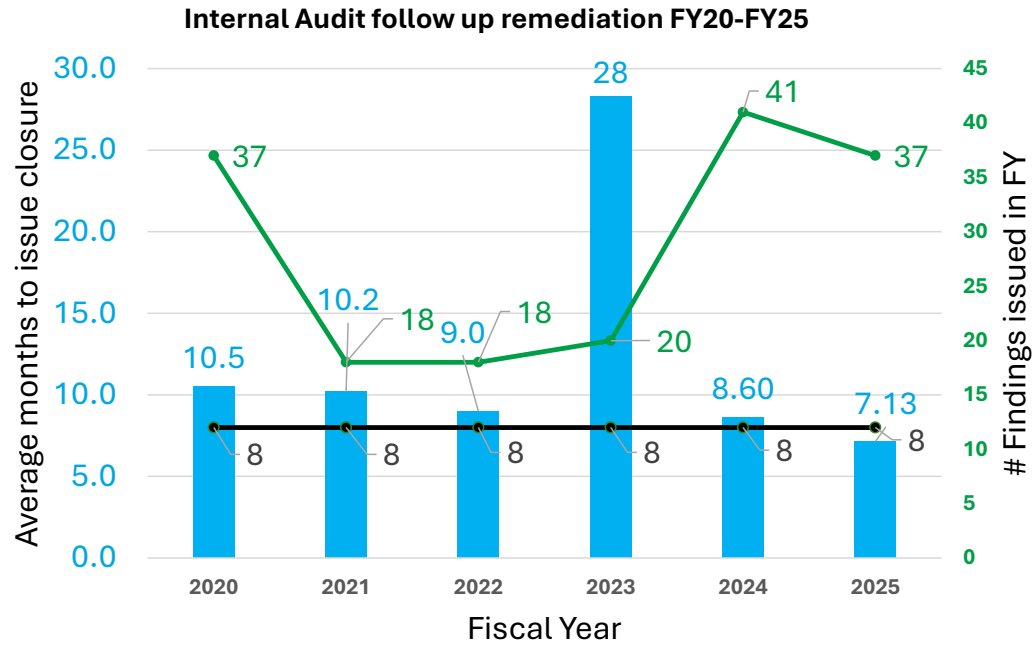
FY2023 to FY2025 Audit Findings Status



- Four FY25 prior audit findings are past due the target completion date-3/31/26: Budget Monitoring – KPI & Budget Tracking Finding, Strategic Plan Monitoring – Timely Submission of 5-15 Reports Finding, Third-Party Vendor Management – Outdated & Inaccurate Public Resources & Facilities WOM – Lack of Maximo Training

***Note: All FY24 Audit Findings have been closed.**

The below graph illustrates the average number of months from audit finding issuance to audit finding closure year-over-year as of April 2026. Management has made significant improvements to achieve timelier audit finding closure as illustrated by the decline from FY23 to FY24. Management's target time to closure is 8 months.



**Data before FY2023 was provided by RSM*

Allegations Update

Below is a summary of the cases received in FY26 as of April 14, 2026. There are four open FY26 cases.

FY 26 Allegation Summary			
FY 26 Allegations Received			12
FY 26 Cases Closed			8
FY 25 Allegations Open			4
FY 26 Allegations Open			4
FY 26 Open Allegation Breakdown			
Four FY25 cases are being investigated (one case logged as two calls.)			
Four FY26 cases are being reviewed and/or investigated.			
Allegation Source			
Hotline	8	Employee Email	1
Management Alert	3	Personal Conversation	0

FY 26 Closed Allegation Breakdown	
Theft of Time	0
Theft or Misuse of Company Assets	0
Policy Issues	1
Employee Relations	5
Sexual Harassment	0
Substance Abuse	0
Wage/Hour Issues	0
Workplace Violence/Threats	0
Closed Due to Lack of Information	2

Total Allegations by Fiscal Year:

Year	FY 21	FY 22	FY 23	FY 24	FY 25
# of Cases	7	18	15	25	19
Action Taken	0	2	2	1	8

FY26 Allegations by Quarter:

Year	Q1	Q2	Q3	Q4	Total
# of Cases	6	4	2	0	12
Action Taken	1	2	1	0	4

*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 never result in corrective action by Internal Audit and are not included in the FY26 Closed Allegation Breakdown

Contacts

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