



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

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City Comptroller
City of Milwaukee, Wisconsin

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Martin Matson
Comptroller

John M. Egan, C.P.A.
Deputy Comptroller

Office of the Comptroller

September 26, 2012

To the Honorable
The Common Council
City of Milwaukee

Dear Council Members:

The attached report summarizes the results of the Audit of the Department of Public Works (DPW) Water and Infrastructure Inventory.

The audit determined that DPW has created an inventory internal control policy that generally provides sufficient guidance to the divisions for establishing procedures to reduce risks associated with managing and maintaining inventory. DPW Water and Infrastructure Inventory Management have shown a commitment to proactively strengthen internal controls as a result of the fleet audit completed in 2011. However, there are opportunities for improvements in the areas of physical security controls, accuracy of inventory recordkeeping, and internal controls over routine inventory transactions.

Audit results are discussed in the Audit Conclusions and Recommendations section of the report, which is followed by the response from the Department of Public Works.

Appreciation is expressed to the Department of Public Works for the full cooperation extended to the auditors.

Sincerely,

Martin Matson
Comptroller

MM/jsd

I. Scope and Objectives

This Audit of the Department of Public Works Water and Infrastructure Inventory was conducted in accordance with generally accepted government auditing standards. Those standards require that the audit obtain sufficient, appropriate evidence to provide a reasonable basis for the findings and conclusions based on the audit objectives. The Office of the Comptroller believes that the evidence obtained provides a reasonable basis for the audit's findings and conclusions based on the audit objectives.

The scope of this audit focused on the City of Milwaukee Department of Public Works' inventory processes including receiving, disbursements, cycle counts, physical security and inventory accounting.

The audit did not include the following three areas: 1) Whether inventories are right-sized for work activities, 2) Procedures and reports used to determine what, when, and how much inventory is purchased and stocked, and 3) Reasonableness of commodity purchases and holding costs. These three areas could be examined in a future audit.

The preliminary objectives of this audit were to:

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

II. Background

Within the City of Milwaukee (City) financial statements, the City recorded inventory in materials and supplies in the amount of \$9,887,320 and \$9,734,657 as of 12/31/11 and 12/31/10, respectively. The Department of Public Works (DPW) manages the City's inventory within its Infrastructure, Water Works, Operations, and Sanitation divisions. Table 1 provides a summary of the DPW inventory by division and location for the years ended 12/31/11 and 12/31/10.

Table 1

DPW Division & Location	12/31/11		12/31/10	
Infrastructure Division & Water Works				
TE523 Warehouse (15th & Canal)	2,956,954	30%	3,239,670	33%
Tower - 3850 N. 35th St.	2,765,419	28%	2,829,904	29%
Pipe Yard - 6th & Howard (Water)	181,273	2%	196,278	2%
Total Infrastructure & Water	5,903,646	60%	6,265,852	64%
Operations Division- Fleet Services				
Central Garage (21st & Canal)	910,604	9%	763,371	8%
Tire Shop (123 N. 25th St.)	149,300	2%	146,168	2%
Northwest Garage (30th & Ruby)	115,376	1%	80,081	1%
Lincoln Garage (39th & Lincoln)	110,131	1%	85,951	1%
Tower/Field Hdqtrs (35th St.)	12,284	0.12%	10,920	0.11%
Total Operations- Fleet Services	1,297,695	13%	1,086,491	11%
Sanitation Division				
Salt (stored at various locations)	2,685,979	27%	2,382,314	24%
Total DPW Inventory	9,887,320	100%	9,734,657	100%

Of the total DPW inventory, approximately 60% was managed by Water Works and Infrastructure. Water Works and Infrastructure inventory is stored at three different locations with the Water inventory primarily located at the Tower warehouse facility on 35th Street. Infrastructure, Communications inventory is located at the Canal Street warehouse and a small amount of Water inventory is stored at the Water Treatment Facility. The Infrastructure and Water Works Departments are responsible for providing support for critical City operations. While Infrastructure and Water Works records approximately 1,350 different active commodity parts into inventory, there are several thousand variations of parts, especially in the Infrastructure department, which must be maintained for specific poles or lighting in each section of the city. Additionally, some commodity purchases are received for specific projects and disbursed to the project worksites. Water and Sewer inventory processes the following types of commodity purchasing activities:

- *Inventoried commodities*- The warehouse will inventory parts that are commonly used for standard repair jobs, parts that have high turnover rates, and seasonal items that have a long order lead time if not on hand during the related season.
- *Internally rebuilt parts*- The machine shops at the Tower and Canal Street facilities are able to rebuild certain parts, particularly electric transformers and water couplings. Internally rebuilt equipment is added back to inventory with a part and labor component.

For the twelve month period ending 12/31/11, Infrastructure and Water Works inventory purchases totaled approximately \$6,600,000.

The Infrastructure and Water Works Departments use the inventory module of the PeopleSoft Financial Management Information System (FMIS) to manage the stockroom activity. Infrastructure and Water Works perform periodic cycle counts of quantities on hand throughout a ten month period ensuring that all commodity items are physically counted at least once. The Infrastructure and Water Works Departments' inventory was last audited in 1994 and an audit of DPW Fleet inventory was completed in 2010 - 2011.

III. Audit Conclusions and Recommendations

A. Summary Conclusions

DPW has an inventory management policy that provides guidance to its divisions over physical security controls, proper inventory accounting and transaction documentation as well as procedures for handling variances identified through physical inventory counts. The audit reviewed this policy and generally found the procedures adequately addressed the risks associated with inventory management given the inherent limitations in both the warehouses DPW Inventory uses and the system limitations of FMIS.

This audit makes eight recommendations to further improve the control environment. During the audit we identified improvements which could be made in the areas of physical security, policies and procedures, and inventory accounting.

1. Formalize an access request form for individuals requiring access to inventory areas.
2. Evaluate the viability of replacing the Canal Street facility.
3. Update the policies and procedures manual for changes made to the accounting system.
4. Clarify section 6.2.2 of the Inventory and Materials Management Policy regarding management approval of inventory disbursements.
5. Design and implement a consistent ordering process.
6. Develop a process to improve the timeliness in recording receipts.
7. Collaborate with the Department of Administration Procurement Services Division to

design a process to improve the resolution of market price adjustments.

8. Refine the process for identifying and recording obsolete inventory adjustments.

B. Physical Security

Inventory Access

Staff access to the inventory locations is requested through an informal email to the Security Operations Manager. Manager approval must be included but the request and approval are not formally documented. When an employee is terminated the employee's manager contacts the Security Operations Manager to remove access. This process could result in conflicting access when an employee changes jobs. The employee may no longer need after hours' access to inventory storage area in the employee's new job yet he or she may still have the ability to access inventory areas. In addition, if an email cancellation request was overlooked or lost, unauthorized or inappropriate personnel could gain access to inventory without management approval.

Recommendation 1: Formalize an access request form for individuals requiring access to inventory areas

A formal access request process must be established and an access request form must be completed for adding, changing, or removing access to secure areas. This form must also document manager approval of the request.

Canal Street Facility

The facility at Canal Street was designed as a Fleet Maintenance facility and lacks enough space to adequately and efficiently store inventory items. Due to the fact that all inventory items at Canal Street cannot be stored in secured areas, there is a risk that inventory items are susceptible to misappropriation by both staff and the general public. The fact that inventory is stored outside, albeit inside a fenced area, has attracted the attention of local criminal elements and has resulted in multiple burglary attempts.

Recommendation 2: Evaluate the viability of replacing the Canal Street facility

DPW should consider a viability study assessing the costs and benefits of relocating the inventory stored at Canal Street to another, more secure facility.

C. Policies and Procedures

As recommended in the Fleet Audit released in 2011, Management has revised their policies and procedures manual earlier in 2012. The revised policies and procedures manual addresses all of the issues raised in the 2011 Fleet Audit and provides a solid framework for future versions of the manual. During the audit it was noted that some minor adjustments were needed to reflect the current inventory processes.

Inventory Manager Duties

During the audit, it was revealed that The Inventory Manager Functional Procedures manual has not been updated since 2008 and does not reflect changes in the accounting system that occurred in 2010. This is a small oversight due to the procedures are relatively the same; the only difference is the terminology. During the audit, it was discovered the Inventory and Purchasing Manager is the only individual with the knowledge to perform the monthly inventory reconciliation. Previously the Inventory and Purchasing Manager's assistant was trained to perform the reconciliation. With the elimination of this position, there is no individual cross-trained to provide back-up if he were to go on extended leave or terminate employment with the City. An outdated procedure manual combined with a lack of cross training weakens controls in place to reduce the risk of inaccuracies within the inventory module and actuals ledger of the PeopleSoft Financial Management Information System.

Recommendation 3: Update the policies and procedures manual for changes made to the accounting system

To strengthen the inventory management processes, management should update the policies and procedures manual for process and system changes. In addition, DPW Management should cross-train staff to perform the duties of the Inventory and Purchasing Manager and implement a policy to update the policies and procedures manual periodically.

Inventory Disbursements

Per the policies and procedures manual, inventory transaction reports used to document stock issues should be signed by a manager for each disbursement. During discussions with business process owners and the Inventory and Purchasing Manager, it was discovered the inventory transaction reports used to document stock issues (inventory withdrawals) are not consistently signed by management prior to disbursement. Management approval on the form is not required as long as there are two signatures on each disbursement sheet.

Recommendation 4: Clarify section 6.2.2 of the Inventory and Materials Management Policy regarding management approval of inventory disbursements

Management should revise section 6.2.2 of the Department of Public Works Inventory and Materials Management Policy to accurately reflect the processes actually followed.

Standardization of Inventory Orders

There are four individuals who perform the ordering for communications, traffic and electrical services, water, and streets and sewer, and each follows different procedures. Additionally, there are no controls in place to prohibit or detect orders placed by unauthorized individuals. The lack of a formalized process subjects the City to a risk of unauthorized orders resulting in a financial loss.

Recommendation 5: Design and implement a consistent ordering process

Ideally, DPW would work with Department of Administration Procurement Services Division (Purchasing) and the Information Technology Management Division (ITMD) to allow the four individuals with purchasing authority to create purchase orders (PO) in FMIS. These individuals could then inform the vendors what PO number an order was assigned to reduce the risk of receiving errors. Alternatively, if granting access to creating POs is problematic, DPW Inventory Management should create a consistent ordering process for the different warehouses to implement. The process should include a standard order form and ordering responsibilities should be limited to an authorized set of individuals. When inventory received has been verified to the packing slip, the packing slip should be verified to the order form that is retained in a secure file. Only individuals authorized to make orders should have edit access to the secure file.

Any shipments received without a corresponding order form should be investigated.

D. Inventory Accounting

Inventory Receipt Timeliness

During the course of the audit, there have been instances where physical counts were different than the amounts recorded in FMIS due to the invoices having not been processed. Inventory is not received into the FMIS system until an invoice has been received and processed, even though the goods are put away and available for disbursement. This situation has led to some instances where inventory is being issued out to jobs but not being recorded in the FMIS system because the system does not allow negative inventory totals. The disbursement sheets for these transactions are put to the side and entered after the inventory receipt has been processed.

Recommendation 6: Develop a process to improve the timeliness in recording receipts

Procurement Services, DPW and ITMD should consider turning the three-way matching feature on in FMIS so that items can be received against a purchase order in the system when they have actually been received. Enabling this function in FMIS may increase the accuracy of inventory quantities and cycle counts due to the ability to account for inventory as it is received versus waiting for the invoice to be input. This should also eliminate the problem of not being able to enter disbursements for products which have been received but have not yet been entered into inventory. Alternatively, the DPW Water and Infrastructure management and staff responsible for placing orders could create a manual matching process to address inventory receipt issues.

Price Adjustments

During periods of price volatility for commodity goods, the price at which a purchase order was issued can be different than the price on an invoice. When this situation occurs, the City of Milwaukee's Procurement Services division will determine the final cost and the item is then received into inventory. Purchasing's current process for addressing market price adjustments can result in delays up to several months before a final price is settled on, products can be received into inventory and suppliers paid for inventory purchases. There is a risk that some of

the City's current vendors will choose to stop supplying products if payments for commodity goods continue to take several months to process.

Recommendation 7: Collaborate with Procurement Services to design a process to improve the resolution of market price adjustments

Procurement Services and DPW need to meet to develop processes which will expedite the resolution of market price adjustments as the process now is too time consuming and potentially risks the City's reputation with vendors.

Obsolete inventory

At the end of each fiscal year, management reviews the obsolete inventory identified and uses excess operating and maintenance funding to remove the items from inventory if fiscally possible. For 6 of the past 12 years, it has not been fiscally possible to fully write-off all obsolete inventory identified for the year. Maintaining obsolete stock in inventory overstates assets recorded on the financial statements. It also leads to an inefficient use of staff time as those items are required to be counted at least once a year as part of the inventory cycle counting process.

Recommendation 8: Refine the process for identifying and recording obsolete inventory adjustments

Management should write-off all inventory currently designated as obsolete when possible. Going forward, management should analyze historical trends and include funding when feasible in future budgets to accommodate writing off obsolete inventory.



COMPTROLLER

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Department of Public Works

Ghassan Korban
Commissioner of Public Works

Preston D. Cole
Director of Operations

September 21, 2012

Martin Matson
Comptroller
City Hall, Room 404

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

Dear Mr. Matson,

Thank you for your audit of The Department of Public Works (DPW) Infrastructure and Water Works Inventory. DPW appreciates the opportunity to work with your staff during the audit and values the audit's recommendations for improving DPW's inventory processes.

We have reviewed the audit and offer the following responses to its recommendations:

Recommendation 1: Formalize an access request form for individuals requiring access to inventory areas

The Department will review its stockroom access request procedures and develop an access request form for adding, changing and removing such access. We will also develop a formal access request procedure with the goal of having both in place by November 30th, 2012 or sooner.

Recommendation 2: Evaluate the viability of replacing the Canal Street facility

DPW shares the audit's concern about the security and storage inadequacies of its 15th & Canal Street facility. The facility's proximity to the Hank Aaron trail, the increased value of commodities such as copper and aluminum, and the down-turn in the economy, have all contributed to this facility becoming an attractive target. To counter this, over the past several years, DPW has taken steps to improve security at the facility, including: installation of new cameras, lighting, fencing and other security measures. Additionally, a fenced storage area has been added to the interior of the yard for containing the high theft-risk materials.

In regards to storage inadequacy, the facility's configuration and storage constraints have required the establishment of multiple stockrooms to service the field crews that work out of this facility. Staffing these multiple service points is inefficient and challenging as stores staffing is decreased due to budget constraints. In 2011, an inventory study conducted by the Department of Administration's Budget and Management Division led to the inclusion of \$75,000 in capital funding in our 2012 budget to conduct a space needs study of this facility. This study is in process and is anticipated to be completed by the end of October 2012.

Recommendation 3: Update the policies and procedures manual for changes made to the accounting system

The inventory procedure manual was partially updated after the accounting system upgrade in 2010 and is 90% current. The manual will be completely updated by the end of 2012, or sooner. In regards to cross-training of staff to perform the duties of the inventory manager, DPW currently has two employees that have assisted the inventory manager in the recent past. If either had to absorb these duties, their past experience, proven ability, coupled with a predominantly complete manual in place, would allow for key work duties to continue.

Recommendation 4: Clarify section 6.2.2 of the Inventory and Materials Management Policy regarding management approval of inventory disbursements

When this policy was updated in April of this year, Section 6.2.2 contained a general statement that read "Normal withdrawal of Inventory Materials from any storage facility first requires management approval". However, this section did not describe how management approval should be obtained or documented. DPW agrees that this section should detail how management approval will be obtained and documented and will update the policy by November 30th, 2012 or sooner.

Recommendation 5: Design and implement a consistent ordering process

It is important to note that currently, the risk of unauthorized orders is minimized by the fact that all payments for ordered materials and supplies must be authorized by the Stores Supervisor. Any invoice for unauthorized orders would be questioned and investigated. Further, the employees that perform the ordering tasks have been instructed of DPW's purchasing guidelines and the stores payment approval requirement. However, DPW agrees that a consistent ordering process would be beneficial in that it would formally document the orders placed, including identifying which employee placed them. DPW will develop a consistent inventory ordering procedure with the goal of having the new procedure in place by December 31st, 2012 or sooner.

Recommendation 6: Develop a process to improve of the inconsistent timeliness in recording receipts

The audit recommends utilizing the three-way matching function in FMIS to minimize the delay to entering inventory in to FMIS and consequently, minimize the variance between inventory physical counts and inventory recorded in FMIS. Unfortunately, this approach has been considered in the past and has been determined to be impractical. This is due to the fact that there are often differences between the unit price indicated on a receipt

ticket and the unit price actually invoiced. Therefore, utilizing the matching function would require frequent adjustments to inventory values in FMIS. This becomes exceedingly complicated when the inventory has already been dispersed and charged to the accounts of various projects.

DPW concedes that delayed entry of inventory has the potential to cause physical count quantity to vary from quantities recorded in FMIS. However, DPW believes that our current manual match process minimizes quantity variance risk and that by retaining copies of the receipt tickets we'll be able to reconcile variances between inventory physical counts and inventory amounts recorded in FMIS. However, DPW will monitor this situation and if necessary implement appropriate corrective measures.

Recommendation 7: Collaborate with Procurement Services to design a process to improve the resolution of market price adjustments

During the Audit, inventory entry into FMIS of 4 types of electrical cable was delayed about a month and a half. The stock in question was physically delivered in several shipments between May 3rd and May 14th, 2012. Entry into FMIS didn't occur until June 26th, 2012; after invoice pricing was finalized. However, prior to this time, the stock was issued for use. This situation caused the Auditors and DPW concern.

The delay in final invoicing in this case was due to the fact that final pricing of these materials was subject to an escalator clause included in the bid language. This language requires the vendor to notify Department of Administration – Procurement Services, in writing, of any copper pricing increase. Price increases must then be approved by Procurement Services before the vendor can issue an invoice.

Procurement Services approval was granted on June 11th, at which time a contract amendment was issued which the vendor signed on June 12th, the Purchasing director signed on June 14th and the Comptroller signed on June 20th. The vendor then issued invoices but 3 of 5 were submitted with errors; revised invoices were not received until June 26th. In this case, the delay in calculating final pricing and obtaining correct invoices was longer than usual and at least a portion of this extended delay can be attributed to the vendor and to Procurement Services.

DPW has been engaged with Purchasing Services in efforts to address these types of delays. As part of the 2012 budget, DPW transferred its Inventory and Purchasing Coordinator position to Procurement Services as a Purchasing Agent dedicated to DPW's purchasing needs. Procurement Services recently hired an individual to fill this new position, and it's our hope that this will have positive impacts on this and other purchasing related concerns moving forward.

Recommendation 8: Refine the process for identifying and recording obsolete inventory adjustments

DPW will write-off all inventory designated as obsolete as soon as practical and will work with the Department of Administration Budget and Management Division to

address any budget shortfalls such action may cause in this current or future years to come.

Thank you again for your time and consideration during this audit.

Very truly yours,

A handwritten signature in black ink, appearing to read "Ghassan A. Korban". The signature is fluid and cursive, with a long horizontal stroke at the end.

Ghassan A. Korban
Commissioner of Public Works

Cc: Patrick Hartmann
John Huff
Dale Mejaki