



**GARLAND**

**INTERNAL AUDIT**

# **Fire Inventory Management Audit**

*December 12, 2017*

*Report 201708*

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# Contents

Overall Conclusion.....	1
Authorization.....	1
Objective.....	1
Scope and Methodology .....	1
Background .....	2
Management Accomplishments* .....	5
Opportunities for Improvement .....	6



## Overall Conclusion

Narcotics are well-managed at the Fire Department. We found that good processes have been designed to address the DEA Practitioner's Manual requirements. Tracking of certain inventory such as gear, hoses, etc. is conducted effectively in order to comply with standards and regulations for the useful life, certification, and cleaning.

There are also opportunities for improvement. The Fire Department does not currently have an overarching inventory system. Periodic/perpetual inventory counts of Fire Department inventory did not occur during the scope of our audit. In addition, the transfer of many items of inventory between Support Services and the Stations is not tracked. Lastly, access to sensitive areas of inventory is not restricted to Fire Department personnel.

## Authorization

We have conducted an audit of Fire Inventory Management. This audit was conducted under the authority of Article VII, Section 5 of the Garland City Charter and in accordance with the FY2017 Annual Audit Plan approved by the Garland City Council.

## Objective

The objective of this audit is to determine if inventories are properly accounted for and access to inventories are closely monitored.

## Scope and Methodology

IA conducted this performance audit 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.

The scope of the audit is from October 1, 2015 to September 30, 2017. As part of our audit, we have excluded vehicles and radios, as these are both managed by other City departments.

To adequately address the audit objectives and to describe the scope of our work on internal controls, IA performed the following:

- Review physical access to inventory at the warehouse and stations
- Review how inventory is recorded in the general ledger
- Meeting with Support Services, Fire Station Captains, and other personnel as necessary regarding their inventory processes
- Inquire with staff how inventory is tracked and monitored for age, damages, disposal, etc. and review support documents

- Develop flow charts reflecting the information noted above
- Survey Fire Departments in neighboring cities regarding their inventory processes
- Track inventory from records to the items or vice versa
- Review inventory purchases for proper authorization and trends
- Review inventory adjustments (as applicable)

To assess the reliability of computer-generated data, we compared reports from the City's P-Card system as well as the Fire Department's SharePoint site to the physical items of inventory. As a result of our testing, we determined that the data was sufficiently reliable for the purposes of this report.

Based on the audit work performed, any deficiencies in internal control that are significant within the context of the audit objectives are stated in the Opportunities for Improvement section on page 6.

## Background

The Fire Department purchases equipment and supplies to support their mission "to serve and protect the citizens and business community of Garland through Fire Prevention, Emergency Medical Response and Public Education, as well as quick and effective response for fire suppression and disaster management". <sup>(1)</sup>

The Fire Department spent approximately \$1.2 million in the general ledger accounts specified for fire inventory in FY2016 & \$900,000 in FY2017 through 9/13/2017. <sup>(2)</sup> There is \$11.6 million approved for Capital Projects related to replacing fire apparatus and emergency response safety equipment on an ongoing basis. <sup>(3)</sup> There are various other Capital Improvements related to ambulances and the rebuild/remodel of Fire Stations; however, we excluded those from these figures due to the scope of our audit.

Purchases for the Fire Department are made in accordance with the City's Purchasing Directive 1. The vast majority of the Fire Department's inventory-related purchases are made by the Support Services staff. Support Services is responsible for the purchase of all station equipment, uniforms, ambulance supplies, and vehicle maintenance.

The Fire Department does not have an overarching inventory system and the individuals in charge of each area both at Support Services and at the Fire Stations determine how best to track their inventory. The high dollar items and highly regulated items, such as narcotics, personal protective equipment (PPE), hoses, thermal imagers and radios are tracked via SharePoint. These items have a significant amount of detail tied to them, such as date of manufacture, asset ID, size, assignments, etc. Other items, such as EMS supplies (non-narcotics), tools, etc. are tracked at a high level at Support Services.

### Capital Assets - PPE, Hoses

In 2017, there was one new capital project funded in the amount of \$1.51 million to replace fire apparatus (Project #12058). The total approved amount for ongoing replacement of fire apparatus is \$11 million. <sup>(3)</sup>

In 2016, there was one capital project funded in the amount of \$53,000 for the purchase of emergency response safety equipment (Project #12108). The total approved amount for ongoing replacement of emergency response safety equipment and service is \$672,000. <sup>(3)</sup>

Combined, these fund the purchase of fire equipment. Items are purchased on a rotational basis, in order to comply with the National Fire Protection Association (NFPA) Standards (mandating a maximum useful life of typically 10 years, depending on item) as well as taking into account the regular wear and tear of gear and hoses. Each firefighter has one full set of gear (consisting of a helmet, hood, gloves, coat, pants, and boots). Each apparatus is fitted with multiple hoses. Currently the NFPA requires gear and hoses to be certified and inspected once annually. PPE must be cleaned annually by a certified party as well.

### DEA Controlled Substances

Internal Audit reviewed the controls for all of the DEA Controlled Substances that the Fire Department keeps on hand. These included 2 Schedule II Drugs, 1 Schedule III Drug, and 1 Schedule IV Drug. These controlled substances are purchased by the Fire Department. They are carried on all ambulances, and dispensed to patients as medical needs arise during service delivery. Garland Fire Department ambulances are staffed with two certified Paramedics. All personnel in the Fire Department are, at a minimum, Certified Emergency Medical Technicians. <sup>(5)</sup> These 4 drugs are maintained in a locked safe at all times.

The use and possession of controlled substances is regulated by the Controlled Substance Act (CSA) of 1970, which is primarily enforced by the Drug Enforcement Administration (DEA). The DEA also performs periodic audits of these controlled substances. The CSA classifies drugs and controlled substances into five schedules based on their potential for abuse and the likelihood of dependence. Schedule II drugs have a high potential for abuse, with use potentially leading to severe psychological or physical dependence. Schedule III drugs have with a moderate to low potential for physical and psychological dependence. Schedule IV drugs have a low potential for abuse and low risk of dependence. <sup>(4)</sup>

### EMS Supplies

The Fire Department responded to 16,828 & 17,333 EMS Calls in FY2016 & FY2017, respectively. This translated to the evaluation of 19,592 & 19,788 patients in FY2016 & FY2017, respectively. <sup>(1)</sup>

Each station has an EMS supplies closet that is used to restock the ambulances/paramedic ambulances. The shift that is on duty on Tuesdays is responsible for placing the EMS supplies order for the week. Since there are 3 shifts, the same person will only place an order once every 3 weeks. Support Services ensures that all requested items are ordered and delivered to the stations the Wednesday following the order.

### Station Supplies

Stations are in use 24/7. There is one shift in charge of ordering station supplies and this shift rotates each year. Station orders are placed on Tuesdays, once every three weeks. If possible, Support Services will order items from the City Warehouse; however, there are also orders placed through outside vendors. Support Services ensures that all requested items are ordered and delivered to the stations the Wednesday following the order.

### Uniforms

Each firefighter has an annual budget for the purchase of uniforms. There are a few contracted vendors that the Fire Department uses for these purchases. Support Services ensures that items are ordered and delivered to the stations the Wednesday following the order.

### References

- (1) City of Garland's 2016-2017 Budget Book
- (2) Reports from the City's financial system
- (3) City of Garland's 2016 & 2017 Capital Improvement Program
- (4) [https://www.dea.gov/pr/multimedia-library/publications/drug\\_of\\_abuse.pdf#page=8](https://www.dea.gov/pr/multimedia-library/publications/drug_of_abuse.pdf#page=8)
- (5) <http://www.garlandfire.com/gov/lq/safety/fire/default.asp>

## Management Accomplishments\*

- In addition to building databases for important assets in SharePoint additional management categories have integrated workflows for asset activities such as:
  - Service tracking for items such as for thermal imaging cameras
  - Fire hose change and testing
  - Gas detector calibration and maintenance records
  - Cost tracking for PPE maintenance and development of “repair or replace cost matrix” for bunker coats and bunker pants
- New database registries have been created with the purchase of new assets and recorded prior to deployment
  - Assignments are also designated with deployment
- Management Dashboards have been created for Support Services personnel and management for assets recorded
- Dashboards have been created for each individual station viewable by all firefighters
  - This has been extremely important for purpose of Narcotics Daily Checks

\*Please note that “Management Accomplishments” are written by the audited entity and that Internal Audit did not audit or verify its accuracy.

# Opportunities for Improvement

During our audit we identified certain areas for improvement. Our audit was not designed or intended to be a detailed study of every relevant system, procedure, and transaction. Accordingly, the Opportunities for Improvement section presented in this report may not be all-inclusive of areas where improvement might be needed.

<b>Finding #1 – Efficiency of Inventory Tracking</b>	
<b>CONDITION (THE WAY IT IS)</b>	<p>The Fire Department does not have an overarching inventory system. The individuals in charge of each area both at Support Services and at the Fire Stations determine how best to track their own inventory.</p> <p>Employees track inventories by manually updating spreadsheets and generate orders based on prior experience, rather than on ideal inventory management tools like automated reorder points or recommended levels for stations.</p>
<b>CRITERIA (THE WAY IT SHOULD BE)</b>	<p>The Government Accountability Office (GAO)’s “Executive Guide on Best Practices in Achieving Consistent, Accurate Physical Counts of Inventory and Related Property” pg. 5 states that “proper inventory accountability requires that detailed records of...acquired inventory be maintained. Physical controls and accountability reduce the risk of undetected theft and loss, unexpected shortages of critical items, and unnecessary purchases of items already on hand.”</p> <p>Truly efficient inventory management requires a centralized database that is accessible to multiple users in multiple locations and updates in real-time.</p>
<b>CAUSE (DIFFERENCE BETWEEN CONDITION &amp; CRITERIA)</b>	<p>The Fire Department has built up their system over time using the tools they had available to them (Access, Excel, SharePoint). Fire Department has looked into acquiring an inventory system in the past, but nothing has been compatible thus far.</p> <p>Since the Fire Department is in operations 24/7, emergencies can happen after hours and on weekends that result in the use of large quantities of EMS supplies, which inhibits the ability to correctly track inventory usage during these times.</p>

<p><b>EFFECT (SO WHAT?)</b></p>	<p>If the individual maintaining the inventory records is not available, unnecessary orders may be placed.</p> <p>If Support Services personnel is not on site, items may not be checked in/out of the warehouse, leading to inaccurate inventory records.</p> <p>Stations are in charge of ordering their own inventory and this may lead to over/under orders.</p>
<p><b>RECOMMENDATION</b></p>	<p>Fire Department Management should:</p> <ul style="list-style-type: none"> <li>• Implement inventory GAO’s “Best Practices” to assist in managing their vast inventory and provide the basis for detecting fraud, waste or abuse of City property.</li> <li>• Explore options for implementing a barcode system (with the assistance of IT/Purchasing) to help manage their inventory.</li> </ul> <p>With this new system, items could be tracked such as:</p> <ul style="list-style-type: none"> <li>• quantity on hand,</li> <li>• standards/minimums (in order to comply with Department of State Health Services),</li> <li>• expiration dates (in order to comply with Food and Drug Administration),</li> <li>• dates in service (in order to comply with National Fire Protection Association (NFPA)),</li> <li>• serial numbers,</li> <li>• transfer of items,</li> <li>• cleanings and annual certifications (to comply with NFPA),</li> <li>• warranty/recall information,</li> <li>• inventory adjustments,</li> <li>• reorder points.</li> </ul>
<p><b>MANAGEMENT RESPONSE</b></p>	<p>Concur</p>
<p><b>ACTION PLAN</b></p>	<p>The Fire Department will apply the appropriate GAO’s best practices for inventory to ensure appropriate controls. Additionally, the Fire Department, in collaboration with I.T., met with an inventory application vendor on 11/30/2017, and performed a walk-through of the Fire</p>

	<p>Support Services area and discussed strategies and concepts for a vendor demonstration. A version of this system is currently being used by GP&amp;L. Fire Support Services and Fire I.T. have a meeting scheduled 12/12/2017, with GP&amp;L to meet and review how GP&amp;L is utilizing the system. The vendor is also being forwarded portions of fire inventory product listings to demonstrate a “proof of concept” in their demonstration.</p>
<p><b>IMPLEMENTATION DATE</b></p>	<p>The vendor demonstration has not been scheduled.</p> <ul style="list-style-type: none"> <li>• If the proof of concept is validated with an appropriate cost benefit analysis, Fire will work with I.T. to generate a mid-year project funding request. We will also work with the Purchasing Department to ensure appropriate procurement guidelines are followed</li> <li>• If funded mid-year, the project goal would be to have assets and inventories currently recorded in SharePoint, transferred into the new application by June 2019.</li> <li>• Items that have to be manually entered will be recorded on an ongoing basis.</li> </ul>

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**Finding # 2 – Physical Access to Inventory**

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<p style="text-align: center;"><b>CONDITION (THE WAY IT IS)</b></p>	<p>Many non-essential individuals have access to sensitive areas related to Fire Inventory. These include people from the Police Department, IT, Facilities Management, and Marshals from the City Attorney's Office. Out of the 46 page access report for the Fire Warehouse, only 4 pages were for individuals in the Fire Department. Internal Audit did not review access at a Fire Station level, but the concern is the same.</p> <p>Access to sensitive areas isn't being monitored after hours/on weekends.</p> <p>Internal Audit had difficulty locating specific locations within the Fire Inventory area as labeling within the Facilities Management software doesn't consistently tie to the door names/numbers. For example, IA was unable to tell the difference between the doors labeled FAEquipStorage and FA_Equip_Storage.</p>
<p style="text-align: center;"><b>CRITERIA (THE WAY IT SHOULD BE)</b></p>	<p>Physical access should be limited to the smallest number of employees necessary. If access cannot be limited, access to sensitive areas should be reviewed periodically for appropriateness.</p> <p>Doors should be labeled according to their location and function to assist with efficiency of granting/removing access for new hires, terminations, and in case of emergency.</p>
<p style="text-align: center;"><b>CAUSE (DIFFERENCE BETWEEN CONDITION &amp; CRITERIA)</b></p>	<p>There was a City-wide change to allow many of these individuals access to all City areas.</p> <p>Fire was not informed of this change; therefore, they were not reviewing for access.</p> <p>The City recently acquired new Facilities Management software and doors have not all been labeled according to their location and function.</p>
<p style="text-align: center;"><b>EFFECT (SO WHAT?)</b></p>	<p>Unauthorized individuals could gain access to restricted areas that contact sensitive and/or expensive items of inventory without being detected.</p>

	In case of emergency, doors should be able to be located quickly and accurately.
<b>RECOMMENDATION</b>	<p>Fire Department management should:</p> <ul style="list-style-type: none"> <li>• Review report of card swipes after hours and on weekends for appropriateness at a frequency that they deem appropriate.</li> <li>• Request a list from Facilities Management of those with access to sensitive areas at least quarterly and review for appropriateness.</li> </ul> <p>Facilities Management should:</p> <ul style="list-style-type: none"> <li>• Revise door names and update description in the facilities management system to more accurately reflect the location/door number, etc.</li> </ul>
<b>MANAGEMENT RESPONSE</b>	Concur
<b>ACTION PLAN</b>	<p><u>Fire Department:</u></p> <ul style="list-style-type: none"> <li>• Review fire facility access and remove non-essential personnel</li> <li>• A specific building plan and naming criteria for access points will be developed with facilities</li> <li>• Monthly reports should be auto generated for card swipes in sensitive areas</li> <li>• Quarterly reports should be auto generated for card swipes in non-sensitive areas.</li> <li>• Findings will be used to adjust frequencies of reporting.</li> </ul> <p>Additional actions to pursue:</p> <ul style="list-style-type: none"> <li>• The Fire Department will request consideration of direct application access to the security system for the fire Administration building and Fire Stations through the City Manager’s office.</li> </ul> <p>The request will be made to achieve the following objectives:</p> <ul style="list-style-type: none"> <li>• Ad hoc reporting, security/permission issues, management of a large personnel group with frequent role changes and sensitive building area management</li> <li>• Immediate access to implement security controls imperative to building security</li> </ul>

	<ul style="list-style-type: none"> <li>• Security and permissions administration via a chain of command process within a fire department directive</li> <li>• I.T. will have a role in application access, support and training</li> </ul> <p><u>Facilities Management:</u> Facilities Management and the Fire Department will review the door naming convention used at fire administration and make changes to better and uniquely identify each door.</p>
<p style="text-align: center;"><b>IMPLEMENTATION DATE</b></p>	<p><u>Fire Department:</u></p> <ul style="list-style-type: none"> <li>• February 2018 – current actions</li> <li>• June 2018 – additional actions requested</li> </ul> <p><u>Facilities Management:</u></p> <ul style="list-style-type: none"> <li>• December 31, 2017</li> </ul>

**Finding # 3 – Inventory Management**

<p align="center"><b>CONDITION (THE WAY IT IS)</b></p>	<p>Periodic/perpetual inventory counts of Fire Department inventory did not occur during the scope of our audit.</p>
<p align="center"><b>CRITERIA (THE WAY IT SHOULD BE)</b></p>	<p>Physical custody of assets, recording transactions and approval of transactions should all be segregated between individuals. According to the GAO, “in situations where segregation of duties is not practical or cost-effective, other controls should be employed to mitigate the recognized risk.”</p> <p>The GAO’s “Executive Guide on Best Practices in Achieving Consistent, Accurate Physical Counts of Inventory and Related Property” recommends performing blind counts of inventory or having the count be performed by two or more persons at the same time.</p>
<p align="center"><b>CAUSE (DIFFERENCE BETWEEN CONDITION &amp; CRITERIA)</b></p>	<p>Limited staff make regular inventories difficult to accomplish.</p> <p>Fire Department Management had not considered doing their own inventory counts independent of Support Services’ staff.</p>
<p align="center"><b>EFFECT (SO WHAT?)</b></p>	<p>The Fire Department does not have an accurate picture of the inventory actually on hand at any given time. This makes it difficult to ensure the correct amount of inventory is on hand or spot inventory losses.</p>
<p align="center"><b>RECOMMENDATION</b></p>	<p>Fire Department management should:</p> <ul style="list-style-type: none"> <li>• Develop a schedule for and perform periodic/perpetual inventory counts (cycle counts or wall to wall). Per the GAO this could be done “based on size, dollar value, turnover, criticality to operations, or susceptibility to misappropriation.”</li> <li>• Based on the inventory counts, make adjustments to inventory. These adjustments should include notations about why adjustments are made. Management should review these adjustments/notations for appropriateness.</li> <li>• Consider who will have access to make inventory adjustments and limit access to those not performing the inventory counts.</li> </ul>

	Note: If a barcode system is obtained, this will make the inventory counts and reconciliation process easier to manage.
<b>MANAGEMENT RESPONSE</b>	Concur
<b>ACTION PLAN</b>	<ul style="list-style-type: none"> <li>• Inventories will be categorized and prioritized per recommendations</li> <li>• A policy will be developed to determine timing of inventory counts, specific inventories to be addressed, methods to achieve and responsible parties</li> </ul>
<b>IMPLEMENTATION DATE</b>	December 2018.

**Finding #4 – Transferred Inventory**

<p align="center"><b>CONDITION (THE WAY IT IS)</b></p>	<p>Much of the inventory at the Fire Department is not tracked when it is transferred from Support Services to Stations (or when returned to Support Services), or when it is transferred between Stations.</p> <p>For example, a large quantity of lawn equipment (blowers, mowers, trimmers, etc.) was purchased and was received at the small equipment shop at Fire Station #1. It was then distributed to various Fire Stations; however a log of which Stations received the items does not exist. Due to this, IA was unable to track the items to their current location.</p> <p>Note: This does not apply to PPE, hoses, or other “tracked” inventory as discussed in the background section of this report.</p>
<p align="center"><b>CRITERIA (THE WAY IT SHOULD BE)</b></p>	<p>The GAO’s “Executive Guide on Best Practices in Achieving Consistent, Accurate Physical Counts of Inventory and Related Property” highlights the importance of implementing and maintain a well-controlled inventory system. This system should be updated to account for the transfer of inventory between locations.</p>
<p align="center"><b>CAUSE (DIFFERENCE BETWEEN CONDITION &amp; CRITERIA)</b></p>	<p>A centralized database for inventory does not currently exist and Fire Stations are not keeping independent records of inventory currently on hand.</p>
<p align="center"><b>EFFECT (SO WHAT?)</b></p>	<p>A lack of tracking makes it difficult to know where inventory should be/is located.</p>
<p align="center"><b>RECOMMENDATION</b></p>	<p>Fire Department Management should ensure that records are kept when items are transferred between Stations/Support Services.</p> <p>If a barcode system is obtained (as recommended in Finding #2), the item should be updated with transfer information to reflect an item’s current location.</p>
<p align="center"><b>MANAGEMENT RESPONSE</b></p>	<p>Concur</p>

<b>ACTION PLAN</b>	<ul style="list-style-type: none"><li>• The Fire Department will develop a tracking system to record items transferred between stations and support services</li><li>• Acquire and implement an inventory management system</li></ul>
<b>IMPLEMENTATION DATE</b>	<ul style="list-style-type: none"><li>• March 2018</li><li>• April 2019 to record all fire inventory. December 2020 to develop a closed, integrated inventory system at the station level.</li></ul>