



**Audit of the Department of Public
Infrastructure and Milwaukee Water
Works Inventory**

AYCHA SAWA
City Comptroller

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March 2024

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March 22, 2024

Honorable, Mayor Cavalier Johnson
The Members of the Common Council
City of Milwaukee

Dear Mayor and Council Members:

The attached report summarizes the results of the Audit of Department of Public Works (DPW) Infrastructure and Water Inventory. The scope of this audit was DPW inventory processes including receiving, disbursements, cycle counts, physical security, and inventory accounting for the period July 2022 through June 2023.

The primary focus of the audit was to evaluate whether the internal controls in place over DPW Infrastructure and Water inventory management were designed adequately and operating effectively. The audit objectives were as follows:

- Evaluate and test the inventory management policies, procedures, and internal controls.
- Evaluate and test the accuracy of inventory records and management reports.
- Evaluate the extent of obsolete, slow moving or missing inventory.
- Evaluate and test the physical security controls in place at each warehouse location.

The audit concluded that the inventory management control environment needs improvement. This report identified ten recommendations to improve the effectiveness of the current control environment.

Audit findings are discussed in the Audit Conclusions and Recommendations section of this report, and are followed by management's response.

Appreciation is expressed for the cooperation extended to the auditors by the personnel of the Department of Public Works Infrastructure and Milwaukee Water Works.

Sincerely,

A handwritten signature in blue ink, appearing to read "Adriana Molina".

Adriana Molina
Audit Manager

AMM: kk/alg



Audit Report Highlights

Audit of the Department of Public Works Infrastructure and Milwaukee Water Works Inventory

Why We Did This Audit

Department of Public Works Infrastructure and Milwaukee Water Works Inventory ranked as a high priority audit within the annual risk assessment. This area has not been audited since 2012.

Objectives

Evaluate and test the following:

- Inventory management policies, procedures, and internal controls
- The accuracy of inventory records and management reports
- The extent of obsolete, slow moving or missing inventory
- Physical security controls in place at each warehouse location

Background

The Infrastructure Services Division and Milwaukee Water Works oversee physical security of inventory warehouses, manage inventory stock, and account for inventory transactions.

Infrastructure and Water Works use the inventory module of the PeopleSoft Financial Management Information System (FMIS) to manage all stock-related warehouse activity, and it is the central system for tracking and monitoring inventory accounting records.

Overview

The audit concluded that the inventory management control environment needs improvement. Certain control activities and monitoring efforts are not operating effectively to address the risks associated with current operations.

Highlighted below are four (4) summarized findings and recommendations. Section III includes all ten (10) findings and recommendations as a result of this audit.

Findings

- *Inventory Counts and Resulting Inventory Adjustments*
15 out of 25 inventory items had count differences.
Recommendation: Perform complete physical inventory verification process for all warehouses.
- *Account Reconciliation Separation of Duties*
The DPW Purchasing and Inventory Manager prepares and reviews all reconciliations prior to submitting the final results to the Comptroller's Office.
Recommendation: Reconciliation preparation and review should be conducted and reviewed by two separate representatives.
- *Physical Security and Security Control Environment*
Inventory Management does not review security access for inactive personnel or personnel activity in warehouses.
Recommendation: Personnel activity and security access reporting should be reviewed by management.
- *Inventory Price and Carrying Value Monitoring*
Inventory price change processes and procedures were not formally documented.
Recommendation: A process for managing price changes should be documented.

(Other findings and recommendations can be found in the Audit Conclusions and Recommendations section of this report.)

I. Audit Scope, Objectives, and Methodology

Scope

The scope of this audit was Department of Public Works (DPW) Infrastructure and Milwaukee Water Works (MWW) inventory processes including receiving, disbursements, cycle counts, physical security, and inventory accounting for the period July 2022 through June 2023.

Objectives

The objectives of the audit were as follows:

- Evaluate and test the inventory management policies, procedures, and internal controls.
- Evaluate and test the accuracy of inventory records and management reports.
- Evaluate the extent of obsolete, slow moving or missing inventory.
- Evaluate and test the physical security controls in place at each warehouse location.

Methodology

Audit methodology included developing an understanding of the processes and controls over inventory management by the DPW Infrastructure and MWW. The audit program was developed using criteria outlined by the DPW Inventory and Materials Management Policy, City of Milwaukee Inventory Management Functional Procedures, City of Milwaukee Inventory Transaction Entry Manual, and City of Milwaukee Warehouse Management Manual.

The audit procedures developed to evaluate the effectiveness of internal controls through on-site and virtual walkthroughs, sample testing, and thorough review of relevant control documentation. The primary audit objectives were as follows:

- Review and assess whether the governing policy and procedures were relevant and effective.
- Review and validate the purchasing and receiving processes.
- Review and validate the inventory processes for disbursed and returned inventory.
- Conduct sample inventory counts at warehouses located at the Field Headquarters (“Tower”) and 15th & Canal (“Canal”) and verify inventory accuracy.
- Analyze and review inventory adjustments for reasonability and compliance with policy and procedure manuals.
- Review and verify inventory that is obsolete and/or overstocked is tracked and accurately stated in the system.

- Review and verify DPW inventory management reporting activities in accordance with the policy and procedure manuals for tracking and monitoring inventory.
- Review and verify the inventory pricing process per inventory policies and validate accuracy within the system.
- Review physical security controls and appropriate access at warehouses.

Compliance Statement

The audit was conducted in accordance with Generally Accepted Government Auditing Standards. Those 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.

II. Organization and Fiscal Impact

The Department of Public Works manages the City's inventory for the Infrastructure Services and Water Works divisions. Infrastructure Services is responsible for the operation and maintenance of all streets, public lighting, traffic control signs and signals, sewers and underground conduit systems. The Milwaukee Water Works provides water services to certain municipalities within Milwaukee, Ozaukee and Waukesha Counties. DPW's inventory services oversee physical security of inventory warehouses, manage over 1,400 items of inventory stock, and account for inventory transactions. The inventory value at year-end of 2022 was \$15.9 million.

III. Audit Conclusions and Recommendations

The audit concluded that the inventory management control environment needs improvement. Certain control activities and monitoring efforts are not operating effectively to address the risks associated with current operations. Internal audit details the following ten findings and recommendations to further improve the effectiveness of key inventory management processes to protect against compliance, financial or other operational risk.

Inventory Counts and Resulting Inventory Adjustments

The DPW Inventory Management Policy states that each department warehouse should conduct physical on-hand quantity counts of each active item at least once each year. If possible, high activity / high value items should be counted more frequently.

Finding: Internal Audit conducted blind count testing while on-site at the inventory warehouses. The Tower warehouse had 3 out of 7 inventory count differences and the Canal warehouse had 12 out of 18 inventory count differences. Additionally, Audit noted that the cycle count performed by the Inventory Manager on high demand/higher value stock items at both Tower and Canal resulted in process exceptions. There were 7 out of 16 process exceptions noted during testing was primarily due to missing support documentation and one count difference that was not updated accurately in FMIS.

Risk: Inventory may be inaccurately counted and/or omitted resulting in inaccurate financial reports.

Risk Rating: High

Recommendation 1: Perform complete physical inventory verification process for all warehouses to ensure accurate reporting of inventories for financial as well as operational purposes. The use of the Target Variance Guidelines detailed within the Inventory Materials and Management Policy may be the most proactive tool towards reducing variances related to higher value stock items at each warehouse. These guidelines should be used by all inventory staff performing inventory cycle counts.

The need for Warehouse Variance Scoring assessments being conducted annually as detailed in the Inventory Management and Materials Policy may be necessary to better understand and assess the impact of counting variances between warehouses.

Account Reconciliation Separation of Duties

Adequate separation of duties reduces the likelihood that errors (intentional or unintentional) will remain undetected by providing for separate processing by the preparer and reviewer of the reconciliations.

Finding: The DPW Purchasing and Inventory Manager prepares and reviews all reconciliations prior to submitting the final results to the Comptroller's Office.

Risk: Reconciliations could be inaccurate resulting in both erroneous and inappropriate actions. *Risk Rating: High*

Recommendation 2: Reconciliation preparation and review should be conducted by two separate representatives in the administration office on all reconciliations that are submitted to the Comptroller's Office. Additionally, reconciliation documents should contain a signature line item for the preparer and approver to sign and date during the review process. The processes should be updated within relevant procedures and/or policy.

Physical Security and Security Control Environment

Finding: Inventory Management does not review inactive employees or personnel access from other departments at both the Canal and Tower Warehouse locations. Semi-Annual Inventory Facility Assessments and Annual Security Access Review were not conducted in accordance with procedures. Inventory Management has not reviewed the Weekly Security Access Reporting since 2022.

In addition, the Canal warehouse did not have a camera system on the second floor or an after-hour access log sheet.

Risk: Unauthorized or unlawful entry may be attempted or made into City warehouses without detection. Additionally, City assets may be stolen, damaged, or otherwise compromised. *Risk Rating: Medium*

Recommendation 3: Semi-annual assessments and annual reviews should be conducted as stated in the Inventory Management and Materials Policy. Copies of these assessments/reviews should be maintained by Inventory management, specifically the review of access activity for inactive employees.

An after-hours access log at Canal should be used and reviewed daily by management, and weekly security access reporting should be reviewed by management as stated in the Inventory Materials and Management Policy. Copies of the log and reports should be maintained by Inventory Management. The physical camera systems should be reviewed annually for functionality, practicality and quality to reduce the risk of theft.

Inventory Price and Carrying Value Monitoring

Finding: Inventory price change processes and procedures were not formally documented to ensure price changes are performed consistently and subsequently are properly monitored within the system of record. The DPW Inventory Materials and Management Policy and procedure manuals did not include detailed inventory price change process.

Risk: Inventory valuation may be misstated in financial statements. Critical decisions on inventory price, obsolescence, and sourcing may be based upon inaccurate information.

Risk Rating: Medium

Recommendation 4: Historical and current pricing on each inventoried stock item should be maintained within the system of record and monitored daily for accuracy. The system average unit cost (AUC) method should be monitored for accuracy on all current inventory for all warehouses on a monthly basis. Standard Operating Procedures should include specific steps on how to update inventory stock prices.

Replenishment Stock Process

Finding: There were no procedures to review overstock inventory. One of the overstock items reviewed for testing was purchased in 2021 at a quantity of \$3.8 million for future projects. This inventory item is currently valued at \$1.9 million. There was no supporting documentation for the over stock item.

Risk: Overstock inventory may lead to inaccurate counts and valuation of inventory, misclassified financials, theft and fraud.

Risk Rating: Medium

Recommendation 5: Improve the process for calculating stock replenishment orders to avoid overstocking items. Inventory Management should create policies and procedures to review overstock inventory.

Policies and Procedures

Finding: DPW Inventory Policies and City of Milwaukee procedures have not been updated for a significant amount of time and do not contain approvals by senior management of the department. The current policies and procedures were last revised in 2012 or prior.

Risk: Personnel may not have adequate information, tools and/or skills to perform necessary functions.

Risk Rating: Medium

Recommendation 6: Inventory management should review and update the current DPW Inventory and Materials Management Policy and all City of Milwaukee inventory procedure manuals, as necessary. The revised policy and procedures should be approved by senior management. All pertinent approved changes should be communicated to the inventory staff.

Policies and procedures should be continuously updated and approved by DPW senior management on an annual (or as-needed) basis.

Management Reporting

Finding: Inventory Management and/or staff did not prepare or use several management reports as specified within the Inventory Management Policy, Functional Procedure/Warehouse/Transaction Entry manuals. The reports include:

- Monthly & Annual reporting
- Monthly/Annual distribution reports
- Annual inventory transaction volume
- Bi-annual inventory facility report
- Year-end inventory variance analysis
- Weekly security access
- Year-end transaction volume reporting
- Inventory transaction history
- Annual security access list
- After-hours card access activity reports
- Other supplemental reports

In addition, there are no documented SOPs for activities conducted at the warehouse and administration level.

Risk: Reports may not be accurate, which could result in critical decisions possibly being made upon erroneous information. *Risk Rating: Low*

Recommendation 7: Policies and procedures should specify a timeline for the occurrence of all management reporting, and clarify which reports are supplemental and not critical to operational needs. Policies and Procedures should also reference SOPs for activities conducted at the warehouses and by administration. SOPs should provide clear-cut directions and detailed instructions needed to perform specific tasks consistently and efficiently.

Obsolete Stock Process

Finding: There were no updated policies and procedures for obsolete inventory that define when an inventory item is obsolete and an inventory disposal process. Obsolete inventory that was not disposed of or sold was kept in the warehouses without being tracked and occupies space while holding no value.

Risk: Critical decisions may be based upon financial statements, records, or manufacturing reports which are inaccurate. Inaccurate information may result in excessive inventory levels if unnecessary inventory is ordered or produced.

Risk Rating: Low

Recommendation 8: Update policies and procedures to improve the process for managing obsolete material by defining when and how items should be disposed of.

Transaction Processes - Returned Goods

Returned stock transactions are currently processed within the system (via the Express Putaway module in FMIS).

Finding: A system module for historical returned stock inventory transactions does not exist. DPW was unable to monitor or track returned inventory stock outside of the system.

Risk: Inaccurate inventory counts and on-hand value for the respective business unit may result in inaccurate financial reports. *Risk Rating: Low*

Recommendation 9: In the absence of an FMIS system-based solution, an alternative solution may be used to track and monitor stock returns. Though return of physical inventoried goods is infrequent, this process should be performed on a routine basis. (This will include physical returns as well as administrative-related returns in which an ITR is completed and FMIS updated.)

Policies and procedures should be updated to reflect the solution being implemented by the department.

Transaction Processes – Disbursement of Goods

Finding: During the review of a sample of 45 inventory disbursement transactions, Audit noted the following exceptions:

- Four out of 45 disbursement transactions were found to be processed untimely, or more than 7 days, when comparing the Inventory Transaction Report (ITR) prepared by warehouse staff to the ship date indicated in FMIS. These four transactions resulted in a ship date being greater than 14 days from the date of the ITR.
- Three out of 45 transactions contained accounting detail in FMIS that did not match the fund, department, program or class data indicated on the ITR forms.
- One ITR was missing accounting detail for a disbursed stock item that should have been classified as a shop job item.

The Inventory Transaction Report contains an "Entered By" line item that is frequently initialed for approval/tracking purposes; this component is not included in the signature requirement section of the DPW Inventory and Materials Management Policy.

Risk: Inventory transaction information may be inaccurate within the system and financial reports. *Risk Rating: Low*

Recommendation 10: Monitoring for untimely shipping activity should occur weekly to ensure accuracy of monthly reconciliation.

DPW administration staff should reject ITRs with missing accounting detail, or maintain appropriate documentation disclosing instances when the accounting detail entered into FMIS will differ from

information included on the report. Inventory management should continue to enforce the two-signature requirement.

The "Entered By" line item currently used on the ITRs should be added to the signature requirement section of the DPW Inventory and Materials Management Policy.



Aycha Sawa, CPA, CIA
Comptroller

Bill Christianson
Deputy Comptroller

Toni Biscobing
Special Deputy Comptroller

Richard Bare, CPA
Special Deputy Comptroller

March 22, 2024

Honorable Mayor Cavalier Johnson
The Members of the Common Council
City of Milwaukee

Dear Mayor and Council Members:

With this letter, the Office of the City Comptroller acknowledges receipt of the preceding report, which communicates the results of the Audit of [Enter the name of the Audit]. I have read the report and support its conclusions. Implementation of the stated recommendations will help improve City processes.

As the City Comptroller, I was not involved in any portion of the work conducted in connection with the audit. At all times, the Audit Division worked autonomously in order to maintain the integrity, objectivity, and independence of the audit, both in fact and in appearance.

Sincerely,

A handwritten signature in black ink, appearing to read "Aycha Sawa", followed by a horizontal line extending to the right.

Aycha Sawa, CPA, CIA
Comptroller



Department of Public Works

Jerrel Kruschke, P.E.
Commissioner of Public Works

March 15, 2024

Adriana Molina
Audit Manager
City Hall, Room 404

Re: Response to Audit of the Department of Public Works Infrastructure and Milwaukee Water Works Inventory

Dear Ms. Molina,

Thank you for your audit of The Department of Public Works (DPW) Infrastructure and Water Works Inventory, as well as for your explanation of the findings and recommendations. DPW appreciates the time that you've committed to performing the audit and values the recommendations provided within the report.

After a careful review of the audit, we offer the below responses to its recommendations. The City Engineer and the Administrative Services Director may be contacted regarding the implementation of your recommendations.

Recommendation 1: Perform a complete physical inventory verification process for all warehouses to ensure accurate reporting of inventories for financial as well as operational purposes. The use of the Target Variance Guidelines detailed within the Inventory Materials and Management Policy may be the most proactive tool towards reducing variances related to higher value stock items at each warehouse. These guidelines should be used by all inventory staff performing inventory cycle counts.

DPW performs cycle counts for inventory items on a yearly basis as part of our standard operating procedure. We agree with your recommendation to implement yearly complete physical counts as a more complete process in managing inventory. DPW Inventory will be performing a complete physical inventory count upon implementation of the FMIS replacement software, which is proposed to go live in 2025. Further, professional services from a consultant will be solicited to aid in scheduled yearly complete counts as recommended thereafter. DPW staff will perform further research on industry standards to confirm that the Target Variance Guidelines within the Inventory Materials and Management Policy are up to date and will implement as necessary.



Recommendation 2: Reconciliation preparation and review should be conducted by two separate representatives in the administration office on all reconciliations that are submitted to the Comptroller's Office. Additionally, reconciliation documents should contain a signature line item for the preparer and approver to sign and date during the review process. The processes should be updated within relevant procedures and/or policies.

A two-person process will be immediately implemented. The Department has requested to add a position for the 2025 budget. The new position will assist with the preparation of the reconciliation for the close out of 2024. The DPW Inventory and Purchasing Manager will be approver. In the interim, the Department's Administrative Services Manager will sign-off as the approver while the DPW Inventory and Purchasing Manager will be preparing the reports. The Policies/Procedures will be updated and completed by the end of 2024 so the new incumbent will have the information ready in 2025. It should be noted that a new ERP is going to be implemented beginning in 2025. We will endeavor to work with the new ERP vendor to see if we can create workflows/efficiencies with the reconciliation process.

Recommendation 3: Semi-annual [security] assessments and annual reviews should be conducted as stated in the Inventory Management and Materials Policy. Copies of these assessments/reviews should be maintained by Inventory management, specifically the review of access activity for inactive employees.

DPW has developed weekly security reports for all inventory-related access doors. The reports are provided on schedule to management and will be retained as recommended. Semi-annual reviews of the reports are scheduled for May and November of 2024. Intermittent reviews will be performed as necessary.

Recommendation 4: Historical and current pricing on each inventoried stock item should be maintained within the system of record and monitored daily for accuracy. The system average unit cost (AUC) method should be monitored for accuracy on all current inventory for all warehouses on a monthly basis. Standard Operating Procedures should include specific steps on how to update inventory stock prices.

The Inventory Module that is currently in use doesn't maintain the price before the update, it only maintains the new price. A request for the new ERP to include such a screen to show before and after pricing will be requested.

A request will be made to develop a report to compare the current (AUC) price to the price for each inventory item for all warehouses and it will be reviewed monthly for accuracy. The new procedure for updates on the inventory stock pricing will be added to the Standard Operating Procedures.

The Inventory Price update is determined by the Purchasing Office. The Inventory prices are set by contract(s); however, it is possible that the Inventory Store may still have materials from a previous contract on the floor and a new contract may generate an updated price along with a new purchase order of those items. A formula is generated to determine the unit average and we will enter the average unit cost (AUC) into the system.

Unfortunately, the current inventory module does not permit us to maintain the historical data, meaning, if we update the entry (price) of that particular item, then the old entry (price) will disappear. The DPW Inventory and Purchasing Manager can create an Excel spreadsheet, which will show the material (item) with both the old price and the new price (entry in the system). However, this is an inefficient system in that we have thousands of items to keep track of.

We will create and implement a Standard Operating Procedure that outlines how to calculate the AUC and how we track the old price. Based on the response in recommendation #2, we will implement the procedures by the end of 2024 to ensure the new position is cross-trained on this job function as well. It should be noted that a new ERP is going to be implemented beginning in 2025. We will endeavor to work with the new ERP to see if the historical prices can be maintained in the new system and the calculation of the AUC can be automatically calculated in the new system. It is possible there will be two sets of procedures referencing the current system and new system. Date: Est. 2024/2025 implementation

Recommendation 5: Improve the process for calculating stock replenishment orders to avoid overstocking items. Inventory Management should create policies and procedures to review overstock inventory.

Stock replenishment is coordinated between DPW Inventory and each Work Unit requiring the materials through recurring meetings and/or email correspondence. Through the last several years, significant supply chain delays have created a selection of "market-sensitive" items. This particular stock is not only crucial to public safety but is often required for time-sensitive, grant-funded contracts. To accommodate for the market-driven uncertainties, a supply of "overstock" is kept for such items in a calculated manner as requested by management in each work unit in collaboration with DPW Inventory.

As this is a more recent necessary practice, DPW will produce policies for such replenishments and maintain a separate record of the requests.

Further, a review schedule will be determined and applied to the policies for any overstocked inventory. Completion and implementation of these policies are anticipated by the end of 2024.

Recommendation 6: Inventory management should review and update the current DPW Inventory and Materials Management Policy and all City of Milwaukee inventory procedure manuals, as necessary. The revised policy and procedures should be approved by senior management. All pertinent approved changes should be communicated to the inventory staff.

Existing inventory-related policies and procedures will be reviewed by DPW staff over the next year to update and conform to industry standards. This review will have some necessary limitations due to the proposed replacement of current inventory management and accounting software, which is expected to go live by the end of 2025. Once the new software is in place, DPW will begin the process of establishing new procedures with a goal to put them into practice by 2026.

Recommendation 7: Policies and procedures should specify a timeline for the occurrence of all management reporting, and clarify which reports are supplemental and not critical to operational needs. Policies and Procedures should also reference SOPs for activities conducted at the warehouses and by administration. SOPs should provide clear-cut directions and detailed instructions needed to perform specific tasks consistently and efficiently.

A discussion and review of all the reports will take place to identify the outdated reports and which reports are still valid. We also determine a timeline of how frequently the reports should be run. In addition, the reports will be available as read-only access to Field Inventory Management so they can easily see the information as well. For example, the security report is currently shared with Field Inventory Management. The DPW Inventory and Purchasing Manager will continue to run reports as part of their duties for auditing purposes and this information will also be shared with Field Management and be immediately available. The outcome will be added to the SOP with the needed details. We will endeavor to work with the new ERP to see what reports can be generated and read-only access for other managers. It is possible there will be two sets of procedures referencing the current system and new system. Date: 12/2024



Department of Public Works

Jerrel Kruschke, P.E.
Commissioner of Public Works

Recommendation 8: Update policies and procedures to improve the process for managing obsolete material by defining when and how items should be disposed of.

DPW will establish a review schedule and procedure to identify obsolete material by the end of 2024. Stock items that qualify as obsolete according to these standards will be reviewed and disposed of at the discretion of the City Engineer. Disposal expenditures will be tracked and budgeted on a yearly basis.

Recommendation 9: Absent of an FMIS system-based solution, an alternative (outside of the system, manual) solution may be used to track and monitor stock returns. Though the return of physically inventoried goods is infrequent, this process should be performed on a routine basis. (This will include physical returns as well as administrative-related returns in which an ITR is completed and FMIS updated.)

DPW will ensure that a function to handle and track stock returns is a consideration in the solicitation process to replace the current FMIS software. If the replacement software is capable of such activity, a procedure will be established to perform reviews at specified intervals.

Recommendation 10: Monitoring for untimely shipping activity should occur weekly to ensure the accuracy of monthly reconciliation.

DPW will conduct weekly reviews of untimely shipping and continue the policy of entering Inventory Transaction Reports (ITR's) within 48 hours of receipt. The "two signatures" requirement on the ITR form will be further emphasized and enforced by updated policies and procedures.

Sincerely,

Jerrel Kruschke, P.E.
Commissioner of Public Works