

**Performance Audit:
Department of Watershed Management
Inventory and Fixed Assets**

June 2022

City Auditor's Office

City of Atlanta

File #22.02



Performance Audit:

Department of Watershed Management Inventory and Fixed Assets

What We Found

Watershed Management spent an average of \$23 million annually for inventory, supplies, and non-capital equipment over the past eight fiscal years but has not fully implemented or enforced procedures developed in 2015 to protect its inventory. As a result, the quantity of inventory on hand is unknown, and theft or loss is likely to occur without detection.

The department is not complying with procedures to separate responsibilities for requesting, purchasing, and receiving between inventory management and warehouse management teams. Our 2014 audit recommended the department separate incompatible duties so that no individual is responsible for authorizing requisitions, maintaining custody of items, and keeping records.

Employees are not conducting wall-to-wall inventory counts at the six-month intervals as directed by procedures. The last wall-to-wall count was conducted in June 2018. A goal of the count is to validate the amount of inventory for financial reporting. Also, employees are not generating monitoring reports intended to prevent undetected theft and loss. Our sample of 256 items at two warehouses found inventory accuracy rates of 16% and 49%, which are well below the industry standard of 95%.

Watershed employees are also not complying with procedures for controlling fixed assets. The department could not initially locate 45 of 84 fixed assets, totaling \$2 million, from our random sample. Our sample included dump trucks and forklifts. Employees were able to later reconcile \$1,728,949 of the missing fixed assets, lowering the total of the unreconciled fixed assets in our sample to \$276,249. The department did not record sufficient information about the fixed assets to locate them. Employees told us that of the 34 fixed assets they were able to find later, 5 were decommissioned, 1 was sold, and 1 item belonged to another department.

Why We Did This Audit

We undertook this audit of Watershed Management because our 2014 audit of the department's inventory management process identified control gaps.

What We Recommended

To improve inventory accuracy and the accountability of fixed assets, the Watershed Management commissioner should:

- enforce procedures to ensure that both inventory records and on-hand quantities are accurate
- ensure that staff use monitoring reports to monitor and track inventory
- enforce procedures for conducting semi-annual wall-to-wall counts for accuracy and completeness
- clarify in procedures which items the Office of Asset Accountability Management should purchase and which items offices should purchase directly from vendors
- develop procedures for documenting information about fixed assets, including requiring the documentation of serial/identification numbers
- implement a barcode scanning system or similar technology to mitigate risks associated with manual processes
- affix GPS or other tracking technology to equipment used in the field
- assign staff to inspect fixed assets at least every two years as required by the Department of Finance's Capital Assets Policy and Procedures

For more information regarding this report, please use the "contact" link on our website at www.atlaudit.org

Management Responses to Audit Recommendations

Summary of Management Responses		
<p>Recommendation #1:</p> <p>We recommend that the Watershed Management commissioner enforce procedures to ensure that both inventory records and on-hand quantities are accurate.</p>		
<p>Response: Agree</p>	<p>Status: Started</p>	<p>Estimated Completion Date (M/Y): 12/2022</p>
<p>Recommendation #2:</p> <p>We recommend that the Watershed Management commissioner ensure that staff use monitoring reports to monitor and track inventory as stated in procedures.</p>		
<p>Response: Agree</p>	<p>Status: Started</p>	<p>Estimated Completion Date (M/Y): 12/2022</p>
<p>Recommendation #3:</p> <p>We recommend that the Watershed Management commissioner enforce procedures for conducting semi-annual wall-to-wall counts for accuracy and completeness as required in the procedures.</p>		
<p>Response: Agree</p>	<p>Status: Started</p>	<p>Estimated Completion Date (M/Y): 12/2022</p>
<p>Recommendation #4:</p> <p>We recommend that the Watershed Management commissioner clarify in procedures which items the Office of Asset Accountability Management should purchase and which items offices should purchase directly from vendors.</p>		
<p>Response: Agree</p>	<p>Status: Started</p>	<p>Estimated Completion Date (M/Y): 6/2023</p>
<p>Recommendation #5:</p> <p>We recommend that the Watershed Management commissioner develop procedures for documenting information about fixed assets, including requiring the documentation of serial/identification number.</p>		
<p>Response: Agree</p>	<p>Status: Not Started</p>	<p>Estimated Completion Date (M/Y): 6/2023</p>

<p>Recommendation #6:</p> <p>We recommend that the Watershed Management commissioner implement a barcode scanning system or similar technology to mitigate risks associated with manual processes, and document and implement mitigating controls for manual processes into procedures until the barcoding system is implemented.</p>		
<p>Response: Agree</p>	<p>Status: Started</p>	<p>Estimated Completion Date (M/Y): 6/2023</p>
<p>Recommendation #7:</p> <p>We recommend that the Watershed Management commissioner affix GPS or other tracking technology to equipment used in the field.</p>		
<p>Response: Agree</p>	<p>Status: Not Started</p>	<p>Estimated Completion Date (M/Y): 6/2023</p>
<p>Recommendation #8:</p> <p>We recommend that the Watershed Management commissioner assign staff to inspect fixed assets at least every two years as required by the Department of Finance's Capital Assets Policy and Procedures.</p>		
<p>Response: Agree</p>	<p>Status: Not Started</p>	<p>Estimated Completion Date (M/Y): 6/2023</p>



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June 2, 2022

Honorable Mayor and Members of the City Council:

We undertook this audit of Watershed Management because our 2014 audit of the department's inventory management process identified control gaps. Although the department implemented most recommendations from the previous performance audit, inventory is still stored in multiple locations using different tracking systems. In this audit, we found that the department has not enforced inventory management procedures developed in 2015, resulting in unknown inventory quantities and amounts, and increasing the likelihood that theft or loss could occur without detection. Employees were also unable to initially locate fixed assets we sampled.

Our recommendations focus on improving inventory accuracy primarily by enforcing existing inventory procedures and improving accountability for fixed assets by inspecting them every two years and using GPS or similar technology to track equipment used in the field.

The Audit Committee has reviewed this report and is releasing it in accordance with Article 2, Chapter 6 of the City Charter. We sent an initial draft report to management on April 21, 2022, and received their response on May 24, 2022. We appreciate the courtesy and cooperation of city staff throughout the audit. The team for this project was Rebecca Robinson, Imani Adams, and Erwin Coleman.

Amanda Noble
City Auditor

Danielle Hampton
Chair, Audit Committee

Watershed Management Inventory and Fixed Assets

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Introduction

We last audited the Department of Watershed Management’s inventory in 2014 and identified control gaps in all aspects of inventory management at all locations. Although the department has implemented most recommendations from the previous performance audit, inventory is still stored in multiple locations using different tracking systems. We undertook this audit because reduced on-site staffing and supply chain disruptions during the COVID-19 emergency have also increased risk. The audit assesses policies and practices used to safeguard inventory and equipment, including fixed assets.

Background

The Department of Watershed Management is responsible for water treatment and distribution, wastewater collection and treatment, and stormwater management. The department’s Office of Asset Accountability Management is responsible for warehouse operations and fleet management, which includes inventory management.

Watershed Management Stores Inventory at Multiple Locations

The department maintains inventory at seven warehouses and three ancillary storerooms located throughout the city. Exhibit 1 shows the facility name, address, and a description of the types of items stored. The warehouses are generally located close to the facilities and operational functions they support, which can create efficiency in obtaining materials needed for maintenance and repairs; however, multiple locations can also make inventory management more complex and introduce additional risks.

Three warehouses store meters, pipes, metal lids, and supplies to maintain the city’s linear infrastructure (also called horizontal assets) for drinking water operations. Four additional warehouses house water pumps, other equipment, and supplies to support wastewater operations (vertical assets). Staff from the Intrenchment Creek warehouse manage the Clear Creek and Flint River storerooms, and 14th Street storekeepers manage the Hemphill storeroom. The department uses two systems—Hansen and Maximo—to track inventory. Warehouses supporting vertical assets use Maximo, while warehouses which support horizontal assets use Hansen.

Exhibit 1: Inventory Is Located at 7 Warehouses and 3 Storerooms

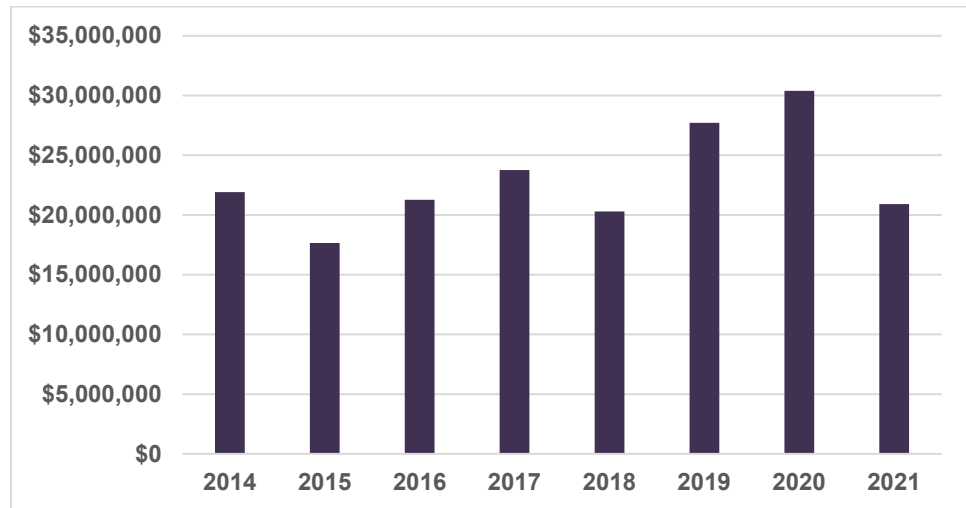
Facility	Address	Items Stored
Warehouses Maintaining Horizontal Assets		
14 th Street	651 14 th Street Atlanta, GA 30318	Water meters and meter accessories
Pipe Yard	2750 Peyton Road Atlanta, GA 30318	Pipes and valves
Englewood	360 Englewood Ave. Atlanta, GA 30315	Personal protective equipment, consumables, metal lids, and covers
Warehouses Maintaining Vertical Assets		
Utoy Creek	805 Selig Drive Atlanta, GA 30336	Water accessories, personal protective equipment, and consumables
R.M. Clayton	2440 Bolton Road Atlanta, GA 30318	Electrical supplies, personal protective equipment, consumables, electrical equipment, and oil
South River	955 South River Industrial Boulevard Atlanta, GA 30315	Water accessories, consumables, and high-value Englewood inventory
Intrenchment Creek	1510 Key Road Atlanta, GA 30318	Electrical supplies, consumables, water accessories, high-value pumps, and CSO inventory
Storerooms		
Hemphill	650 17 th Street Atlanta, GA 30318	Water accessories and personal protective equipment
Clear Creek	1320 Monroe Drive Atlanta, GA 30306	Water accessories, pumps, and CSO inventory
Flint River	2500 Airport Loop Atlanta, GA 30337	Water accessories, pipes, and core samples

Source: Office of Watershed Asset Management Inventory and Warehouse Management Standard Operating Procedures Version 7.0 p. 11

Watershed Management Spent About \$23 Million Annually on Inventory

Watershed Management spent an average of about \$23 million annually for inventory, supplies, and non-capital equipment over the past eight fiscal years (see Exhibit 2). In fiscal year 2020, Watershed spent nearly \$30.4 million in inventory expenses, the highest amount over the period.

**Exhibit 2: Watershed Spending on Inventory, Equipment, and Supplies
FY14 – FY21**



Source: Oracle Trial Balance Report for fiscal years 2014 to 2021

Vehicles and Equipment Purchased Between 2014 and 2021 Totaled \$56 Million

Between 2014 and 2021, Watershed Management purchased 886 vehicles and other equipment classified as fixed assets (excluding computers), valued at \$55,734,953 as shown in Exhibit 3. The city defines capital, or fixed, assets as personal and real property with a unit cost of \$5,000 or more and having a probable useful life of at least two years. Watershed Management uses the Department of Finance’s capital assets policies and procedure to guide its stewardship of fixed assets.

Exhibit 3: Vehicles and Equipment Purchased Between 2014 and 2021 Totaled \$55.7 Million

Office	Number of Assets	Total Value of Assets
Office of Water Treatment and Reclamation	308	\$21,722,487
Office of Customer Care and Billing Services	235	\$18,247,952
Office of Asset Accountability Management	118	\$8,092,947
Office of Linear Infrastructure Operations	120	\$2,626,487
Information Systems	12	\$2,004,502
Other	16	\$1,100,689
Office of the Commissioner	6	\$878,137
Office of Watershed Protection	39	\$613,138
Office of Facilities Management	26	\$398,616
Office of Engineering Services	6	\$49,998
Watershed Management Vehicles/Equipment	886	\$55,734,953

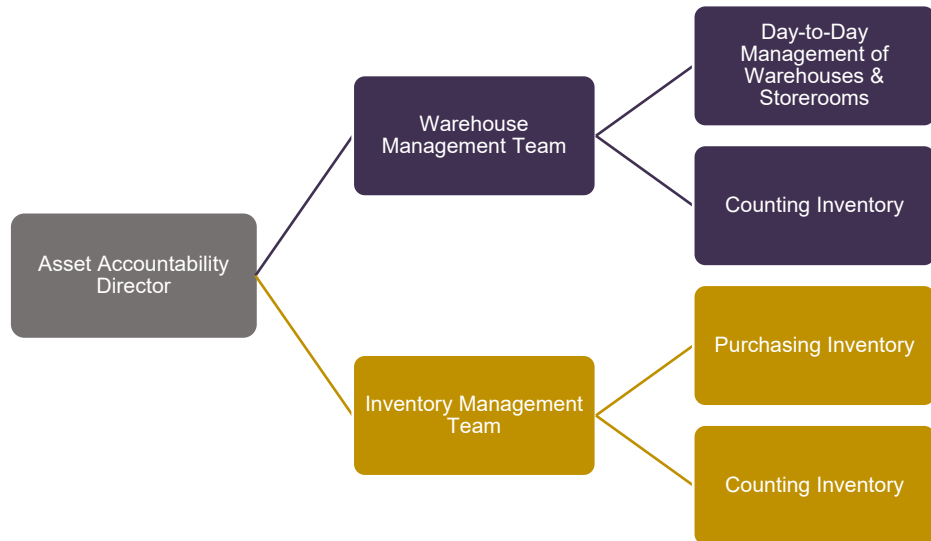
Source: Developed by auditors based on Watershed Management’s fixed asset records

Inventory Management Duties Are Separated to Minimize Loss

Watershed Management’s procedures outline the responsibilities for managing the warehouses and tracking inventory. Two teams within the Office of Asset Accountability Management are responsible for managing inventory—the warehouse management team and the inventory management team. The warehouse management team (26 staff) is responsible for managing the daily operation of the warehouses and storerooms. The inventory management team (14 staff) is responsible for purchasing, ordering, and counting inventory. Both teams report to the asset accountability director (see Exhibit 4). While both teams have a role in counting inventory, only inventory management employees are authorized to adjust inventory quantities to resolve count variances.

Four warehouse managers manage the warehouses and storerooms and report to an overall warehouse manager. Most locations also include one or more storekeepers, who report to the manager.

Exhibit 4: Two Teams Are Responsible for Managing Inventory



Source: Developed by auditors based on Office of Watershed Asset Management Inventory and Warehouse Management Standard Operating Procedures Version 7.0 p. 12

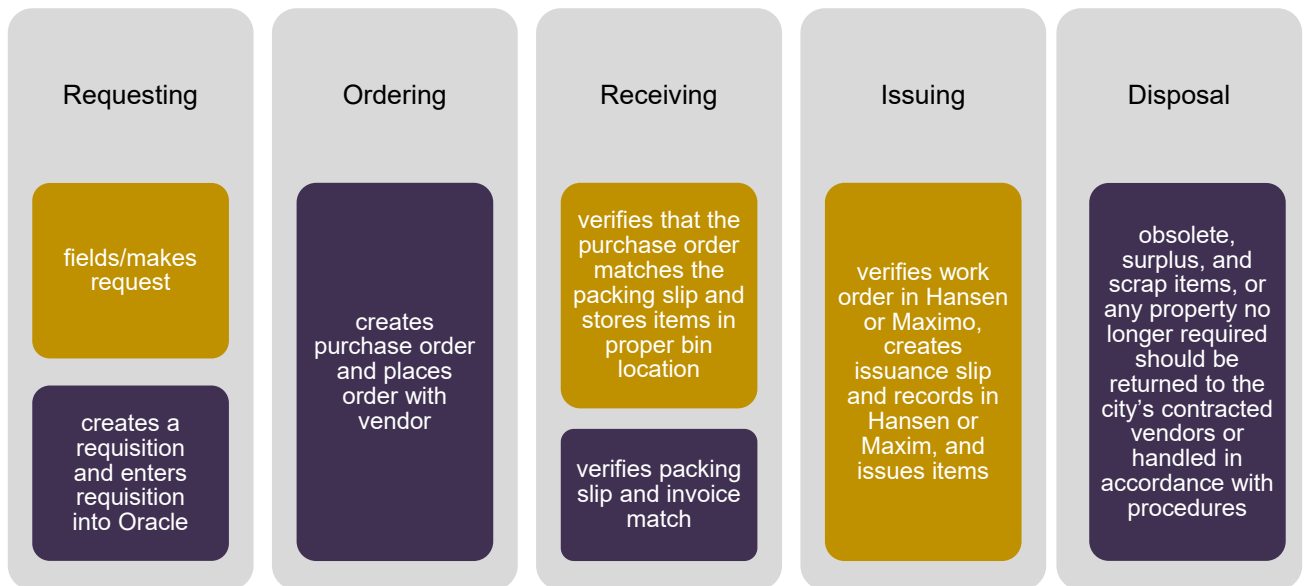
The inventory manager manages the team members assigned to each warehouse for reporting and counting, as well as the inventory technicians responsible for purchasing. The inventory purchasing, receiving, and issuing functions are carried out by separate groups to maintain segregation between the purchasing function and custodial management of the inventory. Segregation of duties is a key internal

control concept that is used to minimize fraud, theft, and misuse of property.

Inventory Management Process Consists of Five Phases

Generally, the process for handling inventory is separated into the following phases: 1) requesting, 2) ordering, 3) receiving, 4) issuing, and 5) disposing of items not used and no longer needed (see Exhibit 5). Watershed Management's procedures describe these processes in detail.

Exhibit 5: Procedures Describe Roles in Inventory Management



Legend:



Source: Office of Watershed Asset Management Inventory and Warehouse Management Standard Operating Procedures Version 7.0 p. 16-17; 19-21; 26; 29; 34; 36; 54; 57; and 80

- **Requesting** - any employee can request an item through the warehouse management team; the requests are sent to the inventory management team, which enters the request in an inventory management tracking log and creates a requisition in either Hansen or Maximo and enters it into Oracle.
- **Ordering** - the Department of Procurement processes the requisition and creates a purchase order in Oracle. To finalize the purchase, the inventory management team retrieves the purchase order number from Oracle, creates the purchase order in Hansen or Maximo, and emails a copy of it to the warehouse management team.

- **Receiving** - When the purchased item is delivered to the warehouse, two warehouse storekeepers are required to count the items and compare the purchase order to the packing slip to ensure they match. If there is a discrepancy, the warehouse management team should contact the inventory management team, who follows up with the vendor to correct the error. If there is a match, the warehouse management team staff signs and dates the packing slip and manually enters the item number into the system. The department's procedures describe using a barcode scanner to scan the item; however, employees told us they do not use the barcode scanners. After the team logs the inventory, it receives the item in Oracle, and stocks the items by bin number. The receiving process for water meters varies slightly because the meter serial numbers must be matched with information from the vendor and uploaded in both Hansen and enQuesta, the department's customer and billing system.
- **Issuing** - The warehouse management team issues inventory items using issuance slips, which must be signed by the person to whom items are issued. Storekeepers also issue the items in either Hansen or Maximo. To issue non-consumables items, such as meters, registers, piping, equipment, and parts, work orders are required. Work orders are not required for consumable items: boots, gloves, safety glasses, hard hats, goggles, office supplies, and janitorial supplies.
- **Disposal** - when items are no longer needed, they are disposed of according to the department's procedures, depending on the type of item. For example, obsolete or surplus scrap metal, including meters, is brought to the city's designated scrap vendor, and the vendor pays the city for the scrap metal.

To ensure consistency and completeness and proper tracking of purchases, both the inventory management and the warehouse management teams are required to pull monthly reports from Hansen or Maximo. The inventory management team uses the purchase order report, for example, to compare purchase order information in Oracle to the department's inventory systems to ensure that purchased inventory in Oracle is received in the warehouse and recorded in Hansen or Maximo.

Procedures Require Staff to Conduct Ongoing Inventory Counts

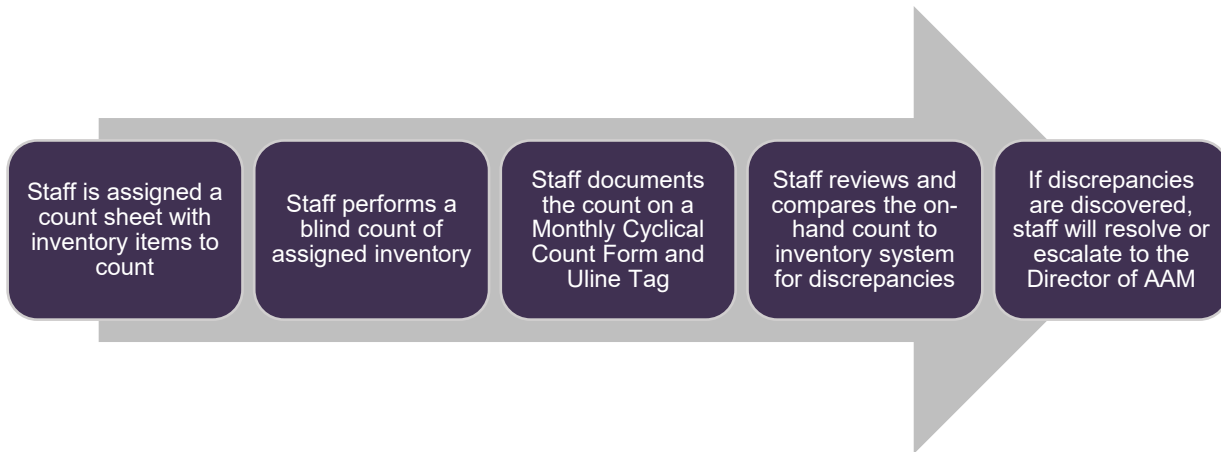
According to Watershed Management's procedures, the Office of Asset Accountability Management is required to audit inventory by conducting

physical counts to verify the existence of assets and ensure that inventory records are complete and accurate (see Exhibit 6). The inventory management team and the warehouse management team are responsible for conducting monthly high-dollar cyclical counts, monthly 10% inventory cyclical counts, and semi-annual wall-to-wall counts. The department's cycle count goal is a 95% accuracy rate.

- **Monthly High Dollar Count** - The inventory management team is responsible for performing monthly high dollar counts. The accounting technician on the inventory management team selects 10% of all high-dollar items, items priced at \$1,000 or more and any quantity of items that total \$1,000 or more, in the warehouse using a count sheet. After the items are selected, the accounting technician will perform a blind count and document the quantity of each item on a Monthly Cyclical Count Form and a Uline Inventory Tag. Once items are counted and documented, the accounting technician will check which items need reconciliation because of a difference between the physical count and the count in Hansen or Maximo. Lastly, either the difference in counts will be resolved by the accounting technician or escalated to the Director of Asset Accountability Management.
- **Monthly 10% Cyclical Count** - The warehouse management team and inventory management team are responsible for the monthly cycle count. The warehouse staff is assigned 10% of all inventory at the warehouse for each count. The warehouse management team performs a blind count, documents the quantity on hand on the Monthly Cyclical Count Form and a Uline Inventory Tag, and enters the quantities into the appropriate inventory system. The warehouse management team emails the Monthly Cyclical Count Report to the inventory management team. The inventory management team receives the report then reviews the counts to determine whether the quantities on hand match the quantities in Hansen or Maximo. If the quantity does not match, the warehouse management team and inventory management team will work together to reconcile the discrepancies and update the system with the correct quantity or escalate the discrepancies to the Director of Asset Accountability Management.
- **Wall-to-Wall Count** - The inventory management team is responsible for performing wall-to-wall counts twice a year, in June and December, which entail a blind count of 100% of the inventory. The inventory manager assigns the counts to the inventory management staff, who documents the count on a

Monthly Cyclical Count and Uline Inventory Tag. After performing the count, the inventory management team checks for any discrepancies between the count and the quantities in the inventory system and escalates discrepancies to the Director of Asset Accountability Management.

Exhibit 6: Inventory and Warehouse Management Teams Conduct Inventory Counts



Source: Developed by auditors based on Office of Watershed Asset Management Inventory and Warehouse Management Standard Operating Procedures Version 7.0 p. 96-97

Audit Objectives

This report addresses the following objectives:

- Are controls in place to safeguard inventory?
- What are the barriers to implementing procedures?

Scope and Methodology

We conducted this audit in accordance with generally accepted government standards. The scope of our audit was 2014 through 2021.

Our audit methods included:

- reviewing December 2021 inventory data from Hansen and Maximo to select and test a random sample of 256 items at two warehouses to physically count and assess the accuracy of the on-hand inventory report
- identifying discrepancies between our blind counts and quantities in the inventory systems

- reviewing fixed asset data in Oracle Cloud for January 2022 to select a stratified random sample of 84 fixed assets to inspect and assess whether documentation is sufficient to locate assets
- visiting each warehouse and interviewing Watershed Management staff to observe and understand processes for requesting, ordering, receiving, issuing, storing, securing, and disposing of inventory
- examining Watershed Management's standard operating procedures for inventory management operations
- reviewing Hansen and Maximo monitoring reports from 2018 to February 2022 to assess whether the department was following procedures related to reporting guidelines
- analyzing the department's inventory expense data for fiscal years 2014 to 2021
- developing flowcharts to illustrate the inventory management lifecycle and procurement processes
- researching the Government Accountability Office's best practices for managing inventory and fixed assets

Generally accepted government auditing standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Findings and Analysis

Safeguards Are Inadequate to Protect Inventory and Fixed Assets from Theft or Loss

The Department of Watershed Management developed inventory management procedures in 2015 in response to control weaknesses identified in our 2014 audit of the department's inventory management; however, the procedures were not fully implemented or enforced. As a result, theft or loss is likely to occur without detection.

Because Watershed Management employees are not complying with procedures for managing inventory or controlling fixed assets, the quantity of inventory on hand is unknown. Our sample counts of 256 items at two warehouses—14th Street and South River—found accuracy rates of 16% and 49%, respectively, well below the industry standard of 95%. Our sample included consumable items, such as office supplies, boots, gloves, and hand soap, and non-consumable items, such as meters, registers, and parts. Watershed Management staff was unable to locate 45 of 84 fixed assets that we randomly sampled, including dump trucks, forklifts, and trailer pumps because the department is not documenting enough information about them to locate them. Watershed Management employees told us that they were subsequently able to find 34 of 45 fixed assets, including 5 that were decommissioned and 1 that was sold.

Our previous audit recommended that the department separate incompatible duties so that no individual is responsible for authorizing requisitions, maintaining custody of items, and keeping records. The department updated its procedures to separate responsibilities between requesting, purchasing, and receiving duties and between inventory management and warehouse management teams, but employees are not complying with these procedures. We also found that staff was not conducting wall-to-wall inventory counts at the six-month intervals prescribed by procedures; the last wall-to-wall count was conducted in June 2018. Team members are not generating monitoring reports intended to prevent undetected theft and loss. Additionally, some Watershed Management offices purchased supplies and equipment outside of the process detailed in procedures and do not track inventory in either Hansen or Maximo. Due to the lack of enforcement of the revised procedures, Watershed Management is unable to detect when inventory discrepancies occur.

We recommend that the Watershed Management commissioner enforce procedures, train staff on procedures, and clarify in procedures which items should be purchased centrally through the Office of Asset Accountability Management. We also recommend that the Watershed Management commissioner develop procedures for fixed asset recordkeeping and inspection.

Procedures Adopted in 2015 Were Not Implemented

In 2015, Watershed Management developed new procedures to mitigate the risk of inventory theft or loss; however, we found that employees were not all aware of the procedures and were not following them. Watershed Management employees told us they were not using monitoring reports to track and monitor inventory. Procedures direct staff to generate monitoring reports from Hansen and Maximo to prevent undetected theft and ensure that staff is upholding segregation of duties, but employees are only pulling two reports as outlined in the procedures—the cyclical and high dollar counts.

Additionally, the Offices of Linear Infrastructure Operations and Water Treatment and Reclamation are purchasing items outside of the process outlined in procedures that ensure segregation of duties. The Office of Linear Infrastructure Operations is not tracking these items in the inventory system, although some items that it purchases are stored at warehouses.

Teams responsible for managing inventory are not following procedures for purchasing, receiving, and issuing inventory. We interviewed warehouse managers regarding the processes for requesting, purchasing, receiving, and issuing inventory and found that the warehouse management team is purchasing inventory for three warehouses. Procedures require that the warehouse management team submit inventory requests, and the inventory management team make the purchases, to segregate incompatible duties.

Procedures also state that two warehouse storekeepers should physically count received items and compare their counts to the quantity on the packing slip, but we found that at some locations only one storekeeper counts the items because Watershed Management has not allocated sufficient staff resources. After physically counting and storing received items, procedures require the warehouse management team to enter the date, quantity, and unit cost of the items into Hansen and Maximo; however, staff were unable to clearly articulate these requirements.

Additionally, Watershed Management has not implemented a barcoding system to receive and issue inventory as we recommended in our 2014 audit of the department's inventory management. Warehouse procedures describe the use of barcode scanners, but staff told us that the warehouses lack the wireless technology infrastructure necessary to support the use of a barcoding system. Manual entry may result in inventory tracking delays and a higher potential for errors in inventory system data. Because Watershed Management employees do not comply with procedures, the department may not be able to effectively manage its inventory.

We recommend that the Watershed Management commissioner enforce procurement and inventory management procedures, train staff in procedures, and periodically update procedures to ensure that practices are consistent with them. We also recommend that the commissioner implement a barcode scanning system or similar technology to mitigate risks associated with manual processes, and document and implement mitigating controls for manual processes into procedures until the barcoding system is implemented.

Monitoring inventory using reports outlined in procedures could mitigate undetected loss and theft. Watershed Management employees are not generating the monitoring reports required by its procedures. The reports are designed to allow staff to track and monitor the department's inventory. Interviews with inventory and warehouse managers indicated they were unfamiliar with reports prescribed by procedures. Exhibit 7 identifies each report, the frequency in which the report is required to be run, the purpose of the report, and the risk that the report is intended to mitigate.

Warehouse and inventory management team employees responsible for generating and using these monitoring reports said that they were not trained on or familiar with the reports. The employees, as well as the Director of Asset Accountability Management, told us that they were only pulling two reports—the monthly 10% cyclical count and high-dollar cyclical counts—at the required frequency. These two reports are required for the inventory management team to perform the counts.

Monitoring reports are intended to ensure that employees comply with procedures, which mitigates the risk of fraud or theft and increases the likelihood that losses will be detected. Regularly using monitoring reports could improve risk management by providing staff with timely information. Without them, management may be unable to detect, investigate, and resolve inventory inconsistencies.

Exhibit 7: Staff Not Using Reports Intended to Manage Inventory

Risk	Report Name (frequency)	Purpose
Employees circumventing segregation of duties	Requisitions w/o PO (monthly)	Requisitions without purchase orders
	Inventory Reorder Levels (monthly)	Quantities on hand support reordering
	Requisition Process Time (unspecified)	Purchases not initiated by inventory management team
	Inventory Receipts w/o PO (monthly)	Purchased items that did not originate from POs
Overstocked inventory sits idle for extended period	Inventory Turnover Rate (monthly)	Number of times inventory is issued and replaced over a period
	Dollar Value of Inventory on Hand (monthly)	Value of inventory
	Inventory Dollar Value (monthly)	Value of all products at individual warehouses
Department not meeting industry standards for inventory accuracy	Inventory Record Accuracy Rate (monthly)	Accuracy of inventory records
	Inventory Shrinkage Rate (unspecified)	Inventory loss through theft, obsolescence, or mismanagement
	Number of Accurate/Inaccurate Counts (unspecified)	Inaccurate item counts and items that could not be reconciled
	Error of Record and Quantity (unspecified)	Errors in location, part number, quantity, description, etc.
	Quantity of Adjustments (unspecified)	Adjustments made in the inventory system to account for discrepancies
Same staff responsible for managing inventory performs inventory counts	Inventory Adjustments (monthly)	History of adjustments for quantity changes, misplaced inventory, found inventory, etc.
	Dollar Value of Adjustments (unspecified)	Value of adjustments in the inventory system to account for the discrepancies
	Average Cost of Inventory (monthly)	Average cost of purchased goods
	Cyclical Counts (monthly)	Percentage of inventory counted
	Wall-to Wall Count (semi-annually)	All items counted in all warehouses
	Non-Reconciled Inventory (monthly/semi-annually)	Inventory without discrepancies between counts and records
Diversion of delivered items	Inventory Receipts w/o PO (monthly)	Goods received that did not originate from a PO
	Daily Barcode Transactions (monthly)	Movement of inventory from receiving to issuing
Billed for items not delivered	Purchase Orders (monthly)	Purchases in Oracle and Hansen/Maximo for reconciliation
	Closed Purchase Orders (monthly)	
Issued items not appropriately tracked/issued by unauthorized staff	Inventory Issued (monthly)	All issued inventory in a given time period
Staff fails to comply with procedures	Authorized User (monthly)	Employees' system access is appropriate for their duties
	Customer Satisfaction (monthly)	Customer satisfaction with warehouse services
Excess issued inventory is not returned to the warehouse	Inventory Returns (monthly)	All inventory returns in a given period

Source: Developed by auditors based on Office of Watershed Asset Management Inventory and Warehouse Management Standard Operating Procedures Version 7.0 p. 111-113

We recommend that the Watershed Management commissioner ensure that staff use monitoring reports to monitor and track inventory as stated in procedures.

Offices of Linear Infrastructure Operations and Water Treatment and Reclamation manually track inventory outside of the department's inventory management systems. The Office of Asset Accountability Management purchases some items for the Offices of Linear Infrastructure Operations and Water Treatment and Reclamation as outlined in the department's procedures, but these offices also have different processes for obtaining tools, equipment, and other commodities.

The Office of Water Treatment and Reclamation provided us with procedures for procuring items directly from vendors when goods cannot be obtained internally through the Office of Asset Accountability Management. Examples of the specialized items that the Office of Water Treatment and Reclamation purchases include chemicals, equipment repairs, sedimentation basing, and winter equipment, such as pumps. The items that the Office Water Treatment and Reclamation purchases are delivered directly to plants and tracked by the plant managers.

The Office of Linear Infrastructure Operations purchases items, such as work apparel, brake shoes, wheel bearings, asphalt, lithium-ion batteries, meter vaults, and fencing materials. The office's draft procedures do not require staff to ensure that the items cannot be obtained internally. Office of Linear Infrastructure Operations staff told us on occasion the Office of Asset Accountability Management did not have items on hand when the office needed them, but it is unclear from its procedures which items it should procure directly from vendors. These purchases are not tracked in Hansen or Maximo, and Office of Linear Infrastructure Operations staff told us that, although warehouses store some of these items for the office, warehouse employees do not issue the items that the office orders, and they are excluded from monthly counts.

The items that the Office of Water Treatment and Reclamation purchases directly from vendors appear to be specialized items that the Office of Asset Accountability Management cannot procure or store at warehouses, such as chemicals, but it is unclear that the items that the Office of Linear Infrastructure Operations purchases are specialized and cannot be obtained internally. Because there are more controls in place for purchases obtained through the Office of Asset Accountability Management in terms of segregating duties, verifying receipt of items, documenting the issuance of items, and confirming quantities through

periodic blind counts, the offices should obtain as many commodities as possible internally. Office of Watershed Asset Management Inventory and Warehouse Management Standard Operating Procedures Version 7.0 should also specify which commodities offices should purchase directly from vendors.

We recommend that the Watershed Management commissioner clarify in procedures which items the Office of Asset Accountability Management should purchase and which items offices should purchase directly from vendors.

Quantity and Value of Inventory On Hand Is Unknown

The department's procedures require inventory tracking to minimize theft or loss. Staff was not complying with procedures, including conducting wall-to-wall inventory counts. While procedures require the wall-to-wall counts twice per year, the last wall-to-wall count that the inventory management team conducted at all warehouses was in June 2018. Failure to conduct counts may result in inaccuracies in inventory data. Our sample counts matched system data for fewer than half of the 256 sampled items.

The last wall-to-wall inventory count at all warehouses occurred in 2018. We requested the inventory management team's inventory performance reports for eight years between 2014 to 2021; those reports included the high-dollar cyclical count and wall-to-wall count. Staff stated that the spreadsheet files from 2017 to mid-2018 were lost due to the ransomware attack on the city in 2018.

After analyzing the reports provided, we found that the inventory management team conducted wall-to-wall counts at 4 of 7 warehouses in 2019 and did not conduct a complete wall-to-wall count in 2020 or 2021. The inventory management team confirmed that it only performed counts for meters and registers in 2020 and 2021. Watershed Management employees told us that the inventory management team is only conducting wall-to-wall counts once a year; data from the inventory count reports only show wall-to-wall counts during the month of June. The inventory management team is supposed to conduct wall-to-wall counts twice per year, but the last record of a full wall-to-wall count was from June 2018.

According to procedures, the inventory management team is responsible for conducting wall-to-wall counts in June and December, which include a comprehensive count of inventory in each warehouse. A key goal of the wall-to-wall counts, along with accurate tracking, is to validate the amount of inventory for financial reporting. The department is not

enforcing procedures for conducting counts, and, as a result, the inventory management team is not properly accounting for inventory.

We recommend that the Watershed Management commissioner enforce procedures for conducting semi-annual wall-to-wall counts for accuracy and completeness as required by procedures.

The quantities of items we counted matched inventory system records for less than half of the sampled items. According to Watershed Management’s procedures, the items counted should have a 95% accuracy rate, which is also an industry standard. The inventory accuracy rate is based on the number of accurate items divided by the number of items counted. As Exhibit 8 shows, at the 14th Street warehouse, 16% of the quantities matched; 8 of 50 items counted were accurate. At the 14th Street warehouse, we counted a total of 2,802 units of 50 items, but the on-hand inventory report listed 1,901 units, resulting in a variance of 901 units. The total dollar value of the 901 units was \$262,112.74.

At the South River warehouse, 49% of the physical count matched what was in the on-hand inventory report (see Exhibit 8); 100 of 206 items we counted were accurate. At the South River warehouse, we counted 887 units of 206 items, but the on-hand inventory report listed 1,179 units, resulting in a variance of 292 units. The total dollar value of the 292 units was \$87,212.19.

We selected a random sample of inventory at the 14th Street and South River warehouses based on the value of the inventory item at each location. On January 25 and 27, 2022, we visited the warehouses and performed a physical blind count to compare counts to the inventory system.

Exhibit 8: Inventory Accuracy at 14th Street and South River Warehouses Was Below 50%

	14 th Street Warehouse	South River Warehouse
Sampled Items that Matched Inventory Records	8	100
Total Items Sampled	50	206
Percentage of Sampled Items that Matched Inventory Records	16%	49%
Units of Sampled Items Counted	2,802	887
Units of Sampled Items in Inventory Records	1,901	1,179
Variance between Units Counted and Inventory Records	901	-292
Total Value of Items with a Variance	\$262,112.74	\$87,212.19

Source: Developed by auditors based on our audit testing results at South River on 1/25/22 and at 14th Street on 1/27/22.

After performing our counts of the inventory, we interviewed staff about the discrepancies between our count and the on-hand inventory report. Staff explained the discrepancies in the following ways:

- the on-hand inventory report was inaccurate
- issued items had not been updated in Hansen or Maximo
- item descriptions were incorrect
- items were stored in two locations because of overstock
- some items were discontinued but not removed from the inventory system

As the results show, the accuracy rate for our sample is well below the industry standard. The accuracy rate would most likely improve if the department was updating the inventory system, reviewing monitoring reports, and performing inventory counts at the frequency stipulated in the department's procedures. Failure to enforce these procedures could result in inaccurate inventory records and undetected loss or theft.

We recommend that the Watershed Management commissioner enforce procedures to ensure that both inventory records and on-hand quantities are accurate.

Department Was Initially Unable to Locate About \$2 Million in Fixed Assets

Watershed Management was unable to find half of the fixed assets in our sample because the department did not record sufficient information about the fixed assets to locate them. We were unable to inspect about \$2 million of fixed assets, including dump trucks, mobile primer pumps, and forklifts. According to Watershed Management employees, the department was later able to locate the dump trucks, forklifts, and other fixed assets that were not available during our initial inspection or records showing that the assets had been decommissioned. Staff reconciled \$1,728,949 of the missing fixed assets, lowering the total of the unreconciled fixed assets in our sample to \$276,249.

Watershed Management could not locate 45 of 84 randomly selected fixed assets, including dump trucks, mobile primer pumps, and forklifts during our first inspection. Using Oracle's fixed asset ledger, we selected a random sample of 84 vehicles and equipment from 781 total fixed assets purchased between 2014 and 2021, 21 from each of four Watershed Management operational offices with the highest values of fixed assets. The sample excluded land, land improvements,

buildings, infrastructure, furniture, and computer equipment. For each office, we selected seven fixed assets from each of three cost categories (see Exhibit 9) by identifying the cost centers associated with these offices. Based on the description in Oracle's fixed asset ledger, our sample included heavy-duty equipment, maintenance equipment, heavy-duty vehicles, vehicles, athletic equipment, and other equipment, such as pumps, air compressors, and cameras. The total value of Watershed Management's fixed assets that we sampled from was \$50.7 million, and the value of fixed assets in our sample was approximately \$6.8 million.

Exhibit 9: Department Initially Found Less than Half of the Sampled Fixed Assets

	Less than \$9,999	\$10,000-69,999	\$70,000+	Total Fixed Assets
Sample Count	28	28	28	84
Fixed Assets Located	6	17	16	39
Percentage located	21.4%	60.7%	57.1%	46.4%

Source: Developed by auditors based on audit testing results

We visited 15 facilities to physically inspect the fixed assets, using the information that Watershed Management documented about them, such as serial number or VIN. Watershed Management staff told us that fixed assets were located at four additional facilities but could not provide enough information for us to locate them. Watershed Management was unable to find 45 of 84 fixed assets after having the sample of fixed assets for two weeks. Some of the unlocated fixed assets included dump trucks, mobile primer pumps, and forklifts. Although the department was initially unable to locate 45 fixed assets when we requested to inspect them, Watershed Management employees told us that they later found or documented the status of 34 of these 45 fixed assets; 5 of these were decommissioned, 1 was sold, and 1 item belonged to another department. Staff reconciled \$1,728,949 of the missing fixed assets, which lowered the total of the unreconciled fixed assets in our sample to \$276,249.

Of the 84 fixed assets in our sample, Watershed Management staff initially told us that they could not locate 22 of them because departmental records lack sufficient information to identify them; for example, Watershed Management tracked the serial number for 44 of 84 (52%) of the fixed assets. In addition to incomplete records, Watershed Management staff told us that records for particular fixed assets were inaccurate in the following ways:

- one had an assigned location that was not a Watershed Management facility

- one had the incorrect value assigned to it (\$0)
- one had been removed from operations
- one was incorrectly assigned to Watershed Management

The fixed asset report contained unclear descriptions. Watershed Management staff told us that some records appeared to be copied from purchase orders, which made identifying the associated fixed asset difficult; for example, one fixed asset's description reads "AFC2536MMLAOL 36 DI MJ RW OL GATE VLV L/A W/BG."

According to the GAO (United States General Accounting Office), agencies should maintain physical control over vulnerable assets. The GAO suggested the following as common control activities:

- developing a plan for identification and protection of any assets that are essential to the minimum operation
- physically controlling assets that are vulnerable to loss, theft, and damage, such as inventories and equipment
- periodically counting assets, comparing the count results to records, and examining exceptions
- affixing equipment and other portable assets with identification plates and number

GAO best practices also state that detailed asset records are necessary to help provide the physical accountability of property and equipment and the efficiency and effectiveness of operations.

Watershed Management does not have its own policy for controlling fixed assets, but the department uses the 2017 City of Atlanta Department of Finance's Capital Assets Policies and Procedures to guide its activities. These procedures state that the department heads must care for and maintain physical inventory at least every two years. A Watershed Management employee told us that Finance division staff only inspects fixed assets when they are received before the assigned office takes custody of them. The policy states that all assets with a value of \$5,000 and a useful life of two or more years must be tagged upon receipt, but we saw fixed assets that were not tagged. Without maintaining accurate records, tagging, and periodically inspecting fixed assets, they may be vulnerable to undetected loss or theft. Failure to maintain sufficient information about fixed assets could also contribute to inaccurate financial reporting.

We recommend that the Watershed Management commissioner assign staff to inspect fixed assets at least every two years as required by the Department of Finance's Capital Assets Policy and Procedures. We also recommend that the Watershed Management commissioner develop

procedures for documenting information about fixed assets, including requiring the documentation of serial/identification number. We further recommend that the Watershed Management commissioner affix GPS or other tracking technology to equipment used in the field.

Recommendations

In order to improve inventory accuracy and the accountability for fixed assets, the Watershed Management commissioner should:

1. enforce procedures to ensure that both inventory records and on-hand quantities are accurate
2. ensure that staff use monitoring reports to monitor and track inventory as stated in procedures
3. enforce procedures for conducting semi-annual wall-to-wall counts for accuracy and completeness as required by procedures
4. clarify in procedures which items the Office of Asset Accountability Management should purchase and which items offices should purchase directly from vendors
5. develop procedures for documenting information about fixed assets, including requiring the documentation of serial/identification numbers
6. implement a barcode scanning system or similar technology to mitigate risks associated with manual processes, and document and implement mitigating controls for manual processes into procedures until the barcoding system is implemented
7. affix GPS or other tracking technology to equipment used in the field
8. assign staff to inspect fixed assets at least every two years as required by the Department of Finance's Capital Assets Policy and Procedures

Appendices

Appendix A: Management Review and Response to Audit Recommendations

Report # 22.02	Report Title: Department of Watershed Management Inventory	Date: May 24, 2022
Recommendation 1: We recommend that the Watershed Management commissioner enforce procedures to ensure that both inventory records and on-hand quantities are accurate.		
Risk Category: Safeguard Assets		Response: Agree
Related Findings: 1. Teams responsible for managing inventory are not following procedures for purchasing, receiving, and issuing inventory. The quantities of items we counted matched inventory system records for less than half of the sampled items.		
Proposed Action: DWM will implement retraining/retooling of relevant staff on standard operating procedures once per year, and reports will be produced and reviewed in accordance with these procedures.		Current Status: Started
Business Owner: DWM Commissioner and Director of Office of Asset Accountability Management (OAAM)		Estimated Implementation Date (M/Y): December 31, 2022
Additional Comments:		

Recommendation 2: We recommend that the Watershed Management commissioner ensure that staff use monitoring reports to monitor and track inventory as stated in procedures.		
Risk Category: Safeguard Assets		Response: Agree
Related Findings: 1. Watershed Management employees are not generating the monitoring reports required by its procedures. The reports are designed to allow staff to track and monitor the department's inventory and prevent undetected theft and loss.		
Proposed Action: DWM will create automated monitoring reports and ensure that staff use them to monitor and track inventory.		Current Status: Started
Business Owner: Director of Office of Asset Accountability Management (OAAM)		Estimated Implementation Date (M/Y): December 31, 2022
Additional Comments:		

Recommendation 3: We recommend that the Watershed Management commissioner enforce procedures for conducting semi-annual wall-to-wall counts for accuracy and completeness as required in the procedures.	Risk Category: Safeguard Assets	Response: Agree
Related Findings: 1. While procedures require the wall-to-wall counts twice per year, the last wall-to-wall count that the inventory management team conducted at all warehouses was in June 2018.		
Proposed Action: Relevant staff will perform wall-to-wall counts at all warehouses and document results on a semi-annual basis.		Current Status: Started
Business Owner: Director of Office of Asset Accountability Management (OAAM)		Estimated Implementation Date (M/Y): December 31, 2022
Additional Comments:		

Recommendation 4: We recommend that the Watershed Management commissioner clarify in procedures which items the Office of Asset Accountability Management should purchase and which items offices should purchase directly from vendors.	Risk Category: Safeguard Assets	Response: Agree
Related Findings: 1. The Office of Asset Accountability Management purchases some items for the Offices of Linear Infrastructure Operations and Water Treatment and Reclamation as outlined in the department's procedures, but these offices have different processes for obtaining tools, equipment, and other commodities, and they manually track inventory outside of the department's inventory management systems.		
Proposed Action: DWM will centralize appropriate inventory purchasing within the Office of Asset & Accountability Management (OAAM) and will make additional efforts to properly track any items purchased by other offices that will be stored at the warehouses.		Current Status: Started
Business Owner: Director of Office of Asset Accountability Management (OAAM)		Estimated Implementation Date (M/Y): June 30, 2023
Additional Comments:		

Recommendation 5: We recommend that the Watershed Management commissioner develop procedures for documenting information about fixed assets, including requiring the documentation of serial/identification number.	Risk Category: Safeguard Assets	Response: Agree
Related Findings: 1. Of the 84 fixed assets in our sample, Watershed Management staff initially told us that they could not locate 22 of them because departmental records lack sufficient information to identify them. Failure to maintain sufficient information about fixed assets could make assets vulnerable to undetected loss or theft and contribute to inaccurate financial reporting.		
Proposed Action: DWM commits to reviewing the existing Fixed Asset report and developing more stringent procedures and tracking to ensure necessary information and documentation is recorded and maintained.		Current Status: Not Started
Business Owner: Director of Office of Asset Accountability Management (OAAM) and Deputy Commissioner of Office of Financial Administration (OFA).		Estimated Implementation Date (M/Y): June 30, 2023
Additional Comments:		

Recommendation 6: We recommend that the Watershed Management commissioner implement a barcode scanning system or similar technology to mitigate risks associated with manual processes, and document and implement mitigating controls for manual processes into procedures until the barcoding system is implemented.	Risk Category: Safeguard Assets	Response: Agree
Related Findings: 1. Watershed Management has not implemented a barcoding system to receive and issue inventory, as we recommended in our 2014 audit of the department's inventory management. Warehouse procedures describe the use of barcode scanners, but staff told us that the warehouses lack the wireless technology infrastructure necessary to support the use of a barcoding system. Manual entry may result in inventory tracking delays and a higher potential for errors in inventory system data.		
Proposed Action: DWM has initiated the procurement phase to solicit competitive proposals for a barcode system or a system using similar technology to mitigate this risk and will implement immediate procedures to mitigate risks while the function is still being performed manually.		Current Status: Started
Business Owner: Director of Office of Asset Accountability Management (OAAM)		Estimated Implementation Date (M/Y): June 30, 2023
Additional Comments:		

Recommendation 7: We recommend that the Watershed Management commissioner affix GPS or other tracking technology to equipment used in the field.	Risk Category: Safeguard Assets	Response: Agree
Related Findings: 1. Watershed Management could not locate 45 of 84 randomly selected fixed assets, including dump trucks, mobile primer pumps, and forklifts during our first inspection.		
Proposed Action: DWM will evaluate the expansion and use of GPS tracking for various transient equipment used in the field, where feasible.		Current Status: Not Started
Business Owner: Director of Office of Asset Accountability Management (OAAM)		Estimated Implementation Date (M/Y): June 30, 2023
Additional Comments:		

Recommendation 8: We recommend that the Watershed Management commissioner assign staff to inspect fixed assets at least every two years as required by the Department of Finance's Capital Assets Policy and Procedures.	Risk Category: Safeguard Assets	Response: Agree
Related Findings: 1. Watershed Management could not locate 45 of 84 randomly selected fixed assets, including dump trucks, mobile primer pumps, and forklifts during our first inspection. Watershed Management uses the 2017 City of Atlanta Department of Finance's Capital Assets Policies and Procedures to guide its activities. These procedures state that the department heads must care for and maintain physical inventory at least every two years.		
Proposed Action: DWM will inventory and inspect all fixed assets at least every two years.		Current Status: Not Started
Business Owner: Director of Office of Asset Accountability Management (OAAM) and Deputy Commissioner of Office of Financial Administration (OFA).		Estimated Implementation Date (M/Y): June 30, 2024
Additional Comments:		