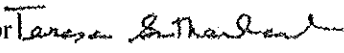


**ANNE ARUNDEL COUNTY**  
**Annapolis, Maryland**  
**Auditor's Office**

**INTER-OFFICE CORRESPONDENCE**

To: Members of the County Council  
County Executive Laura Neuman  
Carlton Epps, Central Services Officer  
Richard Durkee, Information Technology Officer  
Julie Mussog, Controller

From: Teresa Sutherland, County Auditor 

Date: June 20, 2014

Subject: Executive Summary - Performance Audit of Internal Controls over the County's Inventory of Information Technology Equipment

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We recently conducted an audit of the internal controls over the County's inventory of information technology (IT) equipment. Our findings and recommendations are summarized below. Details of our findings and recommendations as well as management's responses are found in our audit report dated June 20, 2014.

In our audit, we found that management did not have adequate internal controls to ensure fiscal year 2013 IT purchases were approved by the Office of Information Technology. Further, we found that management does not have adequate internal controls to:

- ensure IT assets are identified with a bar code and recorded accurately and timely in the inventory records and in the general ledger.
- ensure that all assets listed in the inventory records are in the County's possession, that all assets in the County's possession are recorded in the inventory records, or that the inventory records are accurate and complete.
- ensure duties are appropriately segregated to prevent unnecessary or unauthorized access to inventory records and IT equipment.
- ensure obsolete IT equipment is disposed of in accordance with applicable law and County policies and that disposals are recorded accurately and timely in the inventory records.
- ensure adequate oversight over departments that maintain their own inventory records of IT assets and sensitive items.

Our report includes recommendations to enhance internal controls designed to improve the accuracy and completeness of the IT inventory records; ensure assets are safeguarded against loss from unauthorized disposition; segregate duties to ensure no one person is able to both perpetrate and conceal an unauthorized disposition or theft; and enhance oversight of those departments that maintain their own inventory records. Management has reviewed our recommendations and agreed to incorporate our suggestions as they modify their policies and procedures.

Please call if you have any questions on our report.



**ANNE ARUNDEL COUNTY  
OFFICE OF THE COUNTY AUDITOR**

June 20, 2014

The Honorable Members of the County Council  
The Honorable County Executive Laura A. Neuman  
Mr. Carlton G. Epps, Sr., Central Services Officer  
Mr. Richard Durkee, Information Technology Officer  
Ms. Julie Mussog, Controller  
44 Calvert Street  
Annapolis, Maryland 21401

Dear Members, Ms. Neuman, Mr. Epps, Mr. Durkee, and Ms. Mussog:

In accordance with Section 311 of the County Charter, I am calling to your attention and taking exception to the improper procedures noted in this report.

We conducted a performance audit of the internal controls over the County's inventory of information technology (IT) equipment. Our audit was conducted in accordance with generally accepted government auditing standards prescribed by the Comptroller General of the United States. Those standards require us to 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 we obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

The purpose of our audit was to determine whether management has adequate internal controls to ensure IT asset purchases are approved and that IT assets are safeguarded against loss. Our specific objectives were to determine whether management has implemented internal controls to:

1. ensure fiscal year 2013 IT purchases were approved by the Office of Information Technology (OIT);
2. ensure IT assets are identified with a bar code and recorded accurately and timely in the inventory records within 30 days of receipt and in the general ledger;
3. ensure that all assets listed in the inventory records are in the County's possession, that all assets in the County's possession are listed in the inventory records, and that the inventory records are accurate and complete;
4. ensure duties are appropriately segregated to prevent unnecessary or unauthorized access to inventory records and IT equipment;
5. ensure obsolete IT equipment is disposed of in accordance with applicable laws and County policies and that disposals are recorded accurately and timely in the inventory records; and
6. ensure adequate oversight over departments that maintain their own inventory records of IT assets and sensitive items.

Our audit included interviews with employees from Central Services, OIT, the Office of Finance (Finance), and various departments. We applied our audit procedures only to the purchase and inventory records of noncapital IT assets and sensitive items.

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Our findings and recommendations address controls in place and transactions that occurred during fiscal year 2013. Management's responses to our recommendations are shown in italics. This report is intended solely for the use of the County Council and the management of Anne Arundel County. However, this report is a public document that may be obtained from the Office of the County Auditor.

## BACKGROUND

Section 902 of the Charter requires the Central Services Officer to appoint a Purchasing Agent to manage the County's property inventory system established by and under the direction of the Office of Finance. Section 8-2-101 of the County Code requires the County to adopt a Purchasing Manual, and the Purchasing Manual shall include the procedures to be observed by departments for classifying and accounting for inventory, including a perpetual inventory system supported by physical inventory counts that are periodically reconciled to records maintained by the Controller.

Central Services, Finance, and OIT administer the County's fixed asset inventory using the Fixed Asset Module (FAM) in the EnterpriseOne financial management system. Finance is responsible for ensuring that all capital assets (\$5,000 or greater) are recorded in FAM and depreciated. The Office of Central Services Property Control and Accountability (PCA) Division is responsible for ensuring noncapital assets (less than \$5,000) and sensitive items are recorded in FAM. The PCA Division conducts internal audits, ensures departments conduct physical inventory counts annually, reconciles the physical inventory counts to FAM records, and trains department Property Coordinators. OIT is responsible for approving all IT purchases, overseeing hardware and software maintenance, and training FAM users. While each County department asks for access to FAM as needed for its employees, it is OIT's responsibility to approve new FAM users.

Each department has at least one Technology Coordinator and one Property Coordinator. Technology Coordinators identify the department's technology needs, initiate hardware and software orders, assist OIT with FAM security matters, and coordinate staff training. Property Coordinators enter assets delivered directly to the departments into FAM, update location and physical owner codes, conduct annual physical inventory counts, and coordinate and document asset transfers and disposals.

The County's Property Control and Accountability Policies and Procedures require the Property Coordinators to attach bar codes and update the FAM inventory records within 30 days of receipt. In practice, if the purchases are delivered to OIT, OIT attaches the bar codes and updates the inventory records, and if the assets are delivered directly to the departments, the departments' Property Coordinators attach the bar codes and update the inventory records.

## FINDINGS

**Objective 1: To determine whether the management has implemented internal controls to ensure fiscal year 2013 IT purchases were approved by OIT.**

We determined that management did not have adequate internal controls to ensure fiscal year 2013 IT purchases were approved by OIT.

We reviewed the purchase records for 92 noncapital IT assets purchased in fiscal year 2013. OIT approved the purchase of 84 of the 92 assets, but the Police Department did not obtain OIT's approval for eight items totaling \$9,811 that were purchased using procurement cards. The Police Department did not obtain OIT's approval because

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the staff thought approval was not needed for computers that are not connected to the County's network, for external hard drives, or for helicopter software maintenance.

During our audit, it also came to our attention that the Department of Public Works did not obtain OIT's approval for four items totaling \$1,090 purchased via procurement cards, and OIT's tracking schedule notes that three of the four assets valued at \$890 were stolen.

**Objective 2: To determine whether management has implemented internal controls to ensure IT assets are identified with a bar code and recorded accurately and timely in the inventory records within 30 days of receipt and in the general ledger.**

We determined that management does not have adequate internal controls to ensure IT assets are identified with a bar code and recorded accurately and timely in the inventory records within 30 days of receipt and in the general ledger. For the 92 noncapital purchases we reviewed, we found:

- 6 items totaling \$14,940 for which no one affixed bar codes or entered the required data into FAM. Because the identifying information was missing, we were unable to determine whether the assets are in the County's possession.
- 34 errors in the FAM records for 24 assets, including errors in department codes, physical owner codes, serial numbers, location owner codes, and one equipment status code.
- 20 OIT receiving forms lacked key information, including names, signatures, initials, receiving dates, department delivery dates, asset numbers, costs, physical owner codes, and a serial number.
- 24 items for which the Property Coordinators did not enter asset data into FAM timely. Records show the data was updated 39 to 101 days after the items were received by or delivered to the departments.

With respect to recording noncapital assets in the general ledger, management's procedures require departments to enter the costs of the noncapital assets in a general ledger account used to accumulate the total costs of all noncapital assets. (This general ledger account is strictly used as a control account; it is not used for financial statement purposes.) In our testwork, we noted that the Property Coordinators failed to record the cost for two of the 92 items in the general ledger account, and they recorded the costs incorrectly for nine items.

When the Property Coordinator or OIT enters a noncapital purchase in FAM, FAM assigns a sequential number that the Property Coordinator or OIT is supposed to enter into the general ledger. Using IDEA data analysis software, we reviewed the sequential asset numbers in the general ledger and found 1,152 sequential asset numbers that were not recorded in the general ledger account. We tested 25 of these items to determine whether the assets were properly excluded from the general ledger account. We determined eight were capital or lease assets that were properly excluded from the general ledger account. Of the remaining 17, we found 13 were improperly excluded by the departments' Property Coordinators. We could not determine whether the remaining four assets were properly excluded from the general ledger because the assets were not recorded in FAM. This significant error rate leads us to conclude that management does not have adequate internal controls to ensure the information recorded in the general ledger account is complete, accurate, and reconciled to FAM, rendering the general ledger account wholly ineffective as a control.

Finally, our testwork included assets purchased through the Information Technology Enhancements capital project (C519600), and while we applied our test procedures only to purchases of noncapital assets and sensitive items, it came to our attention that the Office of Finance failed to record many capital assets that cost \$5,000 or more

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in FAM. Consequently, such assets were not properly capitalized, depreciated, or included in physical inventory counts. As a result of our inquiries, management has entered assets totaling approximately \$1,367,000 into FAM to remedy this oversight.

**Objective 3: To determine whether management has implemented internal controls to ensure that all assets listed in the inventory records are in the County's possession, that all assets in the County's possession are recorded in the inventory records, and that the inventory records are accurate and complete.**

We determined that management does not have adequate internal controls to ensure that all assets listed in the inventory records are in the County's possession, that all assets in the County's possession are recorded in the inventory records, or that the inventory records are accurate and complete.

To determine whether assets listed in the inventory records are in the County's possession, we selected 50 assets from FAM and attempted to confirm the assets were in the County's possession. Of the 50 assets we selected, two had physical owner codes indicating the assets were missing. Of the remaining 48, management could not locate five. Central Services changed the equipment status code for one to indicate it was sent to the central warehouse as surplus property, but as of January 2, 2014, four were still listed as active. We were able to sight the remaining 43 assets, but the Property Coordinators failed to update the locations for two computers that had been transferred from OIT to departments.

To determine whether assets in the County's possession are recorded in the inventory records, we sighted 50 assets at various County locations and attempted to trace the assets back to the FAM records. Of the 50, we were unable to locate two in FAM because the assets did not have barcodes. Of the remaining 48 assets, three had incorrect location codes, and five had incorrect or missing serial numbers.

Finally, we used IDEA data analysis software and determined that the inventory records are neither accurate nor complete. We identified 1,025 active IT assets in FAM that did not have serial numbers, 60 that did not have location codes, and 51 that did not have department codes. We also identified 171 active IT assets that should be included in the physical inventory counts, but the FAM records have no bar codes and/or the physical owner codes were blank or coded as "in transit." Consequently, these assets would be improperly excluded from the physical inventory counts. We also noted that many of the items coded as "in transit" have been in that category for a significant period of time, calling into question the accuracy of the coding.

We also noted that when a department enters a new purchase into FAM, FAM assigns a sequential asset number that the County's EnterpriseOne consultant advised us cannot be deleted once established. However, our analysis of sequential asset numbers for fiscal year 2013 asset purchases showed 111 missing sequential asset numbers. The consultant believes that these may have been deleted by users inadvertently if the users cancel their data entry midway through the process. Some users may have reentered assets under another sequential number, but it is possible the users did not reenter the asset or that some records were deliberately deleted from FAM.

**Objective 4: To determine whether management has adequate internal controls to ensure duties are appropriately segregated to prevent unnecessary or unauthorized access to inventory records and IT equipment.**

We determined that management does not have adequate internal controls to ensure duties are appropriately segregated to prevent unnecessary or unauthorized access to inventory records and IT equipment. Purchasing,

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custodial, and record keeping duties should be segregated to ensure one person is not in a position to both perpetrate and conceal an error, a misappropriation, or a theft. To further safeguard assets, employees whose duties require inquiry only access should not have access to enter or modify FAM data.

Employee access to FAM is requested by a department, reviewed and approved by Central Services, and granted by OIT after its review and approval, and there are five levels of FAM access. Most users have inquiry only access; however, some users may enter, change, and delete certain codes and asset information or record transfers between departments, and a limited number of users have administrator rights with unlimited access. Annually OIT sends the Technology Coordinators a list of department users and their EnterpriseOne access levels, including FAM access. The Technology Coordinators are supposed to verify each employee's access is appropriate and necessary for the employee's duties. Additionally, management has a monthly process to remove employees no longer employed by the County.

We reviewed the access of 122 people who may enter or change data in FAM, and we found 30 had inappropriate access; specifically:

- two individuals may purchase IT equipment (purchasing duties), have unlimited access to the storage area where the assets are stored when received (custodial access), and have access to enter and change data in FAM (record keeping access). These duties are not compatible.
- nine individuals serve as both Technology Coordinators (primary or secondary) who request IT purchases and as Property Coordinators who perform record keeping duties. These duties are not compatible, and Technology Coordinators should have inquiry access only.
- nineteen individuals, including the PCA Manager, have access to enter and modify FAM data and record transfers between departments when their duties do not require such access.

**Objective 5: To determine whether management has implemented internal controls to ensure obsolete IT equipment is disposed of in accordance with applicable laws and County policies and that disposals are recorded accurately and timely in the inventory records.**

We determined that management does not have adequate internal controls to ensure obsolete IT equipment is disposed of in accordance with applicable laws and County policies and that disposals are recorded accurately and timely in the inventory records.

Section 8-2-117 of the County Code requires departments to submit reports to the Purchasing Agent listing assets that are no longer used or are obsolete, worn out, or scrapped. Section 8-2-118 prescribes the methods of disposal and requires the Purchasing Agent to use the method that is in the County's best interest. Once an asset is added to FAM, management will not delete the record. Rather, if an asset will no longer be used, Central Service will enter an equipment status code to indicate the asset is inactive.

We reviewed the County's procedures for adding equipment status codes when an asset is no longer active. We selected 30 assets that had equipment status codes indicating the assets were no longer active to determine whether there was adequate documentation to support the asset was no longer in use and appropriately coded as inactive, and we found:

- One asset was coded as Disposed - Returned to Vendor. While there was a property transfer form signed by an OIT employee to indicate the asset was returned to the vendor, there was no documentation to support that the vendor received the returned asset.

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- Two assets were coded as Disposed - Scrapped or Disposed - Destroyed. The property transfer forms were signed by the employee initiating the transfer to the landfill, but no landfill employee signed the forms to show the assets were received at the landfill.
- Four assets were coded as Disposed - Auction. The PCA Manager prepared property transfer forms that were approved by the Assistant Purchasing Agent, but there is no documentation to show the assets were auctioned. Although management provided auction documentation, the documentation did not identify the individual assets auctioned.
- Someone added physical owner codes for two assets to indicate the assets are missing, but there was no documentation to show the changes in the physical owner codes were initiated by the PCA Manager and approved by the Purchasing Agent or Assistant Purchasing Agent, consistent with management's procedures.

Since physical owner codes can be changed to "missing" without proper approval, we selected 25 active IT assets with physical owner codes that indicated the assets were missing for further review. We found documentation to support that the change in the physical owner code was initiated by the PCA Manager and approved by the Purchasing Agent or Assistant Purchasing Agent for 19 of the 25 assets, consistent with management's procedures. The remaining six assets belonged to the Department of Recreation and Parks, and neither the PCA Manager nor the department could provide documentation that the Purchasing Agent or Assistant Purchasing Agent approved the change in status.

Our findings reveal two internal control weaknesses. First, a user could misappropriate or steal an asset without being detected by changing the physical owner code to indicate the asset is missing. Second, someone could improperly remove an asset from the central warehouse without being detected because Central Services does not include assets at the central warehouse in their physical inventory counts, and Central Services does not consistently update the equipment status code after an asset is declared surplus.

**Objective 6: To determine whether management has implemented internal controls to ensure adequate oversight over departments that maintain their own inventory records of IT assets and sensitive items.**

We determined that management does not have adequate internal controls to ensure adequate oversight over departments that maintain their own inventory records of IT assets and sensitive items. The Central Services Officer has authorized the Health Department and the Local Management Board to maintain their own inventory records, and the Central Services Officer has authorized the Police Department to maintain its own inventory records for some digital cameras.

During our audit we noted PCA policies and procedures allow the Central Services Officer to exempt a department from recording assets in the County inventory records provided the department has an established, documented internal asset tracking system; can immediately produce an accurate record of all assets in the department's possession; will provide a copy of the inventory to the PCA when required; and maintains audit records and can provide a copy of an inventory audit upon request. However, we also noted that Central Services has not performed any additional oversight over the Health Department, Local Management Board or the Police Department to ensure that they comply with these policies. Although the Health Department claims that it submits an annual inventory to the County and that the PCA Manager performed limited inventory counts several years ago, Central Services said it has not performed any oversight and could not locate any annual inventory reports from the Health Department.

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## RECOMMENDATIONS

### Accuracy and Completeness of the Inventory Records

The procedures established by OIT and Central Services are designed to ensure IT purchases are approved by OIT, tagged with a bar code, and recorded in FAM accurately and timely, and many of the internal control weaknesses we noted can be remedied by enhancing compliance with the existing procedures. To enhance compliance, we recommend that management provide training or retraining to all Technology Coordinators, Property Coordinators, and procurement card users to ensure they are aware of and comply with the existing procedures.

If management intends to use the general ledger account as a control account to accumulate the costs of all noncapital assets, then we recommend incorporating the required procedures in the County's Administrative Procedures. Further, management should periodically reconcile the data captured in the general ledger account to the data in FAM to enhance the accuracy and completeness of both records.

To ensure the accuracy and completeness of the data entered for future purchases, we recommend that management ensure EnterpriseOne has effective controls to ensure assets are assigned a sequential asset number that cannot be modified or bypassed. Further, we recommend that users be required to enter certain data into FAM before the asset can be added to inventory records and given a sequential asset number. At a minimum this should include a bar code, physical owner code, location code, department code, account number, accounting class, and an asset description. Finally, we recommend that management correct the numerous errors we noted and that management analyze the data in FAM to identify other missing data or incorrect data.

#### *Management's Response*

*Management agrees. Actions will be taken to heighten awareness of the importance of the related training, and insure that all Technology Coordinators, Property Coordinators, and procurement card users have completed the required training. Additionally, the training content will be reviewed and revised as needed to mitigate erroneous entries, and compliance with existing procedures.*

*Management will review and re-evaluate use of the general ledger account in the control of noncapital asset cost. If the present use is continued, procedures to include periodic reconciliation with the FAM will be promulgated.*

*Management will reinforce the need for accuracy and timeliness of entries into EnterpriseOne, and take steps to identify and correct errors that exist. With respect to the existence of missing sequential record numbers, it is important to note limitations of the existing EnterpriseOne system. The system utilizes a multi-User Auto Numbering (Next Number) feature in all modules. Because of this feature a number will be bypassed when a user does not complete the setup process. Because the record was not completed, the record, and the bypassed number, will not exist in the EnterpriseOne system. Due to the assumed complexity and high cost associated with system redesign, alternative steps such as restricting the ability to delete records, and insuring the existence of a complete audit trail when a record is deleted, will be taken.*

### Inactive and Missing Assets

To enhance the internal controls designed to ensure assets are safeguarded against loss from unauthorized disposition, including theft, we recommend that management:



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- modify the FAM system so that physical owner codes are used only to identify the employee responsible for the asset and not to indicate an asset is missing or in-transit.
- modify the FAM system to prohibit the departments from entering any code that results in the asset's status changing to inactive, thereby excluding it from future inventory counts. Only Central Services should have the ability to change an asset's status to inactive, and they should do so only after obtaining documentation of the asset's disposal or loss and only with the approval of the Purchasing Agent or Assistant Purchasing Agent.
- require both the individual transferring an asset and the individual receiving the asset to sign the property transfer form, including assets sent to the County landfill or to an auction company.
- ensure the physical inventory counts are complete, including assets in transit from one department to another and assets held for disposal at the central warehouse.

Currently when a department reports an asset is missing, Central Service accepts the department's assertion and codes the asset as missing in FAM, excluding it from future inventory counts. Further, unless there is evidence of theft, management does not contact the Police Department, even when management suspects the asset may have been stolen. We recommend that management enhance its efforts to determine why an asset is missing and whether an employee should be held accountable for the missing asset. Further, management should report all suspected thefts to the Police Department.

To enhance accountability for assets in the County's possession, we recommend that management increase the number and frequency of its surprise inventory test counts. We also recommend that management explore software applications that will allow it to identify the location of or disable missing assets such as laptops.

#### ***Management's Response***

*Management will undertake a review of the FAM code structure, and authorization for usage, to determine how best to meet the goals of accurate asset location and accountability. Revisions to, and enforcement of procedures will be implemented with those goals in mind.*

*Management will review and revise procedures to improve the control and accountability of assets during transfer between organizational elements and during disposal.*

*Management will review, and revise as needed, its process for dealing with "missing/stolen" assets, with the goals of asset protection, accountability, and appropriate management authority and responsibility.*

*Management will explore its ability to increase the frequency of inventories, and the practicality of software applications that locate and disable assets, within the context of its available resources, and the cost benefit.*

#### **Segregation of Duties**

To ensure that no one person is able to both perpetrate and conceal an unauthorized disposition or theft, we recommend that the Office of Finance and OIT work with the departments to ensure each user's FAM access is compatible with the user's duties. Employees with purchasing or custodial duties should have inquiry only access, including Technology Coordinators. Further, in addition to the procedures executed each month to remove access when an employee terminates employment with the County, we recommend that management ensure at least twice

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yearly that all FAM users are current employees. Finally, the PCA Division should regularly review system reports of FAM access to determine whether the access is authorized and appropriate.

***Management's Response:***

*The PCA Manager will review the Enterprise One reports twice yearly to determine that "access is authorized and appropriate". This determination will take the appropriate separation of duties into consideration, and management will consider other possible procedures to insure appropriate separation of duties, and access.*

**Oversight of Departments that Maintain their Own Inventory Records**

Under the County Charter, the Central Services Officer is responsible for managing the County's fixed asset inventory under the direction of the Office of Finance using the system established by the Office of Finance. Accordingly, if the Central Services Officer is going to permit departments to maintain their own inventory records, then the Office of Finance should establish the system the departments are required to use, and the Central Services Officer should establish written procedures with which the departments must comply to ensure OIT approves all IT asset purchases and that all assets are safeguarded against loss from unauthorized use or disposition. Further, the Central Services Officer should monitor the departments' compliance with the procedures established, ensure appropriate segregation of duties over purchasing, custodial, and record keeping duties, and perform annual physical inventory counts.

***Management's Response:***

*Management agrees and will coordinate to review and revise its procedures in accordance with the Auditor's recommendations.*

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We thank the Office of Finance, the Office of Central Services and the Office of Information Technology for their courteous cooperation. Please call me at (410) 222-1138 if you have any questions regarding our findings and recommendations.

Sincerely,



Teresa Sutherland, CPA  
County Auditor