

City of New York

OFFICE OF THE COMPTROLLER

Scott M. Stringer COMPTROLLER



MANAGEMENT AUDIT

Marjorie Landa

Deputy Comptroller for Audit

Audit Report on the Department of Cultural Affairs' Controls over Its Inventory of Computers and Related Equipment

MJ18-072A June 19, 2018 http://comptroller.nyc.gov



THE CITY OF NEW YORK OFFICE OF THE COMPTROLLER SCOTT M. STRINGER

June 19, 2018

To the Residents of the City of New York:

My office has audited the New York City Department of Cultural Affairs (DCLA) to determine whether it has adequate controls over its inventory of computers and related equipment. We audit City operations such as this as a means of ensuring that agencies follow relevant rules and are accountable for their resources.

The audit found that DCLA has not instituted adequate controls over the agency's inventory of computers and related equipment. Specifically, the audit found that DCLA did not have a comprehensive written procedures manual for the management of its computer-related inventory; did not have an adequate segregation of duties in the management of its computers and related inventory; had insufficient evidence that the agency performed required periodic inventory counts; failed to affix sequentially numbered property identification tags on its computers and related equipment, as required; and had inadequate physical safeguards of the computer inventory at one of its storage locations. In addition, DCLA's inventory records included equipment that the auditors could not find in the agency's possession, excluded other equipment that was in the agency's possession and omitted certain information, such as purchase dates of the computers and related items, which could be used by DCLA as part of its determination of items to be relinquished. Moreover, DCLA did not have a consistent process for relinquishing its inventory of computers and related equipment.

The audit makes 12 recommendations, including that DCLA: create a comprehensive, written manual of its inventory-management policies and procedures that delineate staff responsibilities for computers, computer-related equipment and other assets; perform and document annual inventory counts of its entire inventory and ensure that all discrepancies are independently investigated; utilize appropriate identification tags that are affixed on all computers and related equipment; and comply with the City's inventory relinquishment policy and ensure that it adopts a consistent process and formalizes its procedures for relinquishing computers and related items.

The results of the audit have been discussed with DCLA officials, and their comments have been considered in preparing this report. DCLA's complete written response is attached to this report.

If you have any questions concerning this report, please e-mail my Audit Bureau at audit@comptroller.nyc.gov.

Sincerely

DAVID N. DINKINS MUNICIPAL BUILDING • 1 CENTRE STREET, 5TH Floor • NEW YORK, NY 10007 PHONE: (212) 669-3500 • @NYCCOMPTROLLER WWW.COMPTROLLER.NYC.GOV

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THE CITY OF NEW YORK OFFICE OF THE COMPTROLLER MANAGMENT AUDIT

Audit Report on the Department of Cultural Affairs' Controls over Its Inventory of Computers and Related Equipment

MJ18-072A

EXECUTIVE SUMMARY

The objective of this audit was to determine whether the New York City (City) Department of Cultural Affairs (DCLA) has adequate controls over its inventory of computers and related equipment in compliance with applicable rules and regulations.

DCLA is responsible for supporting and strengthening the City's vibrant cultural life. One of its primary missions is to ensure adequate, public funding for non-profit cultural organizations, both large and small, throughout the five boroughs. In doing so, DCLA helps to support non-profit cultural organizations involved in the visual, literary and performing arts; public-oriented science and humanities institutions, including zoos, botanical gardens, and historic and preservation societies; and creative artists at all skill levels who live and work within the City's five boroughs. Through its Materials for the Arts (MFTA) Program, DCLA provides free supplies for use in arts programs offered by non-profit groups and City public schools.

DCLA utilizes and maintains an inventory of computers and related equipment at two locations: its main offices in Manhattan and the MFTA warehouse located in Queens. A master inventory list of these items is maintained in a Microsoft Excel file, in which DCLA had recorded a total of 194 computers and related equipment items in inventory as of October 13, 2017.¹

During Fiscal Year 2017, DCLA expended \$6,815,645 for its Office of the Commissioner, consisting of \$4,872,115 for personal services and \$1,943,530 for other than personal services (supplies, materials and services necessary to support agency operations).² According to DCLA officials, the agency purchased 133 computers and related items, totaling \$137,420, in Calendar Years 2013 through 2015.

¹ Computer-related equipment includes items that connect to or involve the use of a computer, such as monitors, printers (including multi-function printers), scanners, and external drives.

² The budget information provided in this audit is for the DCLA Office of the Commissioner only. It does not include funds provided directly to cultural institutions in the form of grants.

Audit Findings and Conclusion

DCLA has not instituted adequate controls over the agency's inventory of computers and related equipment. Preliminarily, we found that DCLA did not have a comprehensive written procedures manual and only provided limited policies and procedures for the management of its computerrelated inventory, which could have contributed to the issues identified in this report. Specifically, we found that DCLA did not have adequate segregation of duties over the management of its computers and related inventory; insufficient evidence that the agency performed the required periodic inventory counts; a failure to affix sequentially numbered property identification tags on its computers and related equipment as required; and a lack of adequate physical safeguards of computer inventory at one of its storage locations. As a possible consequence of the inadequate safeguards, DCLA discovered an apparent theft of three computers during the course of the audit that might have been prevented if appropriate controls had been in place.

Further, we found that DCLA's inventory records were incomplete and inaccurate. The inventory records we reviewed included equipment that auditors could not find in the agency's possession and excluded other equipment that we found was in the agency's possession. Additionally, the records did not include the purchase dates of the computers and related items, which could be used by DCLA as part of a determination of whether those items need to be relinquished. Moreover, DCLA does not have a consistent process for salvaging and relinquishing its inventory and did not maintain adequate documentation supporting its relinquishment of its computers and related equipment.

DCLA's failure to institute adequate controls over its inventory operations significantly increases the risk of waste, fraud and mismanagement.

Audit Recommendations

Based on the audit, we make 12 recommendations, including that:

- DCLA should create a comprehensive, written manual of its inventory-management policies and procedures that delineate its staff's responsibilities for computers, computer-related equipment and other assets in conformity with applicable standards, and the specific needs and operations of the agency.
- DCLA should ensure that key responsibilities for the management of the agency's inventory of computers and related equipment are adequately segregated or that compensating controls are implemented.
- DCLA should perform and document annual inventory counts of its entire inventory and ensure that all discrepancies are independently investigated and any adjustments to its inventory records are reviewed and approved by management.
- DCLA should ensure that it utilizes appropriate identification tags, that include sequential internal control numbers, and that the identification tag numbers are assigned sequentially and affixed on all computers and related equipment.
- DCLA should ensure that its inventory of computers and related equipment are stored in secure areas with restricted access to only authorized personnel.
- DCLA should maintain complete and accurate inventory records of all equipment which includes immediately updating its inventory records when changes occur.

• DCLA should comply with the City's inventory relinquishment policy and ensure that it adopts a consistent process and formalizes its procedures for relinquishing its computers and related items.

Agency Response

In its response, DCLA generally agreed with the audit's 12 recommendations.

AUDIT REPORT

Background

DCLA is responsible for supporting and strengthening the City's vibrant cultural life. One of its primary missions is to ensure adequate, public funding for non-profit cultural organizations, both large and small, throughout the five boroughs.

DCLA helps to support non-profit cultural organizations involved in the visual, literary and performing arts; public-oriented science and humanities institutions, including zoos, botanical gardens, and historic and preservation societies; and creative artists at all skill levels who live and work within the City's five boroughs. Through its MFTA Program, DCLA provides free supplies for use in arts programs offered by non-profit groups and City public schools.

DCLA utilizes and maintains an inventory of computers and related equipment at two locations: its main offices in Manhattan and the MFTA warehouse located in Queens. A master inventory list of these items is maintained in a Microsoft Excel file, in which DCLA had recorded a total of 194 computers and related equipment in inventory as of October 13, 2017.

During Fiscal Year 2017, DCLA expended \$6,815,645 for its Office of the Commissioner, consisting of \$4,872,115 for personal services and \$1,943,530 for other than personal services (supplies, materials and services necessary to support agency operations). According to DCLA officials, the agency purchased 133 computers and related items, totaling \$137,420, in Calendar Years 2013 through 2015.

In accordance with the City Charter, the City's Administrative Code, and Rules of the City of New York, the Mayor, the City Comptroller, and various oversight agencies have established rules and regulations to standardize administrative, financial, and management procedures across all City agencies. With regard to the agencies' control, tracking and safeguarding of physical assets, the DOI Inventory Standards establish specific controls over inventory, which among other things call for agencies to maintain permanent inventory records, centrally, for all non-consumable goods with a useful life of more than one year. In addition, the City Comptroller has issued Internal Control and Accountability Directives (Comptroller's Directives) that agencies must follow. Specifically, Comptroller's Directive #1, *Principles of Internal Control*, outlines specific internal control functions that are necessary in satisfying the agency's overall responsibility for successfully achieving its assigned mission and assuring full accountability for resources.

Objective

The objective of this audit was to determine whether DCLA has adequate controls over its inventory of computers and related equipment in compliance with applicable rules and regulations.

Scope and Methodology Statement

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe that the evidence obtained provides a reasonable basis for our

findings and conclusions based on our audit objective. This audit was conducted in accordance with the audit responsibilities of the City Comptroller as set forth in Chapter 5, §93, of the New York City Charter.

The audit scope period was from July 1, 2016 through December 4, 2017. Please refer to the Detailed Scope and Methodology at the end of this report for specific procedures and tests that were conducted.

Discussion of Audit Results with DCLA

The matters covered in this report were discussed with DCLA officials during and at the conclusion of this audit. A preliminary draft report was sent to DCLA and was discussed at an exit conference held on May 22, 2018. On May 31, 2018, we submitted a draft report to DCLA with a request for comments. We received a written response from DCLA on June 14, 2018. In its response, DCLA generally agreed with the audit's 12 recommendations.

The full text of DCLA's response is included as an addendum to this report.

FINDINGS AND RECOMMENDATIONS

DCLA's management has not instituted adequate controls over the agency's inventory of computers and related equipment. We found that DCLA did not have a comprehensive written procedures manual and only provided limited policies and procedures for the management of its computer-related inventory, which could have contributed to the issues identified in this report. Specifically, we found that DCLA did not have adequate segregation of duties over the management of its computers and related inventory, and there was inadequate evidence that the agency performed the required periodic inventory counts. We also found that DCLA did not affix sequentially numbered property identification tags on its computers and related equipment as required. In addition, DCLA did not adequately physically safeguard its computer inventory maintained in one of its storage locations. As a possible consequence of this failure to properly safeguard the computers, DCLA discovered an apparent theft of three computers during the course of the audit that might have been prevented if adequate controls had been in place.

Further, we found that DCLA's inventory records were incomplete and inaccurate. DCLA's inventory records included equipment that auditors could not find in the agency's possession and excluded other equipment that we found was in the agency's possession. Also, the records lacked the purchase dates of its computers and related items, which could be used by DCLA as part of a determination of whether those items need to be relinquished. Moreover, DCLA does not have a consistent process for salvaging and relinquishing its inventory and did not maintain adequate documentation supporting its relinquishment of its computers and related equipment.

DCLA's failure to institute adequate controls over its inventory operations significantly increases the risk of waste, fraud and mismanagement with respect to its computers and related equipment.

The details of our findings are discussed in the following sections of this report.

DCLA Lacks Adequate Inventory Controls

According to Comptroller's Directive #1, *Principles of Internal Control*, "Internal Control must be an integral part of agency management in satisfying the agency's overall responsibility for successfully achieving its assigned mission and assuring full accountability for resources." Internal controls provide reasonable assurance that management's objectives, including the safeguarding of its assets, are being achieved, and serve as the first line of defense in helping to prevent or detect errors and fraud. Controls are the policies, procedures, techniques and mechanisms used to enforce management's direction. They must be an integral part of an agency's planning, implementation, review and accountability, and are vital to it achieving the desired results.

The deficiencies detailed throughout this report may be attributed, at least in part, to management's failure to provide clear direction to its staff, in the form of detailed written policies and procedures, related to the proper maintenance of its inventory. Accordingly, management has not provided an environment conducive to adequately safeguard the agency's inventory. Potentially as a result of DCLA's inadequate controls, three computers from one of its storage locations were missing and had possibly been stolen.

Inadequate Written Policies and Procedures

The DOI Inventory Standards state that "[a]gency management is responsible for ensuring that there are policies and procedures and that these are updated." However, we found that DCLA management did not have comprehensive written procedures over the management of its computer-related inventory, and only had limited policies and procedures relative to its inventory practices in place during the audit period. As a result, DCLA's ability to ensure that agency personnel were aware of their responsibilities for maintaining DCLA's inventory of computers and related equipment was weakened. Such procedures as required by the DOI Inventory Standards should detail DCLA's policies and practices for the management of its inventory of computers and related equipment, including, but not limited to, maintaining and updating a perpetual inventory system, safeguarding its inventory, performing periodic inventory counts, investigating unresolved discrepancies and reporting possible theft to the New York City Police Department (NYPD). In addition, the procedures should detail the agency's relinquishment policies for its equipment and the steps and persons involved in the process.

Throughout the audit, we requested internal written procedures pertaining to different aspects of the management of its computer-related equipment. In response to our requests, DCLA provided a City policy governing City employees' limited personal use of City office and technology resources, which was not directly related to our audit objective. DCLA also provided a three-paragraph sheet that outlined general guidelines relating to the prevention of unauthorized software installation, the movement of desktop computers throughout the agency, the storage of laptops, and the ordering of cell phones. In addition, in response to our request for the agency's guidelines pertaining to its equipment relinquishment procedures, the agency provided various email correspondence between DCLA and the Department of Citywide Administrative Services relating to City policies and procedures concerning the relinquishment of computer equipment. Further, DCLA provided us with various documents in response to our requests that contained very brief narratives of its procedures pertaining to its management of IT-related equipment, its relinquishment of such equipment and the recording and tracking of computers.

These documents, while providing some written guidelines, lacked specific details addressing the agency's management of computers and related equipment, and they did not provide sufficient instructions as to how these procedures should be carried out and whose responsibilities it was to carry them out. For example, the procedures did not explain the process for assigning identification tags to its computer assets or identify the item-specific types of information (such as model and serial numbers) that should be included on the inventory list. The procedures also do not include sufficient detail identifying the criteria used by the agency in determining when computers and related equipment should be salvaged or relinquished, how these decisions should be documented, and what approvals are needed.

As noted in the DOI Inventory Standards,

[the] absence of clearly written policies and procedures that define limits of authority can result in staff being allowed excessive discretion that can provide opportunities for undetected thefts and other dishonest activities. Lack of procedures renders it more difficult to hold individuals accountable for their actions or failures to act.

We believe that it is important that DCLA develop a comprehensive procedures manual and disseminate it to the appropriate staff so that it would be better able to ensure that staff remain familiar with and follow the agency's guidelines.

Inadequate Segregation of Duties

DCLA has not sufficiently segregated the duties of maintaining and overseeing inventory among its staff, nor has it established sufficient compensating controls in lieu of segregating those duties. The DOI Inventory Standards require City agencies to reduce the risk of error and fraud by establishing a separation of duties between the employees who handle the assets that constitute an agency's inventory and those who record inventory transactions. Where an agency is so small that complete segregation of duties is not feasible, the DOI Inventory Standards require that compensating controls, such as increased reviews of inventory-related transactions at the managerial or supervisory level.

DCLA's Information & Technology (IT) Unit has only two individuals responsible for overseeing DCLA's computers and related equipment: the Chief Information Officer (CIO), who is responsible for the overall direction, strategy, and final selection of computers and related equipment; and the Windows Operations Systems Administrator (Systems Administrator), who is responsible for ordering such equipment with approval by the CIO.³ The Systems Administrator is also responsible for receiving, deploying, and maintaining existing computer and related equipment. In addition, these two IT unit staff members are responsible for performing periodic inventory counts and subsequently updating the inventory list. DCLA officials did not identify others in the agency who are involved in the periodic inventory counts or in the maintenance of inventory records.

DCLA should ensure that there is adequate segregation of duties among those who handle the inventory, conduct the inventory count and record inventory transactions. The lack of adequate segregation of duties or compensating controls increases the risk that misappropriation or loss of items may occur without detection because key processes intended to aid in the identification of errors or fraud are assigned to and executed by the only two individuals within DCLA's IT Unit.

No Assurance That Periodic Inventory Counts Are Performed

DCLA did not perform periodic inventory counts of its computers and related equipment in accordance with the DOI Inventory Standards. According to those standards, an agency should conduct a count of all stored goods at least once a year to ensure the accuracy of the perpetual inventory records. Such a count should be conducted by individuals independent of the inventory operation who compare the physical inventory count totals with the regularly updated ("perpetual") inventory records and by subsequent independent investigation of any discrepancies. All reconciliation adjustments made as a result of such counts and investigations are to be submitted to management for approval.

DCLA officials told us that a physical inventory count was not performed in Fiscal Year 2017, and that the last count was performed in Fiscal Year 2016 in January 2016. However, they were unable to provide us with any evidence of the January 2016 count, such as the count sheets used during that count, the names of the individuals involved in the count, or evidence demonstrating that the count results were reviewed by authorized personnel. Therefore, we have no assurance that the inventory count performed in Fiscal Year 2016 had been performed beyond the officials' representations. Moreover, since there were no records of a January 2016 inventory count, or other relevant records, we had no basis for determining what equipment DCLA had in inventory prior to September 14, 2017, the date DCLA provided us with its initial inventory list.

³ The DCLA CIO holds two titles—the CIO and the Director of IT. For the purpose of this report, we will refer to him as the CIO.

Performing periodic inventory counts is an essential control to ensure that variances are identified; that possible misappropriation or loss will be identified; that the needs of an operation for equipment and other items are accurately determined; and that obsolete items are identified and removed. Conducting periodic inventory counts along with having effective security controls can help reduce the risk that valuable computer assets might be misplaced or misappropriated.

Incorrect and Missing Property Identification Tags

The DOI Inventory Standards states that "[r]eadable, sturdy property identification tags (reading 'Property of the City of New York') with a sequential internal control number are assigned and affixed to valuable items. An inventory log containing the internal control number assignments, updated to account for relocation, is maintained."

However, we found that DCLA's computers and related equipment were incorrectly tagged and some items were missing property identification tags altogether. Our physical inventory counts determined that 44 (24 percent) of the 182 observed computers and related equipment did not have a property identification tags affixed to them, as required.⁴ These 44 items consisted of mostly printers and networking equipment; 6 of the 44 items were found in storage.

Officials stated that DCLA generally affixes property identification tags to its inventory of assigned computers and laptops, however, it does not affix tags to other computer-related equipment, such as printers and routers, or items maintained in storage that have not been assigned. Further, DCLA officials stated that newly purchased equipment placed in storage are not tagged until they are assigned and removed from storage. DCLA officials also stated that printers are not tagged because the agency Internet Protocol (IP) address is recorded in the printer display.⁵ However, the IP address is not an adequate substitute for a properly affixed identification tag, because the IP address can be modified by an unauthorized individual. Were that to occur, there would be no way of physically identifying where the equipment came from.

For the remaining 138 items (76 percent), although DCLA had affixed property identification tags to the equipment, the tags lacked key information and formatting. Specifically, the tags did not include the designation of "Property of the City of New York" or "Department of Cultural Affairs." In addition, rather than using a sequential control numbering system, it is DCLA's practice to assign an in-house identification number consisting of: (1) the name of the agency location (either "DCLA" or "MFTA"); (2) the operating system (e.g., Win7 for Microsoft Windows 7); and (3) the location or seat number based on DCLA's seating chart. For example, a computer having an identification tag number of "DCLAWIN7-01" is located at the DCLA site, has a Windows 7 operating system and is assigned to seat number 1 on its seating chart. If equipment is replaced, the same in-house identification number will be assigned to the replaced asset. According to DCLA officials, this is done in order to maintain the naming convention and numbering consistency.

Although DCLA's identification tag naming system may work for the agency in terms of maintaining numbering consistency and may be helpful in identifying assigned locations of its equipment, utilizing this system instead of using sequential control numbers makes it difficult to effectively track and account for all computers and related equipment, especially when those

⁴ In total, there were 214 items identified during our physical inventory count. We excluded 32 items—28 cell phones and 4 network servers—from the identification tag analysis because: (1) it is not DCLA's policy to place identification tags on agency cell phones; and (2) the 4 servers were not easily accessible and endeavoring to closely inspect them could have disrupted DCLA's network and, in turn, its business activities. However, these 28 cell phones and 4 servers were included as part of our inventory count.

⁵ Internet Protocol address is a logical numeric address that is used to uniquely identify each device connected to a computer communication network.

items are disposed of, which reduces the effectiveness of tags as a control mechanism. In addition, by not properly tagging such equipment (e.g., computers and printers), there is an increased risk that such items could be misplaced, lost or stolen without detection.

During the course of the audit, DCLA officials informed us that they purchased the property identification tags that conform to the DOI Inventory Standards' requirements. We physically inspected the tags and confirmed that they included the agency's name and that they were prenumbered in sequential order.

Inadequate Safeguarding of Inventory

DCLA lacks adequate controls to ensure that computers and related equipment kept in storage are appropriately safeguarded from theft or loss. According to the DOI Inventory Standards, one of the minimum requirements for the physical security of inventory is that "items of significant value, susceptible to theft, are stored in restricted, secure areas. Only designated employees enter the restricted area."

However, DCLA's inventory of unassigned computers and related equipment at MFTA were stored in the same storage room with its inventory of arts supplies. Therefore, individuals other than the Facilities Manager and the two IT individuals responsible for DCLA's computers and related equipment had access to the room on a daily basis to retrieve arts supplies requested by nonprofit groups and City public schools. This practice may have contributed to the possible theft of three spare computers that were stored in the art supply storage room, which was brought to our attention by DCLA's CIO.

DCLA officials provided us with its inventory list of computers and related equipment on September 14, 2017. On October 10, 2017, DCLA's CIO informed us of the possible theft of three computers that were included on the inventory list. (These computers had a total cost of approximately \$1,415.) At that time, DCLA officials told us that a thorough search and inquiry would be made with the MFTA warehouse manager and staff to locate the missing equipment. After the investigation, DCLA officials informed us that they could not locate the computers and were not able to determine when a theft might have occurred. DCLA filed a police report at MFTA's local police precinct in Long Island City on November 14, 2017.

Adequate security measures are necessary to deter and detect the loss of inventory. The risk from theft is significantly decreased through the development and implementation of effective security measures. According to DCLA officials, after the missing computers were identified, new protocols were instituted and all the remaining computers and related equipment that were stored in the arts supply closet were relocated to a secured MFTA Local-Area Network room, which has restricted access limited to the Facilities Manager and the two IT Unit staff.

Recommendations

1. DCLA should create a comprehensive, written manual of its inventorymanagement policies and procedures that delineate its staff's responsibilities for computers, computer-related equipment and other assets in conformity with applicable standards, and the specific needs and operations of the agency.

DCLA Response: "DCLA is in agreement and will work with its internal units to draft a comprehensive procedures manual of its inventory-management policies by December 31, 2018."

2. DCLA should ensure that key responsibilities for the management of the agency's inventory of computers and related equipment are adequately segregated or that compensating controls are implemented.

DCLA Response: "DCLA is in agreement and will work internally to distribute responsibilities among the appropriate agency units to ensure adequate segregation of duties and the implementation of compensating controls."

3. DCLA should perform and document annual inventory counts of its entire inventory and ensure that all discrepancies are independently investigated and any adjustments to its inventory records are reviewed and approved by management.

DCLA Response: "DCLA is in agreement and will look to improve its current annual inventory counting procedures. All discrepancies will be investigated and any adjustments to the inventory records will be reviewed with the Director of Finance and approved by agency management."

4. DCLA should ensure that it utilizes appropriate identification tags, that include sequential internal control numbers, and that the identification tag numbers are assigned sequentially and affixed on all computers and related equipment.

DCLA Response: "DCLA is in agreement and has purchased sequentially numbered ID tags approved by the Department of Citywide Administrative Services (DCAS). DCLA will begin affixing these tags to complement its use in tracking labels to the appropriate equipment at the beginning of Fiscal Year 2019."

5. DCLA should ensure that its inventory of computers and related equipment are stored in secure areas with restricted access to only authorized personnel.

DCLA Response: "DCLA is in agreement and confirms that storage areas are secure with access restricted to only authorized personnel."

Incomplete and Inaccurate Inventory Records

Perpetual Inventory Records Did Not Reflect the Inventory on Hand

Our count of DCLA's computers and related equipment revealed a discrepancy of 38 items between the number of items on hand and the number of items recorded on DCLA's master inventory list. This reflected both items that were on the list that could not be located and items that were located but that were not recorded on the list.

The DOI Inventory Standards state, "[a] perpetual inventory system is established to maintain an up-to-date count of all items in the inventory." To determine whether the records accurately represented the equipment on hand, we conducted physical inventory counts—accompanied by DCLA employees—of all computers and related equipment at both of DCLA's locations on November 17, 2017. Our counts identified a total of 214 items on hand.⁶ We compared those items with the items included on DCLA's master inventory list and found a discrepancy of 38 items (18 percent of the items on hand): 9 items on the list that we were unable to locate; and 29 items that we observed that were not recorded on the master inventory list. Among other things, when

⁶ The 214 items on hand included 32 items (28 cell phones and 4 servers) that either did not require identification tags or had inaccessible identification tags.

conducting our physical count of the desktop computers, based on our review of the equipment service tags (serial numbers), we were unable to locate three of the 114 desktop computers that were recorded on DCLA's inventory list and found four desktop computers in the agency's custody that were not recorded on the inventory list, resulting in a gross discrepancy of 7 desktop computers. The results of our count are shown in Table I below.

Table I

Inventory Count Results

Item Description	Number Stated in DCLA's Master Inventory List	Number Found in Auditor's Count	Shortage (fewer on hand than stated in DCLA's list)	Overage (more on hand than stated in DCLA's list)	Gross Discrepancy
Desktop Computers	114	115	3	4	7
Laptops	5	6	0	1	1
Tablets	0	2	0	2	2
Multifunction Printers (Printers/Scanners/Copiers/Fax)	31	33	6	8	14
Cell Phones	20	28	0	8	8
Networking Equipment	4	9	0	5	5
UPS (Uninterruptible Power Supply)	5	5	0	0	0
Servers	15	15	0	0	0
Monitors	0	1	0	1	1
Totals	194	214	9	29	38

To determine whether DCLA updated its inventory records to account for the discrepancies that we found during our count, we obtained an updated inventory list on November 20, 2017. Our review found that DCLA did update its records to account for the 29 items that we located and the 9 items that we could not find during our counts. DCLA officials provided explanations concerning the 9 missing items: (1) 6 items (all multi-function printers) had been relinquished on April 19, 2016 and should not have been included on its current inventory list; and (2) 3 desktop computers had been reported to the NYPD on November 14, 2017 as having been stolen.

During our review of sampled purchase orders, we identified three additional items (a Bluetooth speaker and two projectors) costing a total of \$2,625 that DCLA purchased in 2013, which were also not recorded on its master inventory list. When questioned about this, DCLA officials stated that they considered these items to be peripherals and that it is not the agency's policy to record peripherals on its inventory list. However, these three items were purchased by DCLA's IT Unit for agency operations and have a useful life of more than one year, therefore they should be included on DCLA's master inventory list.

The lack of an accurate perpetual inventory system can lead to waste through duplicative purchases of equipment that the agency already possesses. It can also increase the risk of computers and related equipment being misappropriated without detection.

Perpetual Inventory Records Do Not Contain All Required Information for Recorded Items

The DOI Inventory Standards require City agencies to maintain "[p]ermanent records . . . centrally, to track all non-consumable goods issued to each agency unit, including type of equipment, manufacturer, serial number, agency control number, . . . [and] location"

However, DCLA does not ensure that it records all of the required equipment-identifying information, such as the model, serial and sequential agency control numbers of its computers and related equipment, in its inventory lists.⁷ Our review of DCLA's master inventory list of computers and related equipment revealed that all 174 items requiring identification tags⁸ were missing unique sequentially-assigned agency control numbers. Also, the inventory list provided lacked 11 model numbers and one serial number. In addition, we identified three duplicated serial numbers, each assigned to two items at different locations, as reported on the inventory list. For example, serial number G74F8Y1 was included on the inventory list for two desktop computers, one at DCLA Location 11 and a second at DCLA Location 13B.

Further, DCLA does not include purchase dates on its inventory records. As discussed in the following section of the report, because one of the key factors DCLA considers in identifying computers and related equipment for relinquishment is their useful life, it is important for the purchase dates for each item be included on its inventory records. This would allow DCLA to readily identify items that are approaching or past their useful life.

Complete and accurate inventory records containing all necessary information are required to enable agencies to track its computers and related equipment and the location of each item, to aid in its identification and determination of whether items are eligible for relinquishment, and to help make decisions with regard to the necessity of purchasing new equipment.

Recommendations

6. DCLA should maintain complete and accurate inventory records of all equipment. This includes immediately updating its inventory records when changes occur.

DCLA Response: "DCLA agrees that the current practice of updating inventory records when changes occur must continue and will be investigating inventory management systems to further expedite and streamline this process."

7. DCLA should ensure that all necessary and required information for each inventory item is included in the master inventory record.

DCLA Response: "DCLA is in agreement and will increase its tracking information criteria moving forward."

Weaknesses in DCLA's Relinquishment Practices

According to the DOI Inventory Standards, agencies are required to develop relinquishment policies for the disposal of obsolete inventory. The DOI Inventory Standards also call for agency personnel to inspect and certify the obsolescence of goods presented for relinquishment. In

⁷ As previously noted, DCLA did not always affix property identification tags to its computer-related equipment, and when it did, the tags used by DCLA were inadequate and missing key information.

⁸ As previously noted, it was not DCLA's policy to place identification tags on agency cell phones; 20 of the 194 items on the inventory list were cell phones.

addition, the type, condition and quantity of all items presented for relinquishment are to be recorded on a relinquishment list, and relinquished items are to be deleted from the inventory log.

DCLA does not have a consistent process or formal procedures for relinquishing its computers and related equipment. Moreover, DCLA does not appear to maintain adequate documentation of its relinquished computers and related equipment, as required by DOI Inventory Standards. When we asked DCLA officials for their relinquishment list, the CIO informed us that they "had to do a search of old excel files." In addition, the relinquishment list DCLA officials initially provided us lacked key information, such as the dates the items were relinquished and the method used to dispose of the items. While DCLA officials did eventually provide the information when we asked that it be included, it was not part of an appropriately maintained relinquishment list.

The relinquishment list DCLA provided us identified 120 computers and related items that the agency claimed had been relinquished between March 2013 and April 2016, 59 items to Veolia Environmental Services (Veolia) and 61 items to Dell Marketing (Dell). DCLA also provided us with some supporting documentation, including its tracking sheet of the relinquished items and invoices associated with the relinquishment through Veolia.⁹ However, the information provided was not sufficient to account for all relinquished equipment.

DCLA provided us with waste-removal invoices for the 59 items stored within bins that Veolia picked up from DCLA between March 2013 and April 2016. When we compared the invoices to the items on DCLA's relinquishment lists, we found that DCLA did not consistently record the specific details necessary to identify each item, such as the asset tag or serial number. For 24 of the 59 relinquished items (all desktop computers), DCLA only recorded the equipment name and operating system on the relinquishment list; the asset tag and serial numbers were listed as "Unavailable." In addition, we could not definitively match the items on the relinquishment lists to the Veolia invoices because the invoices only contained a general description of the items (as being "Electronic Waste"). These documents contained no details identifying the specific items that had been relinquished.

In addition, for the remaining 61 items that DCLA officials stated were relinquished to Dell, DCLA was unable to provide sufficient supporting documentation identifying which items were relinquished to Dell. DCLA officials informed us that in March 2013 they relinquished a total of 90 pieces of equipment to Dell, consisting of a combination of desktop computers (the central processing units) and monitors;¹⁰ the disposal of these items was part of DCLA's purchase of 65 new computers. Although officials provided us with a purchase order showing that it had paid Dell for the disposal of the 90 items, there were no receipts from Dell confirming that these items had been removed. In addition, because the purchase order did not contain the serial numbers for the items that DCLA claimed were relinquished, we were unable to match the equipment on the relinquishment list to the purchase order. As a result, we are unable to confirm that these computers were in fact removed by Dell.

Further, as previously mentioned, because there were no prior inventory lists and because DCLA did not use sequentially numbered property identification tags, we have limited assurance that all equipment has been accurately accounted for.¹¹

⁹ Veolia is the City's contracted electronic waste-removal vendor.

¹⁰ For DCLA's relinquishment list of 61 items, DCLA considered a desktop computer, which consisted of a central processing unit (CPU) and a monitor, to be one item. However, the purchase order showed that 90 items were to be removed by Dell. DCLA officials attributed most of the difference to the purchase order considering CPUs and monitors to be separate pieces of equipment.

¹¹ DCLA informed us that they had performed an inventory count in January 2016, however, no records of this action were available.

Moreover, on a related note, DCLA provided no records documenting who made and approved the decision to relinquish the items, or the factors considered when determining the obsolescence of its computers and related equipment. According to DCLA's CIO, one of the deciding factors for relinquishing computers and related equipment is their useful life, which DCLA generally considers to be five years for such items. However, DCLA does not generally record the items' purchase dates on its inventory records—all items listed on its inventory records lacked a purchase date. Therefore, the agency is hindered in determining when its equipment should be relinquished.

The deficiencies of DCLA's process for relinquishing obsolete computers and related equipment increases the risk that computer equipment can be misappropriated without detection.

Sanitization or Destruction of DCLA's Electronically-stored Sensitive Information

Regarding sensitive information stored on salvaged computer equipment, the Information Security Directive issued by the City's Department of Information Technology & Telecommunications (DOITT) states that "City agencies must document the fact of destruction so that the agency can later demonstrate that the records were destroyed in accordance with standard procedures and that all legal requirements were met." The directive further states that "[a]II information technology (IT) equipment must undergo a sanitization process appropriate to the classification of information stored within it prior to disposal or reuse. In particular, if the equipment is to be disposed of, the City agencies must remove the disk media and physically destroy the equipment." If the equipment is to be reused, the directive states that "the City agency must . . . format the hard disks [and] . . . [e]nsure that the information stored in the storage areas of hard disks or other media (for example, magnetic or optical) are securely deleted by methods that irreversibly wipe the physical area of storage." Further, according to federal guidelines, following sanitization, an entity should include, at a minimum, the following details pertaining to the items that were sanitized or destroyed: manufacturer; model; serial number; method and tool that were used; and name and title of person performing the sanitization process as well as the date and location.¹²

When we inquired about the sanitizing or destruction of its salvaged computers' hard drives, DCLA officials informed us that they removed all of the hard drives associated with those computers prior to the relinquishment. DCLA's CIO informed us that he had authorized the removal of the hard drives because at the time of the relinquishment, he was not clear on the process for adequately disposing of the hard drives and decided to keep the hard drives until a suitable disposal method could be found. However, five years after its relinquishment of the computers, DCLA still has the hard drives of the relinquished computers, and we confirmed that 88 hard drives were securely stored in locked storage cabinets. We were unable to specifically link those hard drives to the relinquished computers, but according to DCLA officials, the hard drives we observed belonged to the relinquished computers. So long as those hard drives remain, they present a risk from the possible disclosure of sensitive information maintained on them.

¹² *Guidelines for Media Sanitization*, the United States Department of Commerce, National Institute of Standards and Technology, issued December 2014.

Recommendations

8. DCLA should ensure that its inventory records include purchase dates to facilitate the decision-making process on when items should be relinquished.

DCLA Response: "DCLA is in agreement and will begin centralizing the tracking of this information within an inventory management system. The coordination and implementation of this effort will involve multiple agency units including, but not limited to, Information Technology, Finance and Facilities."

9. DCLA should ensure that relinquishment decisions are documented and approved by an appropriate official.

DCLA Response: "DCLA is in agreement. In drafting a comprehensive procedures manual, DCLA will ensure that relinquishment decisions are documented and approved by an appropriate official."

10. DCLA should comply with the City's inventory relinquishment policy and ensure that it adopts a consistent process and formalizes its procedures for relinquishing its computers and related items.

DCLA Response: "DCLA is in agreement. The agency typically obtains approval via emails and phone calls with DCAS and/or the Department of Sanitation when relinquishing computers and related equipment. In drafting and implementing a comprehensive procedures manual, DCLA will ensure that processes are consistent and centrally tracked going forward."

11. DCLA should, when relinquishing items, ensure that it protects the agency's sensitive and confidential information saved on its storage media (e.g., on its computers' internal hard drives) through a timely sanitization or physical destruction of the storage media. A record of the destruction should be maintained, including at a minimum, the following details: manufacturer; model; serial number; method and tool that were used; name and title of person performing the sanitization process, and the date and location.

DCLA Response: "DCLA understands the importance of protecting all agency sensitive and confidential information and is actively investigating industry best practices to continue to improve the maintenance and documentation of this process."

12. DCLA should immediately sanitize or destroy the internal hard drives removed from its relinquished computers and any other storage media no longer in use to ensure that the agency's sensitive and confidential records are protected.

DCLA Response: "DCLA is in agreement and is continuing the process of appropriately sanitizing and documenting internal hard drives and other stored media using industry standard best practices."

DETAILED SCOPE AND METHODOLOGY

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective. This audit was conducted in accordance with the audit responsibilities of the City Comptroller as set forth in Chapter 5, §93, of the New York City Charter.

The audit scope period was July 1, 2016 to December 4, 2017. To accomplish our objective, we carried out the following procedures.

To obtain an understanding of DCLA's organizational structure, as it relates to the management of its computers and related equipment, we reviewed the DCLA organization chart to identify the reporting structures of the units and the personnel involved.

To obtain an understating of staff responsibilities and the internal control structure over DCLA's management of its computers and related inventory, we conducted walkthrough meetings and interviewed the following key agency personnel:

- Director of Finance;
- Chief Information Officer/Director of IT;
- Windows Operations Systems Administrator; and
- Capital Equipment Manager.

We also performed a walkthrough of the agency inventory layout and storage locations at its two sites—DCLA's Commissioner's Office and the MFTA office. In addition, we requested and reviewed DCLA's written policies and procedures to obtain a general understanding of its regulations governing the management of the agency's computers and related equipment.

To obtain an understanding of the regulations governing DCLA's management of its computers and related equipment, we reviewed and used as criteria the following:

- DOI's Standards for Inventory Control and Management,
- Comptroller's Directive #1, Principles of Internal Control;
- Department of Information Technology and Telecommunications' (DoITT's) *Citywide Policy on City-Owned Mobile Devices and Services*;
- DoITT's Operational Handbook for Asset Management;
- DoITT's Information Security Directive; and
- United States Department of Commerce, National Institute of Standard and Technology, *Guidelines for Media Sanitization*, issued December 2014.

To determine whether DCLA performed annual inventory counts, we requested documentation of the agency's inventory counts performed between July 2015 and September 2017.

DCLA provided us with a master inventory list of its computers and related equipment on September 14, 2017. We initially reviewed and evaluated the inventory list for duplicate entries,

errors and information that is required by DOI Inventory Standards (e.g., equipment type, manufacturer, serial number and agency control number). After identifying some data irregularities, DCLA provided us with an updated list on October 13, 2017. To assess the accuracy and completeness of the master inventory list, we reviewed the list for information such as: item description, equipment make/model, serial number, identification tag number, purchase date, purchase price, physical location and condition.

We also requested and reviewed all purchase orders from DCLA's most recent capital purchases of computers and related equipment made from Fiscal Year 2013 through Fiscal Year 2015. We traced each item on the purchase orders to the inventory list by matching the listed item descriptions and serial numbers to ensure that all items were accurately recorded in DCLA's master inventory list. In addition, we independently generated reports from the City's Financial Management System of DCLA payments from July 1, 2012 to October 6, 2017, to identify possible payments made for purchases of computers and related items. We judgmentally selected all payments charged to Object Codes 199 (Data Processing Supplies) and 332 (Purchase of Data Processing Equipment), as well as payments made to commonly known vendors that sell computer-related items (e.g., Dell, Apple and Staples). In total, we identified 20 transactions having a total cost of \$29,829-4 transactions charged to Object Code 199; 3 transactions charged to Object Code 332; and 13 transactions involving three vendors known to sell computer, but payments were charged to object codes other than Object Codes 199 and 332. We then reviewed DCLA's purchase documentation (e.g. purchase orders and invoices) for these 20 transactions to determine whether any computers or related equipment were purchased. We identified 20 such items, costing a total of \$18,218, associated with 8 of these transactions; the remaining 12 transactions were for the purchase of miscellaneous office supplies and office equipment. Finally, we determined whether these purchases of computers and related equipment were properly recorded on DCLA's master inventory list.

Further, we conducted simultaneous physical inventory counts at DCLA's headquarters in Manhattan and its MFTA warehouse in Queens on November 17, 2017. We attempted to locate all of the items on DCLA's master inventory list and compared critical information, such as: serial numbers, tag numbers and location, to the information on the master inventory list. We also identified and recorded items we observed during our counts that were not identified in the agency's inventory list. For each inventory item checked, we determined whether the item was sequentially tagged with appropriate property identification tags. We conducted our counts in the presence of DCLA personnel and asked them to sign the count sheets at the completion of the count to confirm the results.

To determine whether DCLA assigned wireless devices to current employees and whether services were discontinued upon the separation of the employees from the agency, we reviewed wireless bills for October and November 2017, and compared the payments made on behalf of DCLA staff to the list of personnel employed by DCLA during these months.

To determine whether DCLA followed proper relinquishment procedures, we obtained a list of all computers and related items relinquished between July 1, 2012 and December 4, 2017, and reviewed supporting documentation to determine whether the items had been disposed of according to relevant policies and procedures. We reviewed the documentation provided to determine whether the relinquishment process at DCLA had been implemented consistently, whether all relinquished equipment had been properly identified and accounted for, and whether the hard drives had been properly sanitized or destroyed.

Although the results of our tests of various samples were not statistically projected to their respective populations, these results, together with the results of our other audit procedures and

tests, provided a reasonable basis for us to evaluate DCLA's controls over its inventory of computers and related equipment.



31 Chambers Street, 2nd Floor New York, NY 10007 Phone: 212.513.9300 Fax: 212.341.3810

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TOM FINKELPEARL Commissioner



June 14, 2018

Marjorie Landa Deputy Comptroller for Audit Office of the Comptroller 1 Centre Street New York, NY 10007

Re: Agency Response to Draft Audit Report on the Department of Cultural Affairs' Controls Over Its Inventory of Computers and Related Equipment, dated May 31, 2018, Audit No. MJ18-072A (the "Draft Audit Report")

Dear Ms. Landa,

The Department of Cultural Affairs (DCLA) is committed to strengthening its internal control environment and systems, and we appreciate the opportunity to review and respond to the findings and recommendations outlined in the Draft Audit Report from the Office of the Comptroller.

Below, please find DCLA's responses to the Draft Audit Report's recommendations.

Recommendation 1: DCLA should create a comprehensive, written manual of its inventory-management policies and procedures that delineate its staff's responsibilities for computers, computer-related equipment and other assets in conformity with applicable standards, and the specific needs and operations of the agency.

DCLA Response: DCLA is in agreement and will work with its internal units to draft a comprehensive procedures manual of its inventory-management policies by December 31, 2018.

Recommendation 2: DCLA should ensure that key responsibilities for the management of the agency's inventory of computers and related equipment are adequately segregated or that compensating controls are implemented.

DCLA Response: DCLA is in agreement and will work internally to distribute responsibilities among the appropriate agency units to ensure adequate segregation of duties and the implementation of compensating controls.



Recommendation 3: DCLA should perform and document annual inventory counts of its entire inventory and ensure that all discrepancies are independently investigated and any adjustments to its inventory records are reviewed and approved by management.

DCLA Response: DCLA is in agreement and will look to improve its current annual inventory counting procedures. All discrepancies will be investigated and any adjustments to the inventory records will be reviewed with the Director of Finance and approved by agency management.

Recommendation 4: DCLA should ensure that it utilizes appropriate identification tags, that include sequential internal control numbers, and that the identification tag numbers are assigned sequentially and affixed on all computers and related equipment.

DCLA Response: DCLA is in agreement and has purchased sequentially numbered ID tags approved by the Department of Citywide Administrative Services (DCAS). DCLA will begin affixing these tags to complement its use in tracking labels to the appropriate equipment at the beginning of Fiscal Year 2019.

Recommendation 5: DCLA should ensure that its inventory of computers and related equipment are stored in secure areas with restricted access to only authorized personnel.

DCLA Response: DCLA is in agreement and confirms that storage areas are secure with access restricted to only authorized personnel.

Recommendation 6: DCLA should maintain complete and accurate inventory records of all equipment. This includes immediately updating its inventory records when changes occur.

DCLA Response: DCLA agrees that the current practice of updating inventory records when changes occur must continue and will be investigating inventory management systems to further expedite and streamline this process.

Recommendation 7: DCLA should ensure that all necessary and required information for each inventory item is included in the master inventory record.

DCLA Response: DCLA is in agreement and will increase its tracking information criteria moving forward.



Recommendation 8: DCLA should ensure that its inventory records include purchase dates to facilitate the decision-making process on when items should be relinquished.

DCLA Response: DCLA is in agreement and will begin centralizing the tracking of this information within an inventory management system. The coordination and implementation of this effort will involve multiple agency units including, but not limited to, Information Technology, Finance and Facilities.

Recommendation 9: DCLA should ensure that relinquishment decisions are documented and approved by an appropriate official.

DCLA Response: DCLA is in agreement. In drafting a comprehensive procedures manual, DCLA will ensure that relinquishment decisions are documented and approved by an appropriate official.

Recommendation 10: DCLA should comply with the City's inventory relinquishment policy and ensure that it adopts a consistent process and formalizes its procedures for relinquishing its computers and related items.

DCLA Response: DCLA is in agreement. The agency typically obtains approval via emails and phone calls with DCAS and/or the Department of Sanitation when relinquishing computers and related equipment. In drafting and implementing a comprehensive procedures manual, DCLA will ensure that processes are consistent and centrally tracked going forward.

Recommendation 11: DCLA should, when relinquishing items, ensure that it protects the agency's sensitive and confidential information saved on its storage media (e.g., on its computers' internal hard drives) through a timely sanitization or physical destruction of the storage media. A record of the destruction should be maintained, including at a minimum, the following details: manufacturer; model; serial number; method and tool that were used; name and title of person performing the sanitization process, and the date and location.

DCLA Response: DCLA understands the importance of protecting all agency sensitive and confidential information and is actively investigating industry best practices to continue to improve the maintenance and documentation of this process.

Recommendation 12: DCLA should immediately sanitize or destroy the internal hard drives removed from its relinquishment computers and any other storage media no longer in use to ensure that the agency's sensitive and confidential records are protected.

DCLA Response: DCLA is in agreement and is continuing the process of appropriately sanitizing and documenting internal hard drives and other stored media using industry standard best practices.



Thank you to the Comptroller's Office audit staff for their efforts around this review. We look forward to implementing the changes as outlined above in order to further strengthen our existing processes and procedures.

Sincerely,

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Daniel Contafio Chief Information Officer

Cc: Tom Finkelpearl/DCLA George Davis/MOO Michael Lamanna/Comptroller Terri Richardson/City Hall Phillippa Shao/DCLA Laura Wnek/DCLA