Performance Audit:
Department of Public Works
Fleet Services Inventory Controls

June 2011

City Auditor's Office

City of Atlanta

File #10.11

Performance Audit:

Department of Public Works Fleet Services Inventory Controls

Why We Did This Audit

We undertook this audit because of risks we identified in our 2008 audit of fleet services and due to the inherent risks in managing inventory. The recorded value of fleet services' inventory of vehicle parts was $1.9 million as of March 1, 2011.

What We Recommended

In order to improve the security and accuracy of the Office of Fleet Services' inventory and increase operational efficiency, the commissioner of public works should:

- work with procurement and information technology to link Oracle and Fleet Focus records or develop an alternative method to facilitate reconciling inventory and purchase records

- conduct a 100% inventory count, reconcile discrepancies, and record the location of all parts; conduct periodic counts at all parts facilities and reconcile discrepancies

- ensure that unit costs of like items are consistent in Fleet Focus, correct any incorrect costs and reimburse departments for any overcharges

- update written policies to ensure controls are consistent with current workflow and segregate incompatible duties

- consolidate parts warehouses to fewer facilities, limit key distribution, and improve security to better safeguard inventory and improve operational efficiency

- require Fleet Focus users to change passwords in the system at intervals consistent with best practices

For more information regarding this report, please contact Stephanie Jackson at 404.330.6678 or sjackson@atlantaga.gov

What We Found

The Office of Fleet Services' inventory records overstate the total value and number of items on hand, which indicates potential for theft or fraud and reduces operational efficiency. As of March 1, 2011, about 18,000 parts, valued at about $500,000 of fleet services' $1.9 million parts inventory, had no physical location recorded. The items with unspecified locations are primarily parts, but also appear to include some supplies and labor related items. We also identified discrepancies between inventory records and the number of items on the shelf in 9 of a random sample of 30 parts. These inaccuracies indicate risk of undetected theft and lost or missing assets. Further, employees were not conducting monthly counts of parts inventory, as required by fleet services' written policies.

Because the inventory and Oracle systems are not linked, staff enters information in both. This dual entry weakens the controls in each system intended to separate incompatible duties and ensure items are accounted for when received.

We observed security risks at all facilities except the airport locations, including inadequate lighting, unlocked rooms, rooftop access, a damaged perimeter fence, and distribution of keys to multiple people. Multiple parts locations make it difficult to properly staff and secure parts rooms and provide for adequate separation of incompatible duties. Although the number of parts specialists on staff is high relative to the number of mechanics, based on industry standards, fleet services' doesn't have enough parts specialists to cover all shifts at all facilities, requiring mechanics or mechanic supervisors to retrieve parts for repairs. Responsibility for maintaining custody of parts, initiating work orders to remove parts from inventory, and approving completed work orders should be separated among parts specialists, mechanics, and mechanic supervisors to limit opportunities for any individual to remove parts from inventory without record.

Management Responses to Audit Recommendations

Summary of Management Responses

Recommendation #1:	The commissioner of public works should work with the Departments of Procurement and Information Technology to develop a method to link Oracle and Fleet Focus records or develop an alternative method to facilitate reconciling inventory and purchase records.

Response & Proposed Action: Oracle and Fleet Focus are not compatible systems; creating an interface is cost prohibitive. A more feasible approach would be to use the Hansen Work Order Management system instead of Fleet Focus since Hansen is interfaced with the City of Atlanta's ERP system.   **Agree**

Timeframe: June 30, 2012

Recommendation #2:	The commissioner of public works should direct staff to conduct a 100% inventory count, reconcile discrepancies, and record the location of all parts. Once the baseline inventory is established, staff should conduct periodic counts at all parts facilities and reconcile discrepancies, consistent with policy.

Response & Proposed Action: Office of Fleet Services will conduct a complete inventory count and reconcile all discrepancies. Fleet Services will conduct a quarterly inventory count at all parts locations; the standard operating procedures will be adjusted to reflect quarterly counts. Closing and or combining the remote parts locations would reduce the need for additional staff.   **Agree**

Timeframe: October 31, 2011

Recommendation #3:	The commissioner of public works should direct staff to ensure that unit costs of like items are consistent in Fleet Focus, correct any incorrect costs and reimburse departments for overcharges resulting from input errors.

Response & Proposed Action: Fleet Services will review inventory stock items for cost discrepancies and correct any errors. The office will reimburse user departments for overcharges beginning in FY2012.   **Agree**

Timeframe: August 31, 2011

Recommendation #4:	The commissioner of public works should direct staff to update written policies to ensure that controls are consistent with current workflow and segregate incompatible duties and ensure that staff complies with procedures.

Response & Proposed Action: Fleet Services shall update the parts written policy procedures to insure that inventory controls are consistent and standard at each parts location.   **Agree**

Timeframe: October 31, 2011

Recommendation #5:	The commissioner of public works should consolidate parts warehouses to fewer facilities and ensure that the facilities are secured to better safeguard inventory and improve operational efficiency.

Response & Proposed Action: Fleet Services will consolidate and reduce the number of parts facilities.   **Agree**

Timeframe: October 31, 2011

Recommendation #6:	The commissioner of public works should limit key distribution or install electronic keys to track employee entry into the facilities.

Response & Proposed Action: Fleet Services will install an electronic key system or limit key distribution to safeguard inventory.   **Agree**

Timeframe: October 31, 2011

Recommendation #7:	The commissioner of public works should direct fleet services' information technology staff to require Fleet Focus users to change passwords in the system at intervals consistent with best practices.

Response & Proposed Action: Fleet Services will enact a policy change consistent with DIT's recommendation of changing passwords every 45 days.   **Agree**

Timeframe: July 30, 2011

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June 30, 2011

Honorable Mayor and Members of the City Council:

We undertook this audit of the Office of Fleet Services' controls to safeguard its inventory of vehicle parts because of risks we identified in our 2008 audit of fleet services and inherent risks in managing inventory. Fleet services' annual inventory expenditures averaged $5 million between fiscal years 2008 and 2010; the recorded value of fleet services' inventory of vehicle parts was $1.9 million as of March 1, 2011.

About 18,000 items, worth about $500,000, of the $1.9 million parts inventory was not recorded with a physical location, overstating the inventory value and increasing the risk of undetected theft or fraud. Employees do not conduct monthly parts inventory counts as required by fleet services' policies. We found discrepancies between inventory records and the number of parts on the shelf in 9 instances in a random sample of 30 parts. Also, fleet services' multiple parts locations make it difficult to properly staff and secure parts rooms and provide for adequate separation of incompatible duties.

Our recommendations focus on improving the accuracy of the inventory records and securing the physical parts inventory, as well as increasing operational efficiency. The Office of Fleet Services agrees with our recommendations. Their full responses to our recommendations are appended to the report.

The Audit Committee has reviewed this report and is releasing it in accordance with Article 2, Chapter 6 of the City Charter. We appreciate the courtesy and cooperation of city staff throughout the audit. The team for this project was Katrina Clowers, Lesia Johnson, and Stephanie Jackson.

Leslie Ward
City Auditor

Fred Williams
Audit Committee Chair

Department of Public Works Fleet Services Inventory Controls

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List of Exhibits

Introduction

We conducted this performance audit of the Office of Fleet Services' controls to safeguard its inventory of vehicle parts pursuant to Chapter 6 of the Atlanta City Charter, which establishes the City of Atlanta Audit Committee and the City Auditor's Office and outlines their primary duties. The Audit Committee reviewed our audit scope in March 2010.

A performance audit is an objective analysis of sufficient, appropriate evidence to assess the performance of an organization, program, activity, or function. Performance audits provide assurance or conclusions to help management and those charged with governance improve program performance and operations, reduce costs, facilitate decision-making and contribute to public accountability. Performance audits encompass a wide variety of objectives, including those related to assessing program effectiveness and results; economy and efficiency; internal controls; compliance with legal or other requirements; and objectives related to providing prospective analyses, guidance, or summary information.[1]
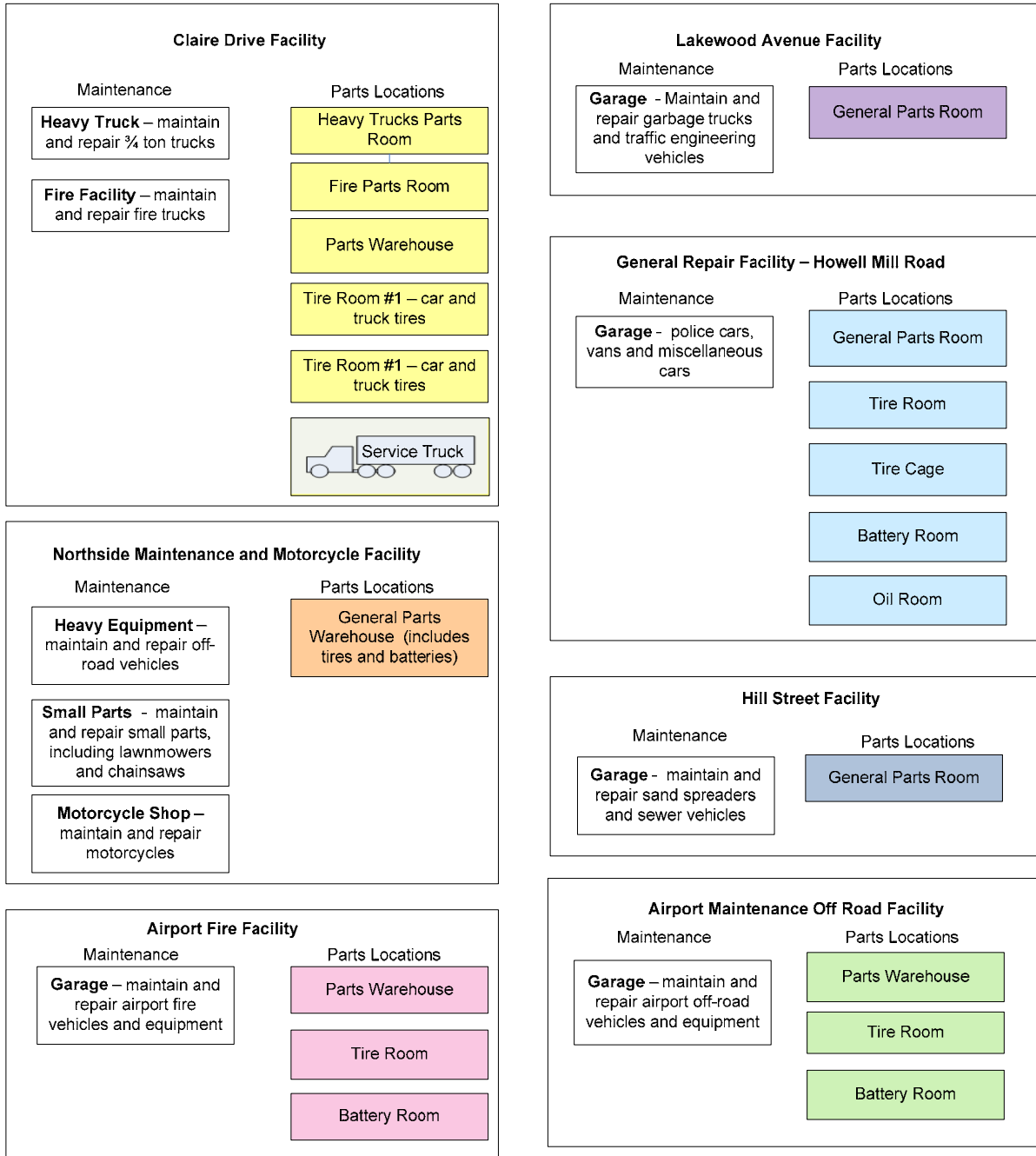
We undertook this audit because of risks we identified in our 2008 audit of fleet services and due to the inherent risks in managing inventory. The recorded value of fleet services' inventory of vehicle parts was $1.9 million as of March 1, 2011.

Background

The Office of Fleet Services is part of the city's Department of Public Works. Fleet services operates 10 maintenance facilities and 20 parts rooms, including 1 service truck, throughout 7 locations within the city (see Exhibit 1). Fleet services maintains and repairs vehicles and other motorized equipment for city departments and operates as an internal service fund; the office purchases vehicle parts from its operating budget and bills departments for the parts and associated labor to recoup its costs. Vehicles and equipment are paid from individual departmental budgets.

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[1]Comptroller General of the United States, *Government Auditing Standards,* Washington, DC: U.S. Government Accountability Office, 2007, p. 17-18.

Exhibit 1 Fleet Services Maintenance and Parts Locations

Claire Drive Facility

Maintenance

- **Heavy Truck** – maintain and repair ¾ ton trucks
- **Fire Facility** – maintain and repair fire trucks

Parts Locations

- Heavy Trucks Parts Room
- Fire Parts Room
- Parts Warehouse
- Tire Room #1 – car and truck tires
- Tire Room #1 – car and truck tires
- Service Truck

Lakewood Avenue Facility

Maintenance

- **Garage** - Maintain and repair garbage trucks and traffic engineering vehicles

Parts Locations

- General Parts Room

General Repair Facility – Howell Mill Road

Maintenance

- **Garage** - police cars, vans and miscellaneous cars

Parts Locations

- General Parts Room
- Tire Room
- Tire Cage
- Battery Room
- Oil Room

Northside Maintenance and Motorcycle Facility

Maintenance

- **Heavy Equipment** – maintain and repair off-road vehicles
- **Small Parts** - maintain and repair small parts, including lawnmowers and chainsaws
- **Motorcycle Shop** – maintain and repair motorcycles

Parts Locations

- General Parts Warehouse (includes tires and batteries)

Hill Street Facility

Maintenance

- **Garage** - maintain and repair sand spreaders and sewer vehicles

Parts Locations

- General Parts Room

Airport Fire Facility

Maintenance

- **Garage** – maintain and repair airport fire vehicles and equipment

Parts Locations

- Parts Warehouse
- Tire Room
- Battery Room

Airport Maintenance Off Road Facility

Maintenance

- **Garage** – maintain and repair airport off-road vehicles and equipment

Parts Locations

- Parts Warehouse
- Tire Room
- Battery Room

Source: Compiled from facility observations and information from fleet services

Fleet services has 16 parts employees and 106 mechanics and supervisors who service the parts and maintenance locations. Fleet services' budget for fiscal year 2011 is $27 million. Total inventory

expenditures averaged $5 million between fiscal years 2008 and 2010 (see Exhibit 2).

Exhibit 2 Fleet Services Inventory Budget and Expenditures FY08-FY10
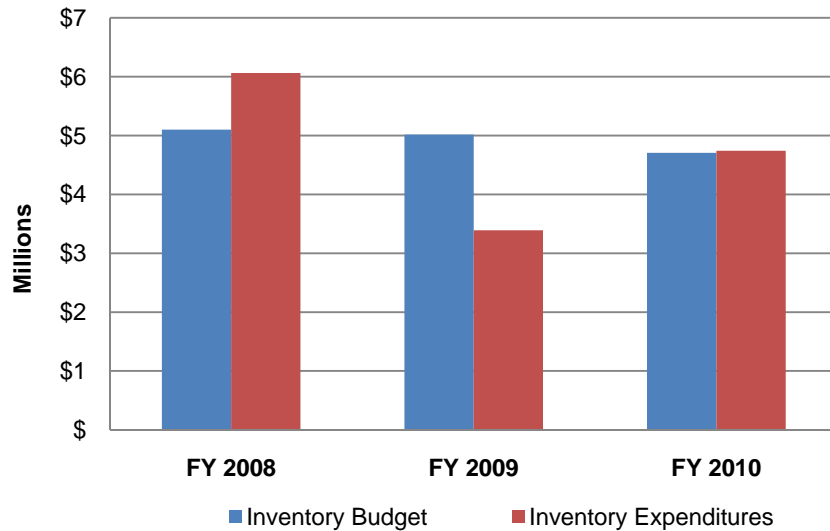
Source: Oracle data for fiscal years 2008 through 2010

Fleet services uses an inventory management system to track parts inventory and manage vehicle and equipment repairs. Fleet services staff enter inventory into the Fleet Focus inventory management system after parts and equipment are purchased and entered into the city's Oracle system. Fleet Focus is a standalone system and does not interface with Oracle or any other system - information must be manually entered into each system separately. Once purchased parts are entered into the system, Fleet services' mechanics use Fleet Focus to request parts in inventory for needed repairs or special order out-of-stock parts. The office also uses the system to track work to be done and to bill departments once mechanics complete repairs. Parts employees also use the system to manage inventory, including monitoring parts usage to determine when to order parts for stock. Because it is a web-based application, employees at each of the seven facility locations have access to Fleet Focus.

Mechanics request parts through Fleet Focus and departments are billed when the part is issued to the mechanic. When a department brings a vehicle to fleet services for repairs, the office creates a work order for the vehicle that details the work to be

completed. If the mechanic needs a part to repair the vehicle, he requests the part in Fleet Focus. If the part is in stock in the inventory system, a parts supervisor approves the request and issues the part to the mechanic to complete the repair. Parts staff can also transfer stock parts from one facility to another. If the part is not in stock at any of the facilities, the mechanic creates a requisition in Fleet Focus to order the part from a vendor. The parts supervisor approves the requisition and it is entered into Oracle by Fleet services accounting staff, who will also assign a purchase order number to the requisition. A parts employee then orders the part, and another parts employee should receive it in Fleet Focus and issue it to the mechanic when it arrives at the maintenance facility. When the part is issued to the mechanic, the part is charged to the work order. After the mechanic completes the repair, the labor hours are applied to the work order through the Fleet Focus system. Mechanic supervisors are responsible for reviewing work orders to make sure that the items billed are accurate.

Audit Objectives

This report addresses the following objectives:

- Are controls in place to maintain physical security and accurate records of parts inventory?
- Does the Office of Fleet Services manage parts inventory in a way that promotes operational efficiency?

Scope and Methodology

We conducted this audit in accordance with generally accepted government auditing standards. Our analysis focused on the Department of Public Works' inventory data from February 1, 2010, through February 28, 2011. Budget and expenditure data focused on fiscal years 2008 through 2010.

Our audit methods included:

- interviewing fleet services management and staff to understand policies and procedures and departmental practices

- observing conditions and procedures at the maintenance shops and parts warehouses for securing inventory

- reviewing city code and the city's property management manual

- researching best practices for managing inventory

- reviewing the office's policies and procedures

- performing a physical check of inventory for a random sample of 30 parts at the 7 maintenance and parts locations

- comparing the number of parts and mechanic personnel to industry practices for parts staffing to assess staffing efficiency

- comparing the inventory turnover rate to industry practices to assess whether fleet services is stocking needed parts

- comparing the inventory data in Fleet Focus to the data in Oracle to assess consistency

- comparing the dollar value of parts ordered in Fleet Focus to parts received in the system to asses consistency

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

Weak Controls Result in Inaccurate Inventory and Increased Risk of Loss

The Office of Fleet Services' inventory records overstate the total value and number of items on hand, which indicates potential for theft or fraud and reduces operational efficiency. As of March 1, 2011, about 28% of fleet services' $1.9 million parts inventory had no valid physical location. We also identified discrepancies between inventory records and the number of items on the shelf in 9 of a random sample of 30 parts. These inaccuracies indicate risk of undetected theft and lost or missing assets.

Without accurate inventory data, the Office of Fleet Services is unable to ensure that parts are available when needed. About 21% of 541 work orders open as of February 28, 2011, were identified as waiting for parts that are supposed to be stock items, another 4% were waiting for special order parts. The rate of inventory turnover in 2010 was less than half of the industry standard, which could indicate that the office is carrying obsolete parts or failing to stock the parts that it needs.

Fleet services' written policies and procedures are incomplete and outdated. The procedures describe manual processes for purchasing and receiving parts. There is little guidance on entering information into the inventory system and the procedures omit updated processes resulting from the city's Oracle implementation in 2008. Because the inventory and Oracle systems are not interfaced, staff enters information in both. This dual entry weakens controls in each system intended to segregate incompatible duties and ensure items are accounted for when received. We identified discrepancies between purchases processed in Oracle from September 2010 through February 2011 and purchases recorded in inventory over the same period, but staff has not reconciled purchases recorded in the two systems because there are no common data fields. Also, about 700 part purchases, totaling about $350,000 recorded in the inventory system from July 2010 through February 2011, had no corresponding record of receipt. Further, employees were failing to conduct monthly counts of parts inventory, as required by fleet services' written policies. We noted other discrepancies and billing

errors that suggest that supervisory review and management approvals are not functioning as effective controls.

The commissioner of public works should work with the Departments of Procurement and Information Technology to develop a method to link Oracle and Fleet Focus records or develop an alternative method to ensure that all purchased items are recorded in inventory. The commissioner should direct staff to conduct a 100% inventory count, reconcile discrepancies, and record the location of all parts. Once the baseline inventory is established, staff should conduct periodic counts at all parts facilities and reconcile discrepancies. Correcting inventory records would reduce the risk of loss or theft and provide accurate information for the office to manage its inventory and maintain adequate stock for repairs.

Inventory Is Overstated

Fleet services' inventory records overstate the number and total value of items on hand, increasing the risk of undetected theft or fraud. Inventory system records as of March 1, 2011, showed unknown location codes for about $500,000 of the $1.9 million in parts listed in inventory. Staff was unable to tell us where these 18,000 items were physically located, or whether they were ever in the city's custody or recorded in error. Error appears to explain most of the inventory with unknown location. Also, about $64,000 of recorded inventory is listed as held on consignment, although staff told us the consignment pilot program was discontinued.

We also identified discrepancies between inventory records and the number of items on the shelf in 9 of a random sample of 30 parts. We were unable to locate 18 of 450 items recorded as quantity-on-hand, and one part had an overage. Both over- and undercounts are red flags for theft or missing assets. Two of the missing items in our sample were recorded as held on consignment, which staff told us had been returned to the vendor. The net variance amounted to about 8% of the value of the inventory we sampled.

About $500,000 in inventory was unassociated with a physical location. Fleet services' parts inventory records showed a total value of $1.9 million as of March 1, 2011, including about $500,000 with unknown location codes (see Exhibit 3). Staff told us that the codes, which are not matched to a physical facility, could have been used for system tests, or to record tools or supplies intended for fleet services' use, or may indicate that parts were special orders. It's not clear why special order parts would remain in inventory,

unless they were used in a repair and not billed to the department. Three of the part codes accounting for about 9,600 items and $174,000 appear to be related to labor; one code is described as truck/car wash and two are described as glass install.

Even if most of the overstated inventory was generated in error, use of these codes in the system could provide opportunity for theft or fraud as it is more difficult to maintain custody of items when records don't show where they are located. Because inventory is a sizable city asset, overstated inventory could cause the city's financial statements to misrepresent the true value of assets.

Exhibit 3 Parts Inventory Quantity and Value by Location

Location	Types of Parts	Quantity on Hand	Value
Unknown	434	17,987	$469,329
General Repair Facility - Howell Mill Road	570	15,837	$253,433
Claire Drive Facility – Heavy Trucks Parts Room	685	38,446	$237,042
Claire Drive Facility - Fire Parts Room	420	8,365	$193,948
Claire Drive Facility - Parts Warehouse	632	27,658	$175,899
Northside Maintenance and Motorcycle Facility - Parts Warehouse	1,082	17,130	$173,875
Lakewood Avenue Facility – General Parts Room	328	9,942	$69,967
Hill Street Parts Room	251	14,925	$65,438
Consignment (Howell Mill General Repair Facility)	313	1,162	$63,835
Airport Maintenance	354	7,402	$62,912
Northside Maintenance and Motorcycle Facility - General Parts Warehouse	197	2,417	$42,483
Claire Drive Facility - Tire Shop	43	305	$34,439
Claire Drive Facility - New Tires Holdings	42	293	$30,336
Airport Fire Facility	201	4,021	$22,646
Claire Drive Facility - Service Truck	19	153	$855
Claire Drive Field Services	1	6	$6
Totals	**5,572**	**166,049**	**$1,896,442**

Source: Fleet services' inventory valuation report as of March 1, 2011

Consignment items remain listed in inventory although program was discontinued. Inventory records continue to list about 1,200 items held on consignment with a total value just under $64,000. Staff told us that that fleet services had conducted a pilot program

in which vendors stored parts at city repair facilities and the city paid for the parts when used. The program was intended to reduce delays in receiving parts. The office discontinued the program due to nonconformance with city procurement regulations. Staff told us they would either purchase the parts or return them to the vendor, but inventory records have yet to be corrected.

Shelf counts did not match inventory records for 9 of 30 randomly selected parts. We randomly sampled 30 parts listed in inventory as of March 1, 2011, and counted the number of items on the shelf compared to the recorded quantity on hand. We identified discrepancies in 9 of the 30 parts sampled (see Exhibit 4). In eight instances, fewer items were on the shelf than were recorded in inventory. In one instance, one more item was on the shelf than was recorded in inventory. Both over- and undercounts flag potential theft or billing problems. Undercounts indicate that items were removed from inventory without updating records — that a part was stolen or used in a repair without being billed. Overcounts indicate that items were not recorded in inventory when stocked, which could allow undetected theft, or that parts billed to a repair were not used and returned to the shelf. Inaccurate records of the quantity of parts on hand make it more difficult to detect theft or loss. Inaccurate records also make it more difficult to establish and monitor reorder points to ensure that stock is available when needed.

Exhibit 4 Inventory Count Results

Sample Location	Number of Parts	Quantity in Inventory System	Dollar Value of Parts	Number of Variances
General Repair Facility - Howell Mill Road – General Parts Room	7	13	$583.42	5
Northside Maintenance and Motorcycle Facility – General Parts Warehouse	6	95	$3,434.82	2
Claire Drive Parts Warehouse	4	242	$676.83	1
Claire Drive Heavy Trucks Parts Room	3	7	$677.48	0
Claire Drive Fire Parts Room	3	12	$514.98	0
Airport Fire Facility	2	64	$100.73	0
Airport Maintenance Off-Road Facility	2	3	$9.03	0
Lakewood Avenue Facility – General Parts Room	2	13	$138.32	1
Hill Street General Parts Room	1	1	$13.19	0
Totals	**30**	**450**	**$6,148.80**	**9**

Source: Auditors' sample

Overall, we were unable to locate 18 of 450 items recorded as quantity on hand, and one part had an overage. The net variance amounted to about 8% of the dollar value of the inventory we sampled (see Exhibits 4 and 5). Two of the missing items at the Howell Mill facility were parts held on consignment. Staff told us that the parts — a heater assembly and an idler pulley — were returned to the vendor. Staff told us that four missing coil packs were ordered on consignment but mistakenly received and recorded as regular stock items and were subsequently returned to the vendor. Staff at the Howell Mill facility also said that part numbers for the two missing brake calipers were changed but not updated in the inventory system, and a missing oil filter was used on a vehicle but not requested in the system.

Exhibit 5 Dollar Value of Inventory Variances

Number	Sample Location	Unit Price	Quantity in Inventory System	Inventory Value	Actual Shelf Count	Variance	Dollar Value of Variances
1	General Repair Facility - Howell Mill Road – General Parts Room	$87.00	3	$261.00	1	-2	($174.00)
2	General Repair Facility - Howell Mill Road – General Parts Room	$57.74	4	$230.96	0	-4	($230.96)
3	General Repair Facility - Howell Mill Road – General Parts Room	$9.20	1	$9.20	0	-1	($9.20)
4	General Repair Facility - Howell Mill Road – General Parts Room	$20.99	1	$20.99	0	-1	($20.99)
5	General Repair Facility - Howell Mill Road – General Parts Room	$20.33	1	$20.33	0	-1	($20.33)
6	Northside Maintenance and Motorcycle Facility - General Parts Warehouse	$7.78	67	$521.52	60	-7	($54.49)
7	Northside Maintenance and Motorcycle Facility - General Parts Warehouse	$7.74	8	$61.92	9	+1	$7.74
8	Claire Drive Parts Warehouse	$.52	232	$120.64	230	-2	$1.04
9	Lakewood Avenue Facility - General Parts Room	$1.71	12	$20.54	11	-1	($1.71)
	Totals		329	$1,267.10	311	Net variance	($504.98)

Source: Auditor's sample

Staff at the Northside facility told us that mechanics retrieve refrigerant without going through parts staff and may not record its use in the system, resulting in inaccurate inventory and underbilling for maintenance.

Staff at the Lakewood facility told us that a mechanic had used one of the missing items — a marker light — for a repair without the part being issued in the inventory system or billed to the department. The supervisor directed the mechanic to request the part in the system to correct the work order. Staff at the Northside location told us that a mechanic had returned an unused spring to the bin without recording its return to inventory, resulting in inaccurate inventory and overbilling for repairs.

Staff at the Claire Drive facility was uncertain why two light bulbs were missing and suggested that the wrong amount could have been entered when the items were received.

Incorrect unit price for refrigerant recorded in inventory resulted in overbilling. Fleet services overcharged three departments a total of $4,200 for refrigerant from January 2010 through February 2011 because the unit price was entered incorrectly in the system. Fleet services charged the departments $93.16 per pound of refrigerant while the average unit price is $4.67. We noted other discrepancies in unit prices of like items listed in inventory; some refrigerant not yet charged to a department showed a unit price of $154.99. Staff have since corrected this unit price; however, Fleet services has continued to bill departments at the $93.16 price for repairs at the Claire Drive maintenance facility.

Fleet services should review data entry to ensure that unit costs of like items are consistent. Mechanic supervisors are supposed to review work orders for accuracy before closing the work order. Supervisors should alert parts staff of inconsistent or unexpected parts costs found during their review.

We recommended in our 2008 performance audit that fleet services establish a quality control process to review work orders to ensure that data are accurate before closing and to provide departments with itemized bills to show charges for each vehicle. We found that the recommendations were implemented during our review of the implementation status in 2009. The office developed a checklist for supervisors to use to ensure that the work orders are accurate and began providing copies of work orders to departments for work performed on vehicles. Despite these changes, the review process

has not proven to be an effective control. Fleet services should ensure that supervisors consistently and thoroughly review work orders to ensure that unit costs for parts are accurate. The office should also correct unit costs in the inventory system and reimburse departments for overcharges.
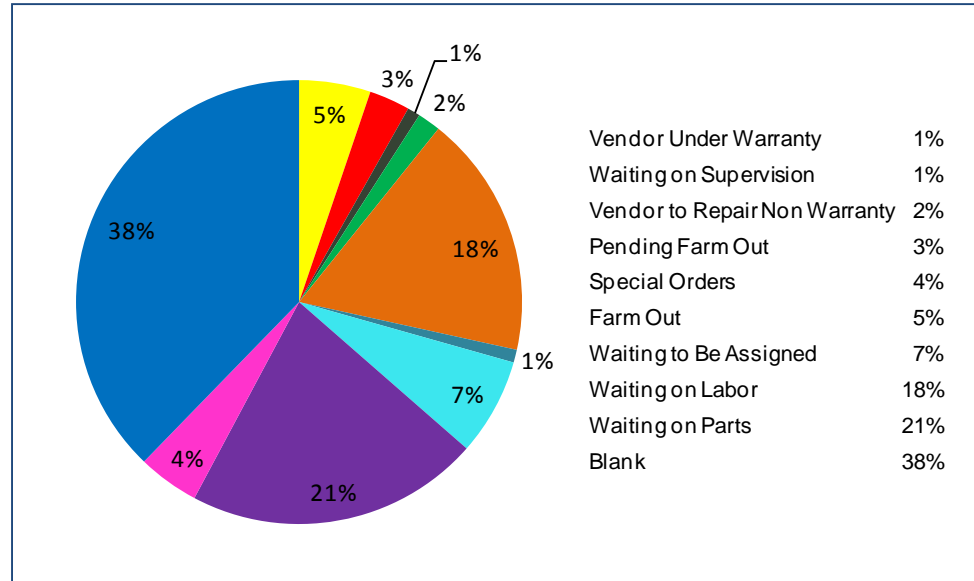
Inaccurate Inventory Contributes to Operational Inefficiencies

Inaccurate inventory data makes it difficult for the Office of Fleet Services to ensure that parts are available when needed. Fleet services' inventory turnover rate is less than half of the industry standard, which could indicate that the office is carrying obsolete or ordering incorrect parts. About 21% of 541 work orders open as of February 28, 2011, were identified as waiting for parts that are supposed to be stock items, another 4% were waiting for special order parts. The median age of open work orders waiting for parts was five days older than the overall median age. About 30% of the work orders had been open for more than a month. Fleet services' goal is to complete service for 90% of light cars and trucks in one day, 90% of heavy trucks within two days, and 90% of off road equipment in three days, consistent with industry standards.

Inventory turnover is less than half of the industry standard. The department's annual inventory turnover from February 2010 through February 2011 was 2.4, well below the industry benchmark of 6 or more inventory turns in 12 months. The turnover rate measures how often parts are used by calculating the ratio of parts billed to the average value of parts in inventory over a specified period. A low turnover rate could indicate that fleet services is holding obsolete parts or is making unnecessary purchases of parts already on hand. Staff told us that the age and variability of the city's fleet increases the number of items needed in inventory and makes it difficult to obtain needed parts.

Aging work orders increase operational costs. About 21% of 541 work orders open as of February 28, 2011, were identified as waiting for parts that are supposed to be stock items, another 4% were waiting for special order parts (see Exhibit 6). Nearly 40% of the open work orders had no reason listed for delay, which means that some of these repairs could also be waiting for parts. The overall median age of open work orders was 13 days, while the median age of open work orders waiting for parts was 18 days. Almost 30% of the work orders had been open for more than 31 days. Longer turnaround times for maintenance and repairs increase the city's operating costs.

Exhibit 6 Open Work Orders as of February 28, 2011

Pie chart with legend:

Category	Percent
Vendor Under Warranty	1%
Waiting on Supervision	1%
Vendor to Repair Non Warranty	2%
Pending Farm Out	3%
Special Orders	4%
Farm Out	5%
Waiting to Be Assigned	7%
Waiting on Labor	18%
Waiting on Parts	21%
Blank	38%

Source: Fleet Focus Work Order List by Department, as of February 28, 2011

Fleet services' performance target is to complete service for 90% of light cars and trucks in one day, 90% of heavy trucks within two days, and 90% of off road equipment in three days, consistent with industry standards. The office reported that it repaired 87% of its cars and trucks within one day, 80% of heavy trucks within two days and repaired 80% of the off-road equipment within three days during fiscal year 2009, as shown in the fiscal year 2011 adopted budget. The office closed about 41,000 work orders from January 2010 to February 2011. Although the open work orders make up a small percentage of the total work orders, a large percentage of those open work orders fall significantly beyond the department's turnaround goals for repairs.

Policies and Procedures are Outdated and Not Followed

Fleet services' policies and procedures are outdated and incomplete. The procedures describe manual purchase requisition, ordering, and receiving procedures without referring to citywide procurement procedures implemented when the city started using the Oracle financial management system in January 2008. Further, the procedures lack guidance for entering information into the inventory system. The procedures also fail to account for staff reductions over the past few years that affect the department's ability to segregate incompatible duties.

In practice, staff enters information into both the inventory and Oracle systems, which are not interfaced. Control procedures designed in the workflows of the two systems aren't working as intended because neither system encompasses the entire workflow. We identified discrepancies between purchases processed in Oracle and purchases recorded in inventory. We also identified discrepancies between parts recorded as purchased and recorded as received within the inventory system.

Staff has not consistently followed key procedures. While written procedures require staff to conduct monthly counts of parts and supervisors to spot check quantities on hand each month, employees told us that they don't have time to conduct physical counts.

Fleet services should update its written policies to ensure that controls are consistent with current workflow and to segregate incompatible duties. The commissioner of public works should work with the Departments of Procurement and Information Technology to develop a method to link Oracle and Fleet Focus records or develop an alternative method to facilitate reconciling inventory and purchase records. The commissioner should also direct managers to ensure that staff complies with procedures.

Fleet services employees do not conduct physical inventory counts required by procedures. The fleet services director acknowledged that staff conducts physical inventory counts inconsistently and also said that except at the Howell Mill and Airport locations, inventories had not been conducted within the past six months. Staff told us that discrepancies found during inventory counts at some facilities during October and November 2010 were not reconciled. The procedures require staff to reconcile all differences found in the annual inventory to a source document, such as a packing slip, work order, or lost and stolen property form. Unexplained differences are to be reported on a findings and recommendation form. Procedures direct staff to ascertain the reasons for discrepancies in the monthly inventory when possible, and to report the results to management.

Our counts of sample items identified discrepancies between inventory records and quantities on hand in four of fleet services' seven locations. Periodic physical counts establish a verifiable balance for financial reporting and provide a baseline for monitoring the accuracy of transactions moving parts in and out of inventory. Accurate inventory records help ensure that parts are available to meet operational needs and that the unit has not under - or

overcharged departments for parts. The commissioner of public works should direct staff to conduct a 100% inventory count, reconcile discrepancies, and record the location of all parts. Once the baseline inventory is established, staff should conduct periodic counts at all parts facilities and reconcile discrepancies.

Fleet services' policies omit citywide Oracle processes and describe an outdated paper system. Fleet services' procedures for requesting, ordering, and receiving parts for stock and down equipment describe a primarily manual process. The procedures do not address responsibility for entering or approving requisitions or entering receipt of ordered goods into Oracle, the city's financial system. The procedures also lack guidance on entering purchase and receipt information into the inventory system. The procedures describe the responsibility of a central ordering center to place orders with vendors, based on approved requisition forms; however, fleet services staff told us that the ordering center no longer exists and personnel have been relocated to other facilities due to staffing shortages. Procedures require the Claire Drive Parts Warehouse to receive all purchases for stock items, but lack clarity on receipt of parts ordered for down equipment. Parts requested for down equipment take priority over other orders and parts purchased after 5:00 pm are supposed to be for emergencies only.

In practice, parts specialists, parts supervisors, and unit accounting staff enter purchases and parts received in both the inventory system and Oracle. Fleet services procedures should reflect current citywide process for purchasing and receiving goods, and should clearly identify responsibilities for entering data into the inventory system and ensuring accuracy of data entry.

Oracle system controls are not working as intended. Oracle controls are not working as intended because the transactions don't flow through Oracle. While buying and receiving duties among fleet services staff are mostly separated within Oracle, four employees who enter purchases in Oracle also pick-up or accept delivery of parts and enter receipt of parts in the inventory system. Other employees then enter receiving reports in Oracle, often after the unit receives an Invoice on Hold report and without documentation that the item was actually received, which defeats the purpose of established controls.

System controls in Oracle are intended to ensure that incompatible duties are segregated. Segregation of duties refers to the practice of dividing responsibilities among different people so that no single

person has physical custody of an asset, processes and records transactions related to the asset, and approves the transactions. Ideally personnel performing any one of these functions — recording, approving, or maintaining custody — would not also perform either of the other two functions. In Oracle, the ability to initiate a requisition and purchase order, the ability to approve a requisition and purchase order, and the ability to receive goods are conferred under different system responsibilities. Departments are supposed to assign these system responsibilities to different individuals. Staff in the Department of Information Technology reviews department requests for system access to ensure assignment of responsibilities in Oracle is consistent with the employee's job and that incompatible duties are separated. We in the Auditor's Office also periodically review segregation of duties in Oracle.

System controls in Oracle are also intended to ensure that invoices are paid only for approved purchases after goods are received. Oracle requires a three-way match between the purchase order, receiving report, and invoice to process a payment. Departments enter and approve requisitions to generate purchase orders for goods, and enter receiving reports upon acceptance of delivery. Staff in the Department of Finance enters invoices received from vendors. Oracle cuts a check when the purchase order, receiving report, and invoice match. The system generates an Invoice on Hold report when there is not a three-way match. While the city's procurement process requires vendors to send all invoices to the city's Department of Finance, fleet services' staff told us that they forward vendor invoices to fleet services' accounting office for payment.

Oracle and inventory records aren't reconciled; discrepancies mask detection of theft or loss. Fleet services staff is unable to compare inventory system records to purchases recorded in Oracle because the systems lack matching data fields. If the same information is entered into both systems, the amounts spent on parts for inventory and the quantities received should match in the two systems. We identified discrepancies between purchases processed in Oracle and purchases recorded in inventory; the discrepancies varied depending on the time frame we reviewed. Oracle shows the city paid $312,000 more for parts than was recorded in the inventory system between July 2010 and February 2011. From September 2010 through February 2011, the inventory system showed $404,000 more for parts than was recorded as received in Oracle. While a time lag in data entry could explain differences between the systems, staff told us that they enter

receipt of goods into the inventory system before they enter receipt of goods into Oracle. Thus, we would expect the inventory system value to be higher than what is recorded in Oracle. We attribute the difference in amounts received between the two time periods to end of year closeout and adjustments that occur in June and July at the end of the city's fiscal year. Fleet services staff should receive parts in the systems in a timely manner; discrepancies between the two systems make it difficult to detect whether theft or loss is occurring.

It is also possible that staff failed to enter receipt of parts into the inventory system when the parts were delivered. We identified discrepancies between parts recorded as purchased and parts recorded as received within the inventory system itself; 8% of 8,781 part orders, amounting to about $353,000, had not been received in the system. While incomplete data entry could explain the difference, our counts of sample items identified lower quantities on hand than what was recorded in inventory for eight of the nine parts for which we identified a discrepancy. If staff failed to enter receipt of parts into the inventory system, we would expect the quantities on hand to be higher than what is recorded in inventory. It is also possible that the parts were specially ordered for down equipment and used in the repair without being entered into the inventory system, in which case departments were undercharged for the repair.

The commissioner of public works should work with the Departments of Procurement and Information Technology to develop a method to link Oracle and Fleet Focus or develop an alternative method to facilitate reconciling inventory and purchase records.

Multiple Parts Locations Increase Risk and Staffing Needs

Consolidating parts warehouses would enable the Office of Fleet Services to better safeguard inventory and improve operational efficiency. Multiple parts locations require more staff to segregate incompatible duties. Although the number of parts specialists on staff is high relative to the number of mechanics, based on industry standards, fleet services' doesn't have enough parts specialists to cover all shifts at all facilities. Inadequate staffing to cover the multiple locations increases risk of theft and loss because incompatible duties are not segregated. Multiple facilities also

create more opportunities for physical security risks. We observed security risks at five of seven locations. Also, 13 employees have master keys to the Claire Drive facility, and 9 non-parts employees have keys to parts rooms at three facilities to compensate for lack of parts specialists on duty. Wide distribution of keys increases risk of loss and limits accountability if loss occurs.

We also noted logical access risks to the fleet inventory system. Users are not required to change passwords in accordance with best practices, increasing the likelihood that an unauthorized user could gain access the system to delete or alter records.
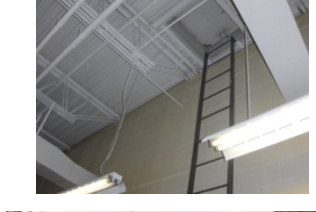
The commissioner of public works should consolidate facilities for greater staff efficiency and ensure the facilities are secured. The commissioner should ensure that distribution of keys is limited or install electronic keys to record who accessed a facility. The commissioner should also work with the office's information technology staff to require Fleet Focus users to change passwords in the system, at intervals consistent with best practices.

Security Risks Subject Inventory to Theft and Loss

We observed physical security risks at most fleet services facilities including inadequate lighting, unlocked rooms, rooftop access, a damaged perimeter fence, and distribution of keys to multiple people. Weak physical security subjects inventory to risk of theft and loss from external and internal sources. Fleet services staff told us that about $8,000 worth of tires were stolen from the Howell Mill facility about two years ago. The Office of Fleet Services is responsible for safeguarding assets under its control.

We observed security risks at five of seven facilities. We noted physical security risks at all locations except the airport (see Exhibit 7). Parts rooms in some facilities were unstaffed, unlocked, or unmonitored. Some parts rooms lacked adequate lighting. One facility had an unsecured gate and damaged perimeter fence.

Exhibit 7 Physical Security Risks Observed at Facilities

Facility	Physical Security Risks Observed	Photograph
Claire Drive Facility - Heavy Truck Garage	• supervisor's parts area (cage) is kept open and has some small parts inside • some large parts are stored throughout the garage area, outside the parts room	
Claire Drive Facility - Fire Parts Room	• sliding glass window of parts room is unlocked	
Lakewood Avenue Facility	• parts room is left unlocked • parts room is dark • parts room is next to a restroom, which supervisors said could allow for theft	
Hill Street Facility	• no cameras in parts room or on shop floor • parts room door is left unlocked • parts room is dark	
General Repair Facility – Howell Mill Road	• parts room has an door leading to the roof of the building	
Northside Maintenance and Motorcycle Facility	• fenced gate on the right side of the building is damaged and falling down • the gate is not automated – and has to be manually pulled and locked by the manager at the end of the work day • no security guard on-site	

Source: Auditors' observations of Office of Fleet Services' facilities during early February 2011

Wide distribution of keys increases risk and limits accountability if loss occurs. Fleet services managers have issued master keys to the Claire Drive facility to 13 employees. The master key opens all internal and external doors at the facility, including the three parts rooms and two tire rooms. Managers have also issued keys to parts rooms at three facilities to eight non-parts personnel (see Exhibit 8). Fleet managers told us they distribute keys based on operational needs. The director of fleet services told us that the policy is to limit access to parts rooms to parts specialists and supervisors, but because not all shifts and facilities have parts personnel on duty, mechanic supervisors are allowed access to the parts room. Fleet services' written policies state that non-parts personnel are permitted through the Claire Drive parts room at designated times only, except by mutual agreement between the supervisors of the parts and tire shop:

- each morning upon arrival up to 7:00 am
- at 11:45 am going to lunch
- at 12:30 pm returning from lunch
- at 3:30 pm change of shift
- evening shift change

The written procedures do not address access to parts rooms at the other facilities.

Access to parts rooms should be limited to segregate duties for maintaining custody of parts, initiating work orders to remove parts from inventory, and approving completed work orders. Separating these duties among parts specialists, mechanics, and mechanic supervisors limits opportunities for any individual to remove parts from inventory without record. Staff explained three of nine discrepancies we identified in our count of sample items as being caused by mechanics accessing or returning parts without recording the transactions in the inventory system. The commissioner of public works should ensure that distribution of keys is limited or install electronic keys to record who accessed a facility.

Exhibit 8 Distribution of Keys to Facilities and Parts Rooms

Facility	Number of Keys	Number of Parts Room Keys Issued to Non-Parts Personnel
Claire Drive Facility	General Facility - 10 Parts Warehouse – 2 Fire Parts Room - 2 Tire Shop - 3 Master Keys - 13	Tire Shop - 2 Fire Parts Room - 1
Hill Street Facility	General Facility – 2 Master Keys - 1	
Airport Fire Facility	General Facility – 6 Master Keys - 2	
Airport Maintenance Off Road Facility	General Facility – 3 Master Keys - 1	
Northside Maintenance and Motorcycle Facility	General Facility – 14 Parts Room - 3 Master Keys - 1	Parts Room - 1
General Repair Facility Howell Mill Road	General Facility – 11 Parts Room - 4 Tire Room - 1 Master Keys - 2	Parts Room - 4
Lakewood Avenue Facility	General Facility – 2 Master Keys - 1	

Source: Fleet services key assignment list

Fleet Focus passwords are not updated in accordance with industry best practices. The inventory system requires user names and passwords access the system, but does not require users to periodically change passwords. The system administrator told us that the system can be set to require password changes at designated intervals, but the function is not activated. Passwords are a means of authenticating users so that only authorized users can access system data, and system records of who performed various functions are accurate. Best practices identify strong passwords and rules requiring periodic password changes as key components for ensuring system security. The commissioner of public works should direct staff to set inventory system controls to require periodic password changes.

Multiple Locations Increase Staffing Needs

Although the number of parts specialists on staff is high relative to the number of mechanics, fleet services' doesn't have enough parts specialists to cover all shifts at all facilities, requiring mechanics or mechanic supervisors to retrieve parts for repairs. Because incompatible duties are not segregated, risk of theft, loss, and inaccurate record keeping is increased.

Fleet services spreads 16 parts personnel among 20 parts rooms. The Office of Fleet Services has 16 parts specialists and supervisors to cover its 20 part rooms located at seven different facilities. Most of the facilities operate two shifts and the Howell Mill facility also operates Saturdays and holidays (see Exhibit 9). One parts specialist covers the two airport locations and one parts supervisor covers both the Lakewood and Hill Street locations. No parts staff is on duty at the Howell Mill location on Saturday or after hours. Mechanic supervisors obtain parts from the parts rooms when no parts staff is assigned. Responsibility for maintaining custody of parts, initiating work orders to remove parts from inventory, and approving completed work orders should be separated among parts specialists, mechanics, and mechanic supervisors to limit opportunities for any individual to remove parts from inventory without record. Failure to separate these duties increases risk.

Exhibit 9 Number of Parts Rooms and Hours of Operation

Facility	Number of Parts Rooms	Number of Parts Staff	Hours of Operation
Claire Drive Facility	6	9	7:00am -4:00pm
			4:00pm-12:00am
Lakewood Avenue Facility	1	1	7:00am-4:00pm
			4:00pm-12:00am
Hill Street Facility	1	0	7:00am- 4:00pm
			4:00pm-12:00am
General Repair Facility Howell Mill Road	5	3	6:00am-3:00pm
			3:00pm-12:00am
			12:00am 3:00am*
			Saturday
Northside Maintenance and Motorcycle Facility	1	2	7:00am -3:30pm
Airport Maintenance Off Road Facility	3	0	8:00am -5:00pm
			5:00pm -8:00pm
Airport Fire Facility	3	1	7:00am – 3:30pm
Total	**20**	**16**	
The Howell Mill Facility is open on holidays and other facilities may be open as well upon request.			

Source: Fleet services' staffing data

The ratio of parts personnel to mechanics staff is above the industry benchmark. Compared to industry standards, the number of authorized parts specialists is high relative to the number of mechanics. The Office of Fleet Services has one parts specialist or supervisor for every six mechanics or supervisors. The industry benchmark is one parts specialist for every eight to ten mechanics. Even with two vacant positions and one employee on extended leave, the office has two to five more parts personnel than called for by the benchmark.

The commissioner of public works could increase operational efficiency and improve physical security by consolidating operations to fewer facilities. Multiple parts locations require more staff to segregate incompatible duties and more effort to secure physically. We recommend the commissioner evaluate options to consolidate fleet services facilities in order to strengthen controls at reasonable cost.

Recommendations

To improve the security and accuracy of the Office of Fleet Services' inventory and increase operational efficiency, the commissioner of public works should:

1. Work with the Departments of Procurement and Information Technology to develop a method to link Oracle and Fleet Focus records or develop an alternative method to facilitate reconciling inventory and purchase records.

2. Direct staff to conduct a 100% inventory count, reconcile discrepancies, and record the location of all parts. Once the baseline inventory is established, staff should conduct periodic counts at all parts facilities and reconcile discrepancies, consistent with policy.

3. Direct staff to ensure that unit costs of like items are consistent in Fleet Focus, correct any incorrect costs and reimburse departments for overcharges resulting from input errors.

4. Direct staff to update written policies to ensure that controls are consistent with current workflow and segregate incompatible duties and ensure that staff complies with procedures.

5. Consolidate parts warehouses to fewer facilities and ensure that the facilities are secured to better safeguard inventory and improve operational efficiency.

6. Limit key distribution or install electronic keys to track employee entry into the facilities.

7. Direct fleet services' information technology staff to require Fleet Focus users to change passwords in the system at intervals consistent with best practices.

Department of Public Works Fleet Services Inventory Controls

Appendices

Report # 10.11	Report Title: Department of Public Works Fleet Services Inventory Controls	Date: 06/16/2011

Recommendation Responses

Rec. #1	The commissioner of public works should work with the Departments of Procurement and Information Technology to develop a method to link Oracle and Fleet Focus records or develop an alternative method to facilitate reconciling inventory and purchase records.	Agree
Proposed Action:	Oracle and Fleet Focus are not compatible systems; creating an interface is cost prohibitive. A more feasible approach would be to use the Hansen Work Order Management system instead of Fleet Focus. Hansen currently is interfaced with the City of Atlanta's ERP system.	
Implementation Timeframe:	1 year (June 30, 2012)	
Responsible Person:	Office of Fleet Services with assistance with DIT and DOP.	

Rec. #2	The commissioner of public works should direct staff to conduct a 100% inventory count, reconcile discrepancies, and record the location of all parts. Once the baseline inventory is established, staff should conduct periodic counts at all parts facilities and reconcile discrepancies, consistent with policy.	Agree
Proposed Action:	Office of Fleet Services will conduct a complete inventory count and reconcile all discrepancies. After the initial inventory discrepancies are resolved, Office of Fleet Services will conduct a quarterly inventory count at all parts locations; the standard operating procedures will be adjusted to reflect quarterly counts. Current budgetary constraints do not allow for the increase in staffing which is needed for monthly inventory. Closing and or combining the remote parts locations would reduce the need for additional staff.	
Implementation Timeframe:	45-days for inventory reconciliation, 60-90 days to implement a quarterly inventory count (October 31, 2011)	
Responsible Person:	Office of Fleet Services parts personnel	

Rec. #3	The commissioner of public works should direct staff to ensure that unit costs of like items are consistent in Fleet Focus, correct any incorrect costs and reimburse departments for overcharges resulting from input errors.	Agree
Proposed Action:	Office of Fleet Services shall review inventory stock items for cost discrepancies and correct any errors. Office of Fleet Services shall review all overcharges in Fleet Focus and correct all discrepancies. Office of Fleet Services shall reimburse each user department for all overcharges resulting from input errors beginning with the FY12 fiscal year.	
Implementation Timeframe:	30-60 days (August 31, 2011)	
Responsible Person:	Office of Fleet Services personnel (Parts and Accounting personnel)	
Rec. #4	The commissioner of public works should direct staff to update written policies to ensure that controls are consistent with current workflow and segregate incompatible duties and ensure that staff complies with procedures.	Agree
Proposed Action:	Office of Fleet Services shall update the parts written policy procedures to insure that inventory controls are consistent and standard at each parts location. The update to written polices shall be completed by the parts fleet manager and parts supervisors with input from the support staff.	
Implementation Timeframe:	60-120 days (October 31, 2011)	
Responsible Person:	Parts Fleet Manager, Parts Supervisors, Parts Staff, review/approval by Commissioner and Assistant Director	
Rec. #5	The commissioner of public works should consolidate parts warehouses to fewer facilities and ensure that the facilities are secured to better safeguard inventory and improve operational efficiency.	Agree
Proposed Action:	Office of Fleet Services shall consolidate and reduce the number of parts facilities. Due the number of remote satellite parts locations that provide services to the user departments, Fleet Services will assess which locations can be closed or consolidated. Due to the current staffing levels, this should improve inventory control and improve the overall operational efficiency.	
Implementation Timeframe:	60-120 days (October 31, 2011)	
Responsible Person:	Office of Fleet Services personnel (Parts, Maintenance staff)	

Rec. #6	The commissioner of public works should limit key distribution or install electronic keys to track employee entry into the facilities.	Agree
Proposed Action:	Office of Fleet Services shall install an electronic key system or limit key distribution to insure safeguards for inventory control. This shall be implemented with the consolidation of the satellite parts locations.	
Implementation Timeframe:	90 - 120 days (October 31, 2011)	
Responsible Person:	Office of Fleet Services (Maintenance and parts personnel)	
Rec. #7	The commissioner of public works should direct fleet services' information technology staff to require Fleet Focus users to change passwords in the system at intervals consistent with best practices.	Agree
Proposed Action:	Office of Fleet Services will work in conjunction with DIT to implement a password security system that is compatible with Fleet Focus. OFS will enact a policy change consistent with DIT's recommendation of changing passwords every 45 days.	
Implementation Timeframe:	30 days (July 30, 2011)	
Responsible Person:	Office of Fleet Services DIT staff	