



# Buffalo City School District Internal Controls Over Information Technology Assets

Report of Examination

Period Covered:

July 1, 2007 — April 6, 2010

2010M-105



Thomas P. DiNapoli

# Table of Contents

	<b>Page</b>
<b>AUTHORITY LETTER</b>	2
<b>INTRODUCTION</b>	3
Background	3
Objective	3
Scope and Methodology	3
Comments of District Officials and Corrective Action	3
<b>INFORMATION TECHNOLOGY ASSETS</b>	5
Inventory Management Software	5
Asset Tracking Software	6
Recommendations	7
<b>APPENDIX A</b> Response From District Officials	9
<b>APPENDIX B</b> OSC's Comment on the District's Response	13
<b>APPENDIX C</b> Audit Methodology and Standards	14
<b>APPENDIX D</b> How to Obtain Additional Copies of the Report	15
<b>APPENDIX E</b> Local Regional Office Listing	16

# State of New York Office of the State Comptroller

---

---

## **Division of Local Government and School Accountability**

December 2010

Dear School District Officials:

A top priority of the Office of the State Comptroller is to help school district officials manage their districts efficiently and effectively and, by so doing, provide accountability for tax dollars spent to support district operations. The Comptroller oversees the fiscal affairs of districts statewide, as well as districts' compliance with relevant statutes and observance of good business practices. This fiscal oversight is accomplished, in part, through our audits, which identify opportunities for improving district operations and Board of Education governance. Audits also can identify strategies to reduce district costs and to strengthen controls intended to safeguard district assets.

Following is a report of our audit of the Buffalo City School District, entitled Internal Controls Over Information Technology Assets. This audit was conducted pursuant to Article V, Section 1 of the State Constitution and the State Comptroller's authority as set forth in Article 3 of the General Municipal Law.

This audit's results and recommendations are resources for district officials to use in effectively managing operations and in meeting the expectations of their constituents. If you have questions about this report, please feel free to contact the local regional office for your county, as listed at the end of this report.

Respectfully submitted,

*Office of the State Comptroller  
Division of Local Government  
and School Accountability*

# Introduction

## **Background**

The Buffalo City School District (District) is governed by the Board of Education (Board) which comprises nine elected members. The Board is responsible for the general management and control of the District's financial and educational affairs. The Superintendent of Schools (Superintendent) is the chief executive officer of the District and is responsible, along with other administrative staff, for the day-to-day management of the District under the direction of the Board. The responsibility for developing, implementing, and monitoring internal controls over information technology asset inventories, such as laptop computers, is shared between the Information Technology (IT) Department and the Finance Department.

There are 61 school buildings in operation within the District, with approximately 34,500 students and 6,800 employees. The District's budgeted expenditures for the 2008-09 fiscal year were \$750.2 million, which were funded primarily with State aid, sales tax, real property taxes and grants. As of January 2010, the District owned more than 23,300 computers, with an estimated value in excess of \$17.5 million.

## **Objective**

The objective of our audit was to evaluate the District's internal controls over its Information Technology asset inventories. Our audit addressed the following related question:

- Are internal controls over Information Technology asset inventories appropriately designed and operating effectively?

## **Scope and Methodology**

We examined the District's internal controls over its Information Technology asset inventories for the period July 1, 2007 to April 6, 2010.

We conducted our audit in accordance with generally accepted government auditing standards (GAGAS). More information on such standards and the methodology used in performing this audit are included in Appendix C of this report.

## **Comments of District Officials and Corrective Action**

The results of our audit and recommendations have been discussed with District officials and their comments, which appear in Appendix A, have been considered in preparing this report. Except as specified in Appendix A, District officials generally agreed with our recommendations and indicated that they planned to initiate corrective action. Appendix B includes our comment on the issues raised in the District's response letter.

The Board has the responsibility to initiate corrective action. Pursuant to Section 35 of the General Municipal Law, Section 2116-a (3)(c) of the Education Law and Section 170.12 of the Regulations of the Commissioner of Education, a written corrective action plan (CAP) that addresses the findings and recommendations in this report must be prepared and forwarded to our office within 90 days, with a copy forwarded to the Commissioner of Education. To the extent practicable, implementation of the CAP must begin by the end of the next fiscal year. For more information on preparing and filing your CAP, please refer to our brochure, *Responding to an OSC Audit Report*, which you received with the draft audit report. The Board should make the CAP available for public review in the District Clerk's office.

## Information Technology Assets

The District's inventory of electronic equipment represents a significant investment of District resources. The Board and District officials are responsible for adopting policies and procedures for the protection of these IT assets as part of their oversight function. This policy should, at a minimum, designate a property manager, provide guidelines for the maintenance of perpetual inventory records, designate the types of equipment that will be included, and provide for periodic physical inventories. A District employee, independent of the purchasing process, should be responsible for conducting the physical inventory and compare the results with the perpetual records. Any differences should be investigated and resolved.

The Board's adopted inventory policy covering IT assets stated that "The Superintendent or his/her designee shall be responsible for maintaining a continuous and accurate inventory of equipment owned by the District ... All supplies and equipment purchased and received by the School District shall be checked, logged, and stored through an established procedure." However, the District did not have adequate, detailed procedures in place that clearly defined employees' responsibilities for maintaining an inventory system for IT assets.

We found that although the District has spent over \$227,000 for software tools in an attempt to implement viable inventory controls, they have failed to use those tools properly. As a result the District has not gotten any discernible benefit from this \$227,000 and therefore do not have assurances that their inventory system adequately controls the significant investment in IT resources.

### Inventory Management Software

In July 2008, the District contracted with a vendor<sup>1</sup> to perform a variety of asset management services, including a physical inventory of IT assets, at a cost of \$71,276. The District uses a software product to maintain the perpetual inventory record of these IT assets. For this software to function, "reporting agents" are installed on District computers via the District's servers, when they are connected to the network. The reporting agent installed on individual computers automatically reports into the software database certain information about the computer, which is the basis of the inventory. This same database also contains non-computer IT asset information. IT assets, such as printers and cameras, are manually added to the database by District staff. The District spent \$50,425 for this software from 2007-2009.

<sup>1</sup> The District also paid this vendor over \$16 million for IT equipment and services over the five fiscal years through June 30, 2009.

When we requested inventory data generated by this software product, District IT officials stated there were discrepancies with the data and that we could not rely on the information. District IT officials provided us with copies of e-mails to the software vendor that provided evidence of various problems they had with the product as proof of their concerns about the reliability of the inventory data. In 2010, the District negotiated a monthly subscription fee of \$1,623 with the vendor as opposed to the annual fee it was paying, in anticipation of ending its use. However, District staff later told us they plan on continuing to use this software as part of their future inventory system, until a better product is identified. District officials have been aware of these problems for some time and could not provide us with a reliable inventory. They continue to pay \$1,623 per month for use of software that does not produce useful reports. The District reported that they replaced the inventory records generated by the software system with records developed from a physical count of computers.

### **Asset Tracking Software**

The District had also purchased asset tracking software for installation on its laptop computers at a total cost of \$176,728. More specifically, 1,781 asset tracking software licenses with a “recovery guarantee” were purchased for \$156,728 and another 2,500 asset tracking software licenses with only the tracking feature (i.e., without the recovery guarantee) at a cost of \$20,000. When installed on a laptop, this product is designed to periodically report the computer’s location to a database maintained by the vendor. District officials can generate a report from the database which lists, by laptop computer, the last time it connected to the internet and the approximate location of the computer at the time it connected. For laptops with the recovery guarantee feature, District officials are required to alert the vendor if a laptop is missing or stolen.<sup>2</sup> The vendor will reimburse the District the cost of the laptop, up to \$1,000, if it cannot be recovered. The District must follow the terms of service to remain eligible for this payment. The guaranteed recovery service is available for five years from the date of purchase.

We found that District IT officials do not effectively use the asset tracking software. They did not periodically review reports generated from the database that listed all the computers with the software installed to identify computers that could be lost or stolen. Furthermore, the report does not highlight any missing or lost laptops, or alert District officials of laptops that have not reported in for long periods of time. District IT officials stated they needed to review the reports manually and due to the large number of laptops, other employees would need to be dedicated to perform these reviews. Any theft deterrence the software may have provided to the District was

---

<sup>2</sup> The District must notify the vendor within 90 days of the date of the actual theft.

minimal because IT staff had not informed District employees this software had been installed on the laptops and there were no stickers or other notifications on the machines.

In January 2010, District IT staff provided us with a report that listed 25 laptops in various stages of recovery. The report indicated that only four laptops reported as lost were recovered by the vendor. Another four theft reports were either made in error or the computer was subsequently found by the District. The remaining 17 missing computers had not been recovered. Of these 17 laptops, 10 were eligible for the recovery guarantee payment. However, the vendor declined the recovery guarantee payment on nine of the missing laptops, because District officials did not report the missing laptops in a timely manner to the vendor.

As further evidence of the District's poor utilization of this control tool, we reviewed information from the tracking software and identified approximately 250 laptops that had last reported to the tracking software database between June 2007 and June 2009 but were not found on the inventory records from the recent physical inventory. We selected 20 laptops from this group and asked District officials to locate them for us. District officials knew the location of only one of the 20 computers, based on their inventory records. Had District officials periodically reviewed reports generated from the tracking database, they may have been able to identify whether these computers were lost or stolen and possibly recovered them or determined if they were disposed of appropriately. Furthermore, the District purchased the recovery guarantee for eight of 19 computers, but apparently never informed the vendor the computers were missing.

During our audit, District IT officials scheduled a meeting with the vendor to learn how to effectively use the product. While this was a positive step, we question why the District paid for the service from 2006 to date if they were not aware of how to fully exploit the product's capabilities. Near the completion of our audit field work, District IT officials stated that they plan to discontinue use of the asset tracking product once the current licenses expire.

District officials cannot be certain that all IT assets are accounted for properly. Because the District has such a large amount of money invested in IT assets (\$17.5 million as of January, 2010), District officials should re-evaluate the efficiency of their inventory controls to be sure that IT assets are accounted for.

## **Recommendations**

1. The District should develop clear and detailed policies and procedures that assign responsibilities to specific officials,

independent of the IT purchasing process, to perform physical inventories and maintain perpetual inventory records.

2. The IT and Accounting Departments should re-evaluate the usefulness of the inventory management software if it continues to produce inaccurate information.
3. The IT and Accounting Departments should use the reports generated from the asset tracking software database to identify possible lost or stolen computers and attempt to locate them.
4. District officials should report missing laptops to the asset tracking software vendor in a timely manner to be eligible for the recovery guarantee payment.

## **APPENDIX A**

### **RESPONSE FROM DISTRICT OFFICIALS**

The District officials' response to this audit can be found on the following pages.



**DR. JAMES A. WILLIAMS**  
Superintendent of Schools

# BOARD OF EDUCATION

65 Niagara Square • Room 801 City Hall  
Buffalo, New York 14202  
Phone: (716) 816-3570 • Fax: (716) 851-3937

## BOARD OF EDUCATION MEMBERS

**MR. RALPH R. HERNANDEZ**  
President  
**MRS. PAMELA D. PERRY-CAHILL**  
**MRS. VIVIAN O. EVANS**  
Vice-President-Student Achievement  
**MR. CHRISTOPHER L. JACOBS**  
Vice-President-Executive Affairs  
**MRS. FLORENCE D. JOHNSON**  
**MRS. MARY RUTH KAPSIK**  
**MR. JOHN B. LICATA**  
**MR. JASON M. McCARTHY**  
**MR. LOUIS J. PETRUCCI**

December 8, 2010

Mr. Robert Meller, Chief Examiner  
Office of the State Comptroller  
295 Main Street, Suite 1032  
Buffalo, New York 14203-2510

Dear Mr. Meller:

The Buffalo Public School District is in receipt of the draft “Report of Examination of Internal Controls over Information Technology Assets for the Period July 1, 2007 through April 6, 2010” (hereafter “Report”). On behalf of the Board of Education and the District’s Administration, we would like to thank the local field staff of the Comptroller’s office for their efforts in preparing this report. We have carefully reviewed the findings and recommendations. Please accept this as the response of the Buffalo City School District (hereafter “District”) and attach this document to the issued Report.

Over the last ten years, the District has significantly expanded its use of technology assets and in particular, the number of computers, which have grown more than four-fold. This rapid expansion in technology assets, costing tens of millions of dollars, necessitated the District to purchase additional software and services to help maintain and track the inventory, as the original systems in place were not designed to handle the growth. The purchases which you discussed in your Report included the inventory management software, a consultant to perform a physical inventory of our assets, and the asset tracking software. We respectfully disagree with the Report’s assessment that the District did not receive any discernable benefits from this \$300,000 investment. Those purchases were made through a careful consideration of the District’s needs and to support its programs in place.

See  
Note 1  
Page 13

The District’s original fixed asset system was designed mainly for large capital projects and was not capable of maintaining the volume of computers purchased over the last ten

years. Therefore it was considered a necessity to purchase an inventory management system that was designed specifically for technology assets. While there are bugs in every software product, this product did provide a valuable inventory record and allowed computers to self-report their school locations when they connected to the internet—this has saved extensive manpower in verifying the location of most machines.

As part of the process of developing procedures specific to tracking technology assets, a vendor was brought in to physically count the District's technology assets, including computers, printers, peripheral and other electronic equipment. This physical inventory was completed in June 2009. Through December 2009, the District carefully validated this data and concluded that it was more accurate and complete than the current inventory. It was determined that the physical inventory should replace the current inventory rather than attempt to combine the two inventories together. This process was simpler, eliminated the risk of duplicate assets and allowed each asset record to be built with a consistent field structure. This new inventory was loaded into the system in April 2010 and has been maintained since. Therefore, in late 2009, when asked by the State auditors for the current inventory data in our system, we provided it, but with the caveat that the information in the current database was not as complete or accurate and would soon be replaced by the recent physical inventory.

Throughout this time period, the District was constantly engaged with our inventory management software vendor to remediate past problems and ensure the system could handle the needs of the District going forward. This included face to face meetings with their technical staff, along extensive testing and training. The District concluded that the software would meet its needs.

With respect to the asset tracking software, the District made a decision to purchase the product at the same time it initiated a 1 to 1 laptop program for students in 2005 as a measure to safeguard the asset in the event of theft or loss. After dissolution of the 1 to 1 student laptop program, along with the District's experience with its use and benefit, it was determined to discontinue the use and purchase of the software.

We therefore believe that these software tools and services were necessary and beneficial towards the District's goal of maintaining an accurate technology asset inventory. This is particularly true in relation to the \$17.5 million in computer assets discussed as part of this Report. As programs and technology change, and the District has been and will continue to be diligent in finding cost effective ways of maintaining control of its inventory or in eliminating services no longer needed. The recommendations of this Report will be faithfully included in our control procedures.

With respect to the specific recommendations,

- 1) The District, as noted above, is in process of developing clear and detailed procedures for maintaining an accurate perpetual inventory of technology assets. We will incorporate the feedback given in this Report and in other consultations

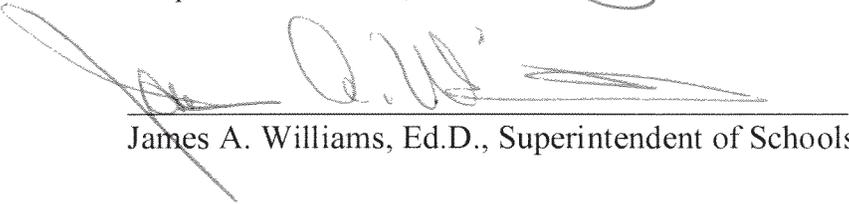
with the State auditors into the finalized asset management procedure document and include it as part of the corrective action plan.

- 2) The District is satisfied that the current inventory software will produce accurate information. However, due to the pace of technological change, new software products may be developed or new needs identified that will change our assessment in the future. Therefore, the District will continue evaluate the inventory software and consider new or supplementary systems that will enhance the accuracy of our technology asset inventory.
- 3) The District has performed a cost benefit analysis and has determined that the cost of the software plus the cost of managing it is in unreasonable excess of the minimal cost of theft or loss the District has experienced to date and therefore the District cannot justify the continued use. The District has restricted laptop use to qualified professional employees only.
- 4) The District agrees that any asset eligible for the recovery guarantee payment will be reported in timely manner once the qualified professional employee has reported the asset stolen to the District.

Respectfully Submitted,



Ralph R. Hernandez, President, Board of Education



James A. Williams, Ed.D., Superintendent of Schools

## **APPENDIX B**

### **OSC'S COMMENT ON THE DISTRICT'S RESPONSE**

#### Note 1

The \$300,000 quoted by District officials reflects the cost of the software plus the cost of the physical inventory, \$71,276. We adjusted our audit report to reflect the total amount spent on the two software programs, which was approximately \$227,000. While District officials may have purchased these two programs after careful consideration, the programs did not provide the intended benefits.

## APPENDIX C

### AUDIT METHODOLOGY AND STANDARDS

Our overall goal was to assess the adequacy of the internal controls put in place by officials to safeguard District assets. To accomplish this, we performed an initial assessment of the internal controls so that we could design our audit to focus on those areas most at risk. Our initial assessment included evaluations of the following areas: purchasing, payroll and personal services, and information technology.

During the initial assessment, we interviewed appropriate District officials, performed limited tests of transactions and reviewed pertinent documents, such as District policies and procedures manuals, Board minutes, and financial records and reports. In addition, we obtained information directly from the computerized financial databases and then analyzed it electronically using computer-assisted techniques. This approach provided us with additional information about the District's financial transactions as recorded in its databases. Further, we reviewed the District's internal controls and procedures over the computerized financial databases to help ensure that the information produced by such systems was reliable.

After reviewing the information gathered during our initial assessment, we determined where weaknesses existed, and evaluated those weaknesses for the risk of potential fraud, theft and/or professional misconduct. We then decided upon the reported objectives and scope by selecting for audit those areas most at risk. We selected information technology inventory for further audit testing.

For information technology assets, we interviewed information technology and accounting department staff about the District's inventory controls and how they used inventory software products for this purpose. We obtained administrative policies and procedures regarding the District's inventory controls and the contract between the District and the vendor performing the physical inventory of IT assets for the District. We reviewed paid vouchers from the vendor from which the District purchased the bulk of its computers. District officials provided a schedule prepared by the vendor that listed, by serial number, computers the District purchased from this vendor. We made requests through the District to the vendors of software tracking products to address more technical questions and obtained a report from District IT staff of computers identified by the asset tracking software as potentially missing. We electronically compared a report generated from the asset tracking software database to the District's inventory record. For computers not found on the inventory, our testing of exceptions was based on the last recorded date the computer reported into the asset tracking software database.

We conducted this performance audit in accordance with generally accepted government auditing standards (GAGAS). 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.

## APPENDIX D

### HOW TO OBTAIN ADDITIONAL COPIES OF THE REPORT

To obtain copies of this report, write or visit our web page:

Office of the State Comptroller  
Public Information Office  
110 State Street, 15th Floor  
Albany, New York 12236  
(518) 474-4015  
<http://www.osc.state.ny.us/localgov/>

**APPENDIX E**  
**OFFICE OF THE STATE COMPTROLLER**  
**DIVISION OF LOCAL GOVERNMENT**  
**AND SCHOOL ACCOUNTABILITY**

Steven J. Hancox, Deputy Comptroller

**LOCAL REGIONAL OFFICE LISTING**

---

**ALBANY REGIONAL OFFICE**

Kenneth Madej, Chief Examiner  
Office of the State Comptroller  
22 Computer Drive West  
Albany, New York 12205-1695  
(518) 438-0093 Fax (518) 438-0367  
Email: [Muni-Albany@osc.state.ny.us](mailto:Muni-Albany@osc.state.ny.us)

Serving: Albany, Columbia, Dutchess, Greene,  
Schenectady, Ulster counties

**BINGHAMTON REGIONAL OFFICE**

Office of the State Comptroller  
State Office Building, Room 1702  
44 Hawley Street  
Binghamton, New York 13901-4417  
(607) 721-8306 Fax (607) 721-8313  
Email: [Muni-Binghamton@osc.state.ny.us](mailto:Muni-Binghamton@osc.state.ny.us)

Serving: Broome, Chenango, Cortland, Delaware,  
Otsego, Schoharie, Sullivan, Tioga, Tompkins counties

**BUFFALO REGIONAL OFFICE**

Robert Meller, Chief Examiner  
Office of the State Comptroller  
295 Main Street, Suite 1032  
Buffalo, New York 14203-2510  
(716) 847-3647 Fax (716) 847-3643  
Email: [Muni-Buffalo@osc.state.ny.us](mailto:Muni-Buffalo@osc.state.ny.us)

Serving: Allegany, Cattaraugus, Chautauqua, Erie,  
Genesee, Niagara, Orleans, Wyoming counties

**GLENS FALLS REGIONAL OFFICE**

Karl Smoczynski, Chief Examiner  
Office of the State Comptroller  
One Broad Street Plaza  
Glens Falls, New York 12801-4396  
(518) 793-0057 Fax (518) 793-5797  
Email: [Muni-GlensFalls@osc.state.ny.us](mailto:Muni-GlensFalls@osc.state.ny.us)

Serving: Clinton, Essex, Franklin, Fulton, Hamilton,  
Montgomery, Rensselaer, Saratoga, Warren, Washington  
counties

**HAUPPAUGE REGIONAL OFFICE**

Ira McCracken, Chief Examiner  
Office of the State Comptroller  
NYS Office Building, Room 3A10  
Veterans Memorial Highway  
Hauppauge, New York 11788-5533  
(631) 952-6534 Fax (631) 952-6530  
Email: [Muni-Hauppauge@osc.state.ny.us](mailto:Muni-Hauppauge@osc.state.ny.us)

Serving: Nassau, Suffolk counties

**NEWBURGH REGIONAL OFFICE**

Christopher Ellis, Chief Examiner  
Office of the State Comptroller  
33 Airport Center Drive, Suite 103  
New Windsor, New York 12553-4725  
(845) 567-0858 Fax (845) 567-0080  
Email: [Muni-Newburgh@osc.state.ny.us](mailto:Muni-Newburgh@osc.state.ny.us)

Serving: Orange, Putnam, Rockland,  
Westchester counties

**ROCHESTER REGIONAL OFFICE**

Edward V. Grant, Jr., Chief Examiner  
Office of the State Comptroller  
The Powers Building  
16 West Main Street – Suite 522  
Rochester, New York 14614-1608  
(585) 454-2460 Fax (585) 454-3545  
Email: [Muni-Rochester@osc.state.ny.us](mailto:Muni-Rochester@osc.state.ny.us)

Serving: Cayuga, Chemung, Livingston, Monroe,  
Ontario, Schuyler, Seneca, Steuben, Wayne, Yates  
counties

**SYRACUSE REGIONAL OFFICE**

Rebecca Wilcox, Chief Examiner  
Office of the State Comptroller  
State Office Building, Room 409  
333 E. Washington Street  
Syracuse, New York 13202-1428  
(315) 428-4192 Fax (315) 426-2119  
Email: [Muni-Syracuse@osc.state.ny.us](mailto:Muni-Syracuse@osc.state.ny.us)

Serving: Herkimer, Jefferson, Lewis, Madison,  
Oneida, Onondaga, Oswego, St. Lawrence counties