

Financial Management Practices Performance Audit Report

Baltimore County Public Schools

October 2008



OFFICE OF LEGISLATIVE AUDITS
DEPARTMENT OF LEGISLATIVE SERVICES
MARYLAND GENERAL ASSEMBLY

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DEPARTMENT OF LEGISLATIVE SERVICES
OFFICE OF LEGISLATIVE AUDITS
MARYLAND GENERAL ASSEMBLY

Bruce A. Myers, CPA
Legislative Auditor

October 15, 2008

Senator Verna L. Jones, Co-Chair, Joint Audit Committee
Delegate Steven J. DeBoy, Sr., Co-Chair, Joint Audit Committee
Members of Joint Audit Committee
Annapolis, Maryland

Ladies and Gentlemen:

We conducted an audit of the financial management practices of the Baltimore County Public Schools (BCPS) in accordance with the requirements of the State Government Article, Section 2-1220(e) of the Annotated Code of Maryland. BCPS is the third largest public school system in Maryland based on the number of students enrolled. The educational services are delivered in 158 schools and 10 centers (where students are enrolled on a short-term basis), with fiscal year 2007 expenditures totaling \$1.2 billion. The objectives of this audit were to evaluate whether BCPS procedures and controls were effective in accounting for and safeguarding its assets and whether its policies provided for the efficient use of financial resources.

Our report disclosed that, in many cases, BCPS had procedures and controls in place to ensure the safeguarding of assets and the efficient use of financial resources. Nevertheless, our report contains 18 recommendations to enhance controls in BCPS' existing financial management systems and processes in areas such as payroll, facilities, and information systems. For example, management should ensure that employees' system and application accesses are required by their job functions and do not compromise accountability and control over accounts payable and payroll disbursements. Other issues to be addressed include improving controls over information technology resources, benchmarking performance of maintenance operations, and analyzing all alternatives to reduce construction costs and address overcrowding at certain schools.

An Executive Summary of our findings can be found on page i, immediately following this cover letter, and our audit scope, objectives, and methodology are explained on page 63. We wish to acknowledge the cooperation extended to us during our audit by BCPS.

Respectfully submitted,

Bruce A. Myers, CPA
Legislative Auditor

Executive Summary

The Office of Legislative Audits has conducted an audit to evaluate the effectiveness and efficiency of the financial management practices of the Baltimore County Public Schools (BCPS) in accordance with the State Government Article, Section 2-1220(e) of the Annotated Code of Maryland. State law requires the Office to conduct such an audit of each of the 24 public school systems in Maryland and provides that the related audit process be approved by the Joint Audit Committee. Since the Committee approved the audit process in September 2004, we have issued audit reports related to 11 school systems; BCPS represents the twelfth to date. The approved process included 11 functional areas to be audited at each system. The following are summaries of the findings in these areas at BCPS.

Revenue and Billing Cycle (see pages 7 through 9)

According to BCPS' audited financial statements, \$1.4 billion in revenue was received during fiscal year 2007, the vast majority of which was received via electronic funds transfers from other governmental entities. Procedures and controls for these revenue sources and related accounts receivable were found to be adequate. Procedures over other sources, such as cash receipts from food service operations, were also found to be adequate.

Federal Funds (see pages 11 through 13)

Annually, BCPS is subject to an audit of its federally-funded programs (often referred to as the Single Audit, a requirement of Circular A-133, which is issued by the U.S. Office of Management and Budget). Due to parallels between that work and the scope of our audit, we placed significant reliance on the results of the independent audits of the fiscal year 2006 and 2007 grant activity. The related reports stated that BCPS complied, in all material respects, with the requirements applicable to its major federal programs. In addition, with respect to internal controls over compliance with and the operation of major federal programs, the auditors noted no reportable conditions and no matters considered

to be material weaknesses. Also, BCPS had adequate processes for identifying children eligible for Medicaid-subsidized services and for recovering the related costs, and for obtaining funding under the federal Schools and Libraries Universal Service Program.

For fiscal year 2007, BCPS' expenditures of federal fund awards totaled \$75.8 million, and federal fee-for-service revenues included \$7 million for Medicaid-subsidized services for qualified students, and \$5.5 million as a Medicare Part D subsidy for keeping retirees on BCPS' prescription drug plan.

Procurement and Disbursement Cycle (see pages 15 through 19)

According to BCPS records, non-payroll disbursements totaled \$354 million during fiscal year 2007. BCPS has a number of policies and procedures in place designed to help ensure proper procurement and payment of related invoices. BCPS also exercised appropriate controls over travel expenditures. However, BCPS did not always adequately restrict employees' capabilities on the automated system and several employees had capabilities that potentially weakened established internal controls. With respect to BCPS-issued purchasing cards, we noted that new purchasing cards were sent directly to the employee responsible for requesting the cards, rather than to an independent employee. This condition could allow unauthorized purchases to be made on improperly obtained cards.

Human Resources and Payroll (see pages 21 through 25)

BCPS employed 16,890 full-time and part-time employees during 2007 with associated payroll costs of \$895 million. We noted that BCPS had a highly centralized process to monitor vacancies and control the hiring of new employees which helps to control payroll costs, BCPS' largest category of expenditures. BCPS should address certain deficiencies within payroll processing. These include limiting access in the automated system for processing critical payroll transactions, verifying changes made to the payroll records, and restricting access to the payroll checks prior to distribution to originating locations. Although BCPS had taken certain steps to address current workforce planning with regards to hiring and retaining instructional and non-instructional staff, BCPS had not prepared a formal plan to address long-term workforce

needs (for example, five or more years in the future). It is estimated that about 11 percent of BCPS staff could retire within the next five years (over 1,500 employees), increasing the importance of BCPS attracting and retaining staff.

Inventory Control and Accountability (see pages 27 through 29)

BCPS has formal policies governing the purchase and disposal of property and materials and supplies. However, these policies could be strengthened and more control is needed over the equipment and textbook inventories and the related record keeping. For example, physical inventories of textbooks and certain sensitive equipment (that is, items more susceptible to theft such as computers, digital cameras, and audio/video equipment) were not performed. According to BCPS records, as of June 30, 2007, the book value of its equipment totaled \$19.7 million based on a capitalization threshold of \$5,000 per item.

Information Technology (see pages 31 through 33)

BCPS maintains and administers a computer network, computer operations, and a number of significant financial and academic information system applications. BCPS developed and periodically updated written technology plans. However, we identified several areas in need of improvement, including procedures for the off-site backup of critical data, the development of a comprehensive disaster recovery plan, the monitoring of security over critical servers, the strengthening of policies over passwords and accounts, and the controlling of physical access to the main computer room.

Facilities Construction, Renovation, and Maintenance (see pages 35 through 46)

BCPS' staff of 1,300 custodial and maintenance personnel maintains its 168 schools and centers, and various other support facilities. BCPS used a long-term plan for the construction and renovation of school facilities. Plans were updated annually and reflected input from the Board. BCPS has also adopted a number of State required guidelines and practices for procuring and monitoring construction and renovation projects. Based on our

tests, contracts for major projects were properly procured and the related payments were properly processed. BCPS should better analyze and use available alternatives to address significantly overcrowded schools and limit construction costs to the extent possible. BCPS established a comprehensive energy management conservation program and also used a centralized energy monitoring and control system in most of its schools. Although BCPS maintained a detailed and comprehensive work order system, it did not make full use of the system. For example, data from the system were not accumulated and analyzed to determine overall efficiencies or to evaluate individual performance.

Transportation Services (see pages 47 through 50)

BCPS is responsible for the safe transportation of approximately 70,100 eligible students, of which 4.4 percent are disabled. BCPS owns and operates almost 90 percent of the buses that transport these students. BCPS used a number of recognized best practices to increase student transportation efficiency, such as staggering school arrival and dismissal times to enable buses to perform multiple trips. Nevertheless, we noted that BCPS should implement its electronic routing software to further increase operational efficiency, since our tests found low ridership on many buses.

Food Services Operations (see pages 51 through 55)

BCPS has implemented a number of best practices to help reduce food service costs, such as using performance measures to gauge operational efficiency. BCPS has adequate procedures in place to identify students eligible for free and reduced-price meals under the federal national school meals programs. Although certain financial reports indicated that the food service department was self-sufficient, the full amount of indirect overhead costs attributable to food service operations was not recognized in certain financial reports. Thus, food service operations may actually be operating at a deficit that is being absorbed by other departments and the BCPS' general fund.

School Board Operations and Oversight (see pages 57 through 60)

The 11-member Board has adopted policies governing the operations of the Board and BCPS. Financial information is made available to the proper parties (such as the Board, principals and administrative supervisors) in a timely and consistent manner. BCPS also has an internal audit function that reports directly to the Board, and the Board had adopted a detailed ethics policy that applies to Board members and all employees of BCPS. The Board should consider including in its operating budget and master plan additional financial-related objectives, goals, and performance measures to assess the cost effectiveness and efficiency of various departments.

Other Financial Controls (see pages 61 through 62)

BCPS has appropriate procedures in place to govern its cash and investments and appeared to adequately cover risks through insurance policies. In addition, procedures were in place to investigate student residency issues and collect tuition from non-resident students.

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Background Information

Oversight

Baltimore County Public Schools (BCPS) is governed by a local school board, consisting of 11 appointed members. The vast majority of BCPS funding is provided by the Baltimore County and State governments. In addition, the Maryland State Department of Education (MSDE) exercises considerable oversight through the establishment and monitoring of various financial and academic policies and regulations, in accordance with certain provisions of the Annotated Code of Maryland. MSDE also works with BCPS to comply with the requirements and mandates of the federal No Child Left Behind Act of 2001. The Baltimore County government exercises oversight principally through approval of the BCPS annual operating and capital budgets.

Statistical Overview

According to MSDE student enrollment records, BCPS has the third largest student enrollment among the 24 public school systems in Maryland, and ranks as the 25th largest school system in the United States. From fiscal year 1997 to 2007, the total full-time regular and special education pupil population has increased 1.7 percent from 104,073 to 105,839, with projected decreases to 103,110 by 2015. Presently, BCPS has 158 schools, consisting of 103 elementary, 27 middle, 24 high, and 4 special education schools. BCPS also has 10 centers where students are enrolled only on a short-term basis. A review of its budget history disclosed an increase in the BCPS total operating expenditures from \$633 million in fiscal year 1998 to \$1.2 billion in fiscal year 2007. The largest expense category is salaries, wages, and benefits, accounting for 84 percent of total operating expenditures. BCPS' budgeted full-time positions in fiscal year 2006 as reported to MSDE totaled 14,087, which consisted of 9,294 instructional and 4,793 non-instructional employees.¹

¹ The primary source for this background information is MSDE statistical data, including the annual Fact Book.

Certain statistical information contained in this report was taken from reports distributed by MSDE and represents the most current comparable information available at the time of our audit. These MSDE reports are based on self-reported data from the 24 Maryland public school systems, and MSDE does not warrant the comparability or completeness of the data.

External Audit of Fiscal Years 2006 and 2007 Activity

Annually, BCPS engages a certified public accounting firm to independently audit its fiscal year-end financial statements. Additionally, the auditor conducts what is referred to as a Single Audit of BCPS federal grant programs (as required by federal regulations). The financial statement audit reports and Single Audit reports for the 2006 and 2007 fiscal years were issued in September 2006 and September 2007, respectively. None of the reports included any reportable conditions nor any significant findings on BCPS record keeping, processes, and controls.

Chapter 1

Revenue and Billing Cycle

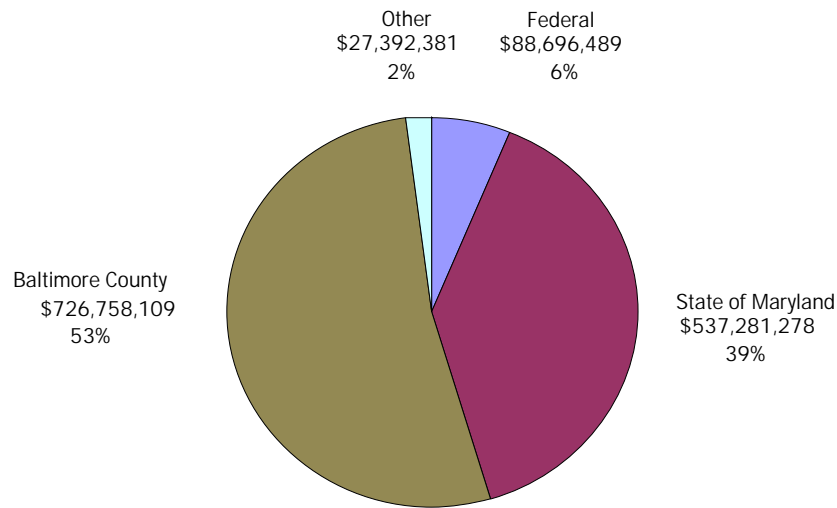
According to BCPS' audited financial statements for the fiscal year ended June 30, 2007, \$1.4 billion in revenue was received by BCPS during fiscal year 2007. Because of similarities in the work of the certified public accounting firm in its independent audit of the BCPS financial statements and the scope of our audit in this area, we placed significant reliance on the results of the firm's audits of the fiscal year 2006 and 2007 financial statements for certain revenue transactions, including State, local, and federal sources. The auditor's procedural review and testing did not disclose any findings related to the collection of revenue and related accounts receivable. School activity funds² were periodically audited by the BCPS internal audit department. The internal auditor's reports reviewed did not disclose any consistent or pervasive control weaknesses.

Background

BCPS revenues consist primarily of funds received from Baltimore County and the State. Other revenue sources include federal grant funds, receipts from the sale of food, and interest income. Revenues from all sources for fiscal year 2007 totaled approximately \$1.4 billion, according to the audited financial statements, as shown in the following chart.

² The Board has a fiduciary responsibility to ensure that the school activity funds are used only for intended purposes by those to whom the assets belong. Receipts for the school activity funds, which totaled \$16.9 million during fiscal year 2007, are not included in the \$1.4 billion revenue total because the Board cannot use these assets to finance its operations.

Chart 1
Sources of Fiscal Year 2007 Revenue
(\$1.4 Billion)



Source: BCPS fiscal year 2007 audited financial statements

In addition to the above revenues, schools also collect school activity funds for various purposes such as yearbook and school trips. These school activity funds are accounted for separately by each school and reported, in summary, in the audited financial statements. According to the audited financial statements, as of June 30, 2007, the School Activity Fund balance totaled \$7.3 million and fiscal year 2007 revenue totaled \$16.9 million.

Revenue and Billing Cycle Activities Were Generally Adequate

Due to similarities between the work of the certified public accounting firm that audited the BCPS financial statements and the

scope of our audit in this area, we placed significant reliance on the results of the audits of the fiscal year 2006 and 2007 financial statements. The firm's procedural review and testing disclosed no findings regarding the collection of revenues from State, local, federal, and other sources (such as food service receipts) and related accounts receivable. This included the use of electronic funds transfers to process the related revenues.

Recommendations

None

Chapter 2

Federal Funds

Annually, BCPS is subject to an audit of its federally-funded grant programs (often referred to as the Single Audit, a requirement of Circular A-133, which is issued by the U.S. Office of Management and Budget). The reports on the audits of BCPS fiscal year 2006 and 2007 federal grant activity were issued by its independent certified public accounting firm on September 8, 2006, and September 26, 2007, respectively. In its reports, the firm stated that BCPS complied, in all material respects, with the requirements applicable to its major federal programs. In addition, with respect to internal controls over compliance with and the operation of major federal programs, the firm noted no reportable conditions³ and no matters considered to be material weaknesses.⁴

BCPS had an adequate process for the identification of children eligible for Medicaid-subsidized services and recovering the related costs.

³ Reportable conditions are issues relating to a significant deficiency in the design or operation of the internal control over compliance that, in the auditor's judgment, could adversely affect the grantee's ability to administer a major federal program.

⁴ Material weaknesses, which are more severe problems, are reportable conditions in which the existing internal control components might not detect, in a timely manner, a significant instance of noncompliance with applicable requirements of laws, regulations, contracts, and grants caused by error or fraud.

Background

BCPS receives funds primarily from Baltimore County, the State, and the federal government. Most funds received from Baltimore County and the State were unrestricted; however, federal funds were generally restricted for use for a specified program, such as the National School Lunch Program or special education. According to the audited Schedule of Federal Awards, fiscal year 2007 expenditures of federal funds totaled \$75.8 million. BCPS also obtained revenues from various federal fee-for-service payments during fiscal year 2007, including \$7 million for Medicaid-subsidized⁵ services for qualified students, and \$5.5 million as a Medicare Part D subsidy for keeping retirees on BCPS' prescription drug plan.

BCPS Established Adequate Internal Controls over Federal Grants and Complied with Federal Grant Requirements

Because of the certified public accounting firm's work on BCPS federal fund expenditures, we relied on the firm's results. Besides expressing an opinion on BCPS compliance with the terms of several grant programs, the firm also considered the impact of BCPS' internal control structure on compliance and audited the fiscal year 2006 and 2007 required Schedule of Federal Awards, which includes claimed and reported grant-related expenditures. In its reports, the firm stated that BCPS complied, in all material respects, with the requirements applicable to its major federal grant programs. In addition, with respect to internal controls over compliance with and the operation of major federal programs, the auditors noted no reportable conditions and no matters considered to be material weaknesses.

⁵ The Federal Medical Assistance Program, or Medicaid, and Medicare are not deemed grant programs under Circular A-133 and are not included in the Single Audit.

Processes Were in Place to Identify Students Eligible for Medicaid-Subsidized Services and to Obtain Federal Cost Reimbursements

To identify students who are eligible for Medicaid-subsidized services, BCPS routinely submitted an electronic data file listing all BCPS students to MSDE for electronic matching against the Maryland Department of Health and Mental Hygiene's records of children eligible for Medicaid-subsidized services. The electronic matches identified newly-eligible students and verified the continued eligibility of previously identified students. In addition, BCPS engaged in outreach activities to families to identify both educational and medical services appropriate for special needs students. BCPS also obtained timely reimbursements from the federal government for the costs of Medicaid-eligible services.

BCPS Used Funding from the Federal E-Rate Program to the Extent Authorized

BCPS applied for and obtained funding under the federal Schools and Libraries Universal Service Program (E-Rate). This program provides discounts to subsidize schools in obtaining telecommunications and Internet access. According to BCPS records, E-Rate reimbursements received during fiscal year 2007 totaled approximately \$1.2 million, which was an increase of 43 percent over reimbursements received for fiscal year 2004. A pattern of steady increases was evident since fiscal year 2004.

Recommendations

None

Chapter 3

Procurement and Disbursement Cycle

BCPS followed certain procurement best practices, such as purchasing items through contracts already procured by the State and other local governments (referred to as “piggybacking”) when it was beneficial to do so and establishing a comprehensive credit card purchasing program. Also, policies have been established defining the conditions under which employees may be reimbursed for travel, including advanced approval and documentation requirements. We found these requirements were complied with in the travel reimbursements we tested.

Although BCPS principally used manual processes to control procurement and disbursement transactions processed through its automated procurement and accounting system, our audit disclosed that significant vulnerabilities existed as a result of employees’ assigned capabilities in the system. These weaknesses included unrestricted user access to the system that allowed certain employees the capability to add or adjust vendor information, generate purchase orders, and process payments. Also, the initial receipt and distribution of credit cards was not properly controlled.

Background

According to BCPS records, non-payroll related disbursements totaled \$354 million during fiscal year 2007. BCPS generally used an automated process for purchasing. Paper requisitions were

prepared and were required to be approved by supervisory personnel within the requesting department. The purchasing department generated automated purchase orders and submitted them to vendors. Purchases anticipated to cost more than \$25,000 required bids from multiple vendors, were handled by the centralized purchasing department, and required Board approval.

Invoices were received by the finance office or the ordering department. In either case, the ordering department approved a copy of the invoice or other receiving document to indicate receipt of the goods and services and approval for payment. The approved invoice was submitted to the accounts payable office, where it was manually matched to the original approved purchase order, before payment processing. Payments were processed through an automated system, which prints vendor checks and also posts the payments to the financial records.

BCPS also had established a comprehensive credit card purchasing program and, during fiscal year 2007, BCPS employees used the 1,650 credit cards issued to make purchases totaling \$11 million, with the monthly invoices being paid directly by the school system.

BCPS Used Several Best Practices to Address Its Procurement and Disbursement Processing Needs

BCPS had instituted certain best practices, including the following, that should enhance the cost effectiveness of its procurement and disbursement transactions.

- When it is beneficial to do so, BCPS “piggybacks” onto contracts already procured by the State, other local governments, and cooperative purchasing organizations. This practice saves BCPS certain costs associated with the procurement of the contracts and provides larger discounts as a result of the combined purchasing power of multiple entities.
- BCPS established a comprehensive credit card purchasing program that saved BCPS on traditional processing costs, such as purchase orders and checks. Although elsewhere in this chapter we have a recommendation for improving the program, the program was implemented with many best practices to control and account for credit card purchasing. Specifically, BCPS published a comprehensive credit card procedures

manual; provided individual training to each cardholder as to their responsibilities and card usage requirements; and established transaction monitoring by the finance office. BCPS received annual rebates from the bank issuing the credit cards. For example, the rebate was \$119,584 for fiscal year 2007. To further streamline small purchases, BCPS also used e-commerce account cards to make online catalog purchases from pre-approved vendors.⁶ Like the credit cards, a principal or designated fiscal supervisor will assign employees to use the e-commerce account cards to purchase from the approved online catalogs. For fiscal year 2007, charges using the e-commerce account cards totaled approximately \$3.2 million.

- Policies have been established defining the conditions under which employees may be reimbursed for travel, including advanced approval and documentation requirements. We found these requirements were complied with in the travel reimbursements we tested. BCPS' travel expenditures totaled \$1.9 million during fiscal year 2007, which included \$814,633 for out-of-state travel.

BCPS Should Improve Internal Control Over Its Procurements and Disbursements

Although BCPS principally used manual processes to control procurement and disbursement transactions processed through its automated procurement and accounting system, our audit disclosed that significant vulnerabilities existed as a result of employees' assigned capabilities in the system. Specifically, 16 employees had system access capabilities that allowed them to generate purchase orders that were not subject to online approval. Also, 28 employees, including 5 of the aforementioned 16 employees, had access capabilities to process invoice payments that were not subject to online approval and were not required to be matched electronically for accuracy and authorization to an approved purchase order in the automated system. The aforementioned 5 employees also had the ability to add vendors to the system. BCPS had established manual controls over purchase orders and invoice

⁶ Although functioning much like a procurement card, e-commerce account cards can only be used for online transactions from pre-authorized vendors.

payments, such as manual approval of purchase orders and assigning accounting employees to match checks printed to source documentation. Although these manual controls may prevent employees in other BCPS departments from processing unauthorized transactions, the controls may not always prevent unauthorized purchases or disbursements processed by the aforementioned employees, particularly those employees who worked in the purchasing department (9 employees) and the accounts payable department (10 employees). Not adequately restricting users' online capabilities to those necessary to perform their job duties created vulnerabilities that could allow unauthorized transactions to be processed without detection. BCPS processed disbursements totaling approximately \$279 million using its automated system during fiscal year 2007, including approximately \$68 million in payments that were not subject to online matching of the payment to a related purchase order.

BCPS Should Improve Control Over Credit Card Issuance

Although BCPS had developed policies and procedures to help ensure proper credit card usage, our review of controls disclosed that the duties over the ordering and initial receipt of credit cards from the bank were not adequately segregated. The individual responsible for ordering new credit cards also initially received these cards from the issuing bank prior to the cards' distribution to BCPS personnel. Consequently, this employee could direct that a card be issued, obtain the card, and make unauthorized purchases, without timely detection. BCPS used 1,650 procurement cards for small procurements totaling approximately \$11 million for fiscal year 2007.

Recommendations

1. BCPS should limit employee capabilities on the procurement and accounting system to those necessary for their job duties to ensure that segregation of duties is not compromised and to ensure that an independent review of every procurement and disbursement transaction is properly completed.

2. BCPS should segregate the duties of ordering new credit cards from the initial receipt and distribution of the cards.

Chapter 4

Human Resources and Payroll

BCPS exercised position control and filled vacant positions by use of centralized hiring of all new employees. This helps BCPS control payroll costs, which represent the largest category of expenditures. Our review disclosed that BCPS should address certain deficiencies within the payroll processing. These include limiting access in the automated system for processing critical payroll transactions, verifying changes made to the payroll records, and restricting access to the payroll checks prior to distribution to originating locations. Although BCPS had taken certain steps to address current workforce planning with respect to hiring and retaining instructional and non-instructional staff, BCPS had not prepared a formal plan to address long-term workforce needs (for example, five or more years in the future). A large number of BCPS staff could retire within the next five years, increasing the importance of BCPS attracting and retaining staff.

Background

BCPS used an automated system to maintain human resources information, process payroll, and track employee leave balances. According to BCPS records, salary, wage and benefit costs for fiscal year 2007 totaled approximately \$895 million. As of September

2006, BCPS had 14,175 full-time equivalent employees. BCPS' ratio of students to employees (7.5 to 1) was reasonable compared to similarly-sized school systems (see Table 1 below).

| Table 1 Comparison of Employee to Student Ratios – Fall 2006 | | | |
|---|--|---|---------------------------|
| School System | Number of Students (as of September 30, 2006) | Number of Full-Time Equivalent Employees (as of October 1, 2006) | Student to Employee Ratio |
| Baltimore Co. | 105,839 | 14,175 | 7.5 to 1 |
| Anne Arundel Co. | 73,066 | 9,046 | 8.1 to 1 |
| Prince George's Co. | 131,014 | 17,742 | 7.4 to 1 |
| Baltimore City | 82,381 | 11,569 | 7.1 to 1 |
| Montgomery Co. | 137,814 | 20,096 | 6.9 to 1 |

Source: MSDE 2006/2007 Fact Book

BCPS' automated system automatically generated biweekly time records and any adjustments were processed by designated employees—known as timekeepers—at the various locations (such as schools). Time records were processed electronically by the system. The system generated payroll checks and direct deposit advices.

Payroll Internal Controls Need to Be Strengthened

Three employees had been assigned access to personnel and payroll menus in the automated system that provided them virtually complete control over the payroll process – Although these employees needed access to certain components of the menus to perform their jobs, BCPS had not developed a process to restrict access to only those components necessary to perform specific job duties. As a result, the current system's inability to limit access to certain functions within menus allowed them to perform potentially incompatible functions, such as adding a new employee and processing the related payroll. Furthermore, 13 employees,

including the aforementioned three employees, had the ability to change employees' address and bank account information in the automated system for direct deposit payees, as well as the ability to independently process payroll. Although we found no evidence of unauthorized hiring or payments, unnecessary employee access to the system could be used to process unauthorized payroll payments that may not be readily detected.

Independent reviews of payroll entries to source documents need to be performed and documented – BCPS should strengthen its payroll procedures by requiring independent reviews of all payroll entries and ensuring that all employees performing the reviews are actually independent from the payroll adjustment process. Specifically, our audit disclosed the following conditions:

- The reported work hours of approximately 160 custodian supervisors were not subject to independent verification to source documentation. According to BCPS records, fiscal year 2007 overtime expenditures for BCPS employees totaled approximately \$5 million, including approximately \$645,000 related to custodian supervisors.
- Independent reviews of payroll records in the Substitute Employee Management System (SEMS) were not always documented by school administrators as required. Specifically, our test of payroll records from June 2007 for 20 schools disclosed that there was no documentation for 8 of these schools that the principal had approved the SEMS payroll records for the time worked by substitutes and for the absences recorded for employees.
- Payroll adjustments (such as overtime hours worked) processed by employees in the Office of Payroll were not always subject to independent review. Specifically, eight employees in the Office were responsible for entering adjustments to employee payroll, but these adjustments were not independently approved for accuracy and propriety. Furthermore, these employees had access to the related payroll checks prior to distribution.

Existing Workforce Planning Should Be Expanded to Include Future Critical Needs

BCPS has taken certain steps to address current workforce needs, such as determining current workforce qualifications and the need for both instructional and non-instructional positions, and has implemented a number of teacher retention and recruiting initiatives. While these BCPS efforts address immediate workforce needs (1-2 years), the efforts do not consider expected long-term workforce needs (for example, 5 or more years). Based on August 2007 BCPS reports, approximately 11 percent of BCPS employees (greater than 1,500 employees), including 12 percent of teachers, currently have at least 25 years of service. Furthermore, these reports show an additional 6 percent of BCPS employees, including 6 percent of teachers, will have at least 25 years of service in another 5 years. Given the increasing number of employees at or close to retirement age, and the increased qualifications required for teachers by the federal No Child Left Behind Act, BCPS could experience difficulty in hiring qualified administrative, financial, and instructional employees in the future.

Workforce planning involves analyzing the existing workforce and identifying gaps between future needs and current resources and then implementing procedures to address the gaps over the intervening years.

Recommendations

3. BCPS should take the necessary corrective actions to ensure that adequate internal controls are in place over the human resources and payroll system. For example, users' system capabilities and job duties should be segregated, and an independent review and approval process should be established over payroll-related changes recorded in the system.
4. BCPS should also establish procedures to ensure that all employee time records are independently approved and that verifications to source documentation (such as time clock cards) are documented and retained for review purposes. In addition, BCPS should ensure that payroll adjustments recorded in the automated system are independently reviewed and that such

reviews are documented. Furthermore, BCPS should restrict employees with the ability to process adjustments from having access to the related paychecks.

5. BCPS should expand its workforce planning to include long-term needs for both critical instructional and non-instructional positions.

Chapter 5

Inventory Control and Accountability

BCPS has formal policies governing the purchase and disposal of property and materials and supplies. However, BCPS policies in these areas could be strengthened and more control was needed over its equipment and textbook inventories and the related record keeping. For example, physical inventories of certain sensitive equipment (that is, items more susceptible to theft, such as computers, digital cameras, and audio/video equipment) were not performed.

Background

BCPS maintained one warehouse for materials and supplies. Inventory records were maintained using an automated system. According to BCPS records, materials and supplies inventory (not including food services) totaled \$548,000 as of June 30, 2007.

BCPS uses an automated fixed asset system to track property and equipment. According to BCPS records, as of June 30, 2007, the depreciated value of equipment was \$19.7 million. Certain individuals were responsible for the property at each location (that is, each school or central office). Property at BCPS included furniture and equipment items, such as desks, computers, audio and video items, and various other items. All property items with a cost of \$5,000 and greater were to be included in this centralized inventory system and capitalized for financial statement reporting.

BCPS maintains a separate database of certain computer hardware assigned to schools but this database does not include computer hardware assigned to central offices.

BCPS Needs to Improve Controls Over its Equipment

BCPS should improve its controls and procedures over its equipment inventories. BCPS had not established an equipment policy to require that all computers and sensitive items susceptible to theft (such as PDAs, digital cameras, and audio/video equipment) be added to the equipment records and counted during periodic physical inventories. Specifically, BCPS' Board-approved policy only required that items with a cost of at least \$5,000 be added to the equipment records and counted during periodic physical inventories. Additionally, a separate database maintained for computer hardware contained only items assigned to schools, but not to central offices. BCPS' purchases of computers during the period from July 1, 2004 to March 31, 2007 totaled approximately \$15.5 million, which included approximately \$7.5 million for items with a purchase price of less than \$5,000 that were not subject to routine physical inventories.

Also, BCPS' procedures were inadequate for its annual physical inventory of capital equipment items with a value of \$5,000 or greater. Specifically, the employees designated as custodians responsible for maintaining the inventory records of capital equipment items (usually school principals or office managers) were also responsible for ensuring the completion of the related physical inventories. However, BCPS had not established a policy to verify the accuracy of the inventory counts reported by the aforementioned employees, as recommended by the Government Finance Officers Association.

Policies and Controls Over Textbooks Should Be Enhanced

BCPS should strengthen its controls and record keeping for textbooks. BCPS did not maintain centralized records of textbook inventories. Rather, BCPS relied on schools to maintain records of textbooks on hand and to perform related physical inventories.

However, BCPS had not established a procedure to verify that schools actually conducted periodic physical inventories and to ensure that schools used the inventory results to make purchasing decisions (that is, whether used textbooks could reduce new purchases) or to maximize redistribution of excess books to other schools in BCPS. We were advised that BCPS relied on the use of budgets to limit individual school spending on textbooks, and that textbook expenditures within annual budgeted amounts were not questioned. According to BCPS records, fiscal year 2007 textbook and classroom supply expenditures totaled approximately \$22 million.

Recommendations

6. BCPS should establish an equipment policy requiring that computers and sensitive items susceptible to theft (such as, PDAs, digital cameras, and audio/video equipment), be added to its inventory records and counted during periodic physical inventories. In addition, BCPS should establish a policy to verify the accuracy of the completed capital equipment inventory counts.
7. BCPS should better account for its textbooks by developing and enforcing written policies and procedures to govern the accounting and safeguarding of these items. Specifically, BCPS should maintain comprehensive, centralized textbook records and document all physical inventories, including supervisory approval for any subsequent adjustments needed to the records. BCPS also should use the results of its textbook physical inventories to enhance redistribution in lieu of purchasing new textbooks.

Chapter 6

Information Technology

BCPS maintains and administers a computer network, computer operations, and a number of significant financial and academic information systems applications. BCPS developed and periodically updated a written technology plan that was linked to the BCPS' Master Plan.

However, we identified several areas in need of improvement, including strengthening policies over passwords and accounts, improving procedures for the backup of data, monitoring security over critical servers, and developing a comprehensive disaster recovery plan.

Background

The BCPS Department of Technology (DOT) maintains and administers BCPS' computer network, computer operations, and instructional information system applications. BCPS operates a wide area network, with Internet connectivity, which connects the individual schools' local networks to the computer resources located at the BCPS headquarters. DOT consists of 107 employees that provide instructional and technical support for the entire system. Several significant financial and academic related information system applications exist. For example, the financial applications include modules for budgeting, payroll, human resources, purchasing, and accounts payable.

Technology Plans Were Regularly Developed to Address Current and Future Needs of BCPS

BCPS prepared an annual technology plan as part of its Master Plan, and prepared a separate, more extensive technology plan every three years. These plans established a vision and mission for technology in BCPS and have defined goals. These plans addressed various topics, including student achievement, system security, hardware and software replacement, replacement cost schedules, professional development, and training.

Steps Should Be Taken to Ensure Adequate Security Over IT Applications

Changes should be made to existing procedures to ensure that all access is appropriate. Specifically, user access to computer resources was commonly controlled through the use of individual passwords and user logon ids; however, these tools could be more effectively used. For example, default system accesses were not disabled or otherwise modified. Also, automatic password expirations (requiring periodic password changes) were not enforced for all users. BCPS did not fully use existing system audit software to monitor security events, access permissions, and failed attempts to access certain critical data and, as a result, unauthorized or inappropriate activities affecting the integrity of critical production applications, data, and system files could occur and remain undetected. Finally, certain operating system security options were not properly configured, which could enable hackers to exploit vulnerabilities.

Data Processing Functions Should Be Better Safeguarded From Disruption

Physical access to the computer room was not adequately controlled as the access code for one of the doors to the room had not been changed in at least a year, which could allow unauthorized access by individuals no longer employed by BCPS. In addition, critical financial information system backup files were not stored at an appropriate off-site location to protect the information in case of

catastrophic damage to the computer room. Finally, BCPS lacked a formal, comprehensive, disaster recovery plan, which should include:

- the identification of an alternate site in the event of a disaster
- applications prioritized for recovery
- disaster recovery team designations and areas of responsibility
- testing of the disaster recovery plan
- restoration of network connectivity

Recommendations

8. BCPS should implement appropriate security measures to safeguard, and monitor the security over, its applications and data systems.
9. BCPS should improve physical controls and safeguards over its computer operations, should institute appropriate off-site backup procedures, and should develop a comprehensive disaster recovery plan.

Chapter 7

Facilities Construction, Renovation, and Maintenance

BCPS develops long-term plans for the construction and renovation of school facilities. These plans are updated annually and also reflect input from the Board. We noted that BCPS has adopted a number of State required guidelines and practices for the procurement and monitoring of construction and renovation projects. Further, BCPS had developed an energy conservation program and other measures to control energy costs.

However, BCPS should analyze and use all alternatives to address overcrowded schools including improving the use of schools with available capacity in order to minimize the need for new school construction. BCPS should also ensure that construction change orders are submitted to the State's Public School Construction Program, as required.

Regarding facility maintenance, BCPS needs to eliminate the backlog of maintenance work orders, use information provided on satisfaction surveys to resolve issues and improve maintenance services, and implement a performance measurement system to compare its maintenance staffing levels to other school systems to determine whether additional efficiency measures should be implemented.

Background

BCPS maintains 168 schools and centers, and various support facilities with a staff of approximately 1,300 custodial and maintenance personnel. The average BCPS school is 44 years old. BCPS uses a six-year Capital Improvement Plan (CIP) to identify ongoing and projected needs for new building and major renovations. In developing the CIP, BCPS solicited input and used information from various sources such as public meeting and student demographic data. The CIP is approved by the Board and elected county officials, and certain objectives and strategies related to school facilities from the CIP are incorporated into the BCPS Master Plan. In the fiscal year 2007 CIP, construction, major renovations, repairs, and systemic improvements were estimated to cost \$728 million during fiscal years 2007 through 2012. BCPS' reported deferred maintenance totaled \$15 million as of July 2007.

Table 2 below presents a comparison of BCPS fiscal year 2006 plant costs (that is, maintenance and operational costs) and square footage with those of other similar systems in Maryland. It depicts two measurements to assess plant costs: plant costs per student, and plant costs per square foot. BCPS costs were generally comparable to other school systems in its peer group.

Table 2
Plant Cost Comparison Per Student and Per Square Foot
Fiscal Year 2006 (Unaudited)

| School System | Plant Costs | | | Square Footage Per Student | Total Gross Square Footage |
|-------------------------------|---------------|------------------|-----------------|----------------------------|----------------------------|
| | Total | Per Student ① | Per Square Foot | | |
| Baltimore Co. | \$ 94,015,905 | \$ 878.55 | \$6.07 | 144.8 | 15,491,126 |
| Prince George's Co. | 129,654,471 | 982.16 | 7.40 | 132.7 | 17,516,616 |
| Montgomery Co. | 125,854,615 | 904.96 | 5.90 | 153.4 | 21,337,754 |
| Anne Arundel Co. | 59,188,511 | 811.18 | 4.98 | 162.7 | 11,874,222 |
| Baltimore City | 83,176,509 | 1,001.09 | 4.62 | 216.5 | 17,985,561 |
| Average of Comparable Schools | \$ 99,468,527 | \$ 939.81 | \$5.79 | 162.3 | 17,178,538 |

Sources: MSDE Selected Financial Data, State Board of Public Works – School Construction Program

① - Based on Average Daily Enrollment 2005-2006

A Number of Best Practices Were in Place for Facility Management and Project Planning

BCPS had implemented certain facility management best practices that enhanced cost effectiveness –

- BCPS has a program in place at approximately 90 percent of its schools to manage energy usage. The program uses computers to monitor the operations of major systems (that is, heating and cooling) and controls these systems from a centralized location. The system has not been used at the remaining schools primarily because these schools are scheduled for replacement in the near future. BCPS entered into a two-year cooperative purchasing agreement in June 2006 for electricity, gas, and heating fuel needs with other school systems to ensure the availability of energy at reduced prices over the term of the agreement.
- BCPS implemented an automated work order system in July 2006 for tracking maintenance work orders. This new automated system allows users located throughout the County to enter work order requests via BCPS' intranet and provides various reporting and cost-tracking functions that could be used to increase the efficiency and timeliness of maintenance operations in the Department of Physical Facilities.

Construction and renovation procurement and monitoring practices were adequate –

BCPS used a formal process to develop specifications for major construction and renovation projects in accordance with educational specifications approved by the State Board of Public Works Interagency Committee for Public School Construction. All projects were reviewed and approved by the BCPS Board. BCPS also used an internal manual to guide the procurement and monitoring processes for all capital projects. Our review of 10 construction awards valued at \$114 million disclosed that the procurements were done in accordance with policy and were properly approved. Our test of 10 related invoices totaling \$13 million disclosed that the invoices were accurate and processed correctly (for example, proper retainage was withheld, and documented inspections and approvals were evident).

More Should Be Done to Analyze and Use Alternatives for Addressing Overcrowded Schools

BCPS should analyze and use alternatives to address overcrowding at certain schools while minimizing construction costs. BCPS monitored enrollment and established plans for long-term facility renovation and construction to address overcrowded schools. However, major renovations projects were generally prioritized on the basis of the school's age, which may not be a cost-effective practice. For example, BCPS could take additional action to alleviate overcrowding by increasing the enrollment of schools significantly below student capacity rather than resorting to new construction projects. Considering such alternatives is especially critical given a future system-wide trend of declining enrollment through 2015.

BCPS' student population is unevenly dispersed throughout the County which presents significant challenges in developing geographic school districts that attempt to evenly distribute approximately 103,000 students enrolled at 154 schools⁷. Our comparison of student enrollment to State capacity limits as established by the State Board of Public Works' Public School Construction Program (PSCP) disclosed that many elementary and high schools were overcrowded (that is, exceeded 95 percent of

⁷ This 2006-2007 school year count of students/schools excludes 4 special education schools and 10 centers.

capacity) while many other elementary and middle schools used less than 80 percent of capacity as summarized in Table 3 below:

| Table 3 Comparison of Schools With Available Capacity and Overcrowded Schools 2006-2007 School Year | | | | | | | |
|---|-------------------|--|----------------------------------|--|-------------------------------|---|-------------------------------|
| School Type | Number of Schools | Enrollment Below 80% of State-Rated Capacity Excluding Relocatable Classroom Seats | | Enrollment Exceeds 95% of State-Rated Capacity Excluding Relocatable Classroom Seats | | Enrollment Exceeds 95% of State-Rated Capacity <u>Including</u> Relocatable Classroom Seats | |
| | | No. of Schools | No. of Students (Under) Capacity | No. of Schools | No. of Students Over Capacity | No. of Schools | No. of Students Over Capacity |
| Elementary | 103 | 16 | (1,727) | 53 | 2,466 | 36 | 932 |
| Middle | 27 | 12 | (3,159) | 5 | 324 | 4 | 195 |
| High | 24 | 1 | (244) | 16 | 2,702 | 12 | 1,387 |
| Totals | 154 | 29 | (5,130) | 74 | 5,492 | 52 | 2,514 |

Source: Calculation performed by OLA based on data in BCPS 2006 Educational Facilities Master Plan

NOTE: Schools with enrollment between 80% and 95% were not included in the comparison columns above. The PSCP calculates the State-rated capacity for each school and limits expected enrollment to 95% of the calculated capacity. PSCP does not include relocatable classroom seats in its calculation of a school's capacity.

As indicated in this table, 74 schools (48 percent), primarily elementary and high schools, were overcrowded during the 2006-2007 school year, which resulted in 5,492 more students attending these schools than State capacity limits. On the other hand, 29 schools (19 percent), primarily elementary and middle schools, used less than 80 percent of State capacity limits, which resulted in these schools having 5,130 fewer students than capacity limits. Although BCPS had placed approximately 200 relocatable classrooms throughout the system with a total initial cost of approximately \$16 million to temporarily alleviate overcrowding and provide additional space for school programs, 52 of the schools (34 percent) were still overcrowded even with the additional classrooms.

According to BCPS' 2007 *Educational Facilities Master Plan*, high school enrollment over the next five years in the central and northeast areas of the County will exceed the collective capacities of the high schools by approximately 963 students, while high schools

in the northwest and southwest areas of the County are projected to be below capacity. BCPS hired consultants to conduct studies of overcrowded schools in recent years, including a November 19, 2003 *High School Facility Utilization Study* wherein the consultants recommended construction of a new high school in the northeast area. The *Study* found that a district-wide school boundary shift would not by itself effectively manage high school enrollments. In the 4 years since the *Study* was conducted, BCPS built an addition to one northeast area high school to provide additional seating, but overcrowding persists at 11 other high schools.

The *Study* mentioned a number of alternative solutions to construction to alleviate overcrowding. Specifically, a survey of community members included in the *Study* disclosed that 70 percent of the respondents chose the following four solutions as the most preferred options to alleviate high school overcrowding in the absence of new school construction projects: (1) change school boundaries (38 percent), (2) change current grade structure (15 percent), (3) move neighborhoods⁸ (10 percent), and (4) move individual grades to other schools (7 percent).

While the four solutions mentioned in the *Study* are all viable alternatives for easing school overcrowding, BCPS has not widely employed any of these alternatives. Specifically, although the Board has established policies for revising school boundaries and the closure of schools, these policies have not been used on a regular basis to manage student enrollment. In this regard, BCPS has only revised school boundaries in the past when new schools were opened or when a school was closed. BCPS has not closed a school since 1983. Furthermore, BCPS has been reluctant to changing the current grade structure (for example, retaining 9th grade students in middle school rather than moving the students to high school to alleviate high school overcrowding). BCPS has also been reluctant to move neighborhoods, since BCPS attempts to keep neighborhoods intact when developing school boundaries. Lastly, BCPS has only moved individual grades to other schools on a limited basis. For example, the Board took action to alleviate overcrowding in the Fall 2007 at two elementary schools by moving the schools' pre-kindergarten and kindergarten programs to other elementary schools in the immediate area with available capacity, which

⁸ Moving neighborhoods involves the County revising the boundary lines of a particular neighborhood in a school's district. BCPS attempts to keep neighborhoods intact when developing school boundaries.

eliminated the need for costly construction projects at the two schools.

School construction costs have increased significantly in recent years, so significant savings could be achieved by reducing the need for construction. BCPS' experience during 2004 to 2006 was to spend \$23,354 per student and \$47,896 per student to construct an elementary school and a middle school, respectively. In addition to construction costs, the cost of purchasing school property sites and the recurring additional costs to operate and maintain a new school, as well as the expense to maintain excess space in existing schools, suggest that it could be more cost effective to increase the use of existing schools. Our review of construction projects disclosed that BCPS built additions to address overcrowding at certain schools even though adjacent schools had excess capacity that could have potentially alleviated the overcrowding. For example, BCPS is in the process of constructing additions totaling \$6.7 million at two southwest area schools whose enrollment is currently a combined 207 students over State capacity limits. However, five adjacent schools have a combined 854 students less than State capacity limits. BCPS capital construction expenditures totaled approximately \$280 million during the period from July 1, 2004 to June 30, 2007 according to the audited financial statements.

BCPS' practice of prioritizing renovation projects on the basis of the schools' ages may not be the most cost effective alternative. Since fiscal year 2004, 9 of the 20 schools with the largest unused student capacity had or were undergoing major renovations with projected costs of approximately \$114 million. These nine schools had total student capacity of 9,640 students, but enrollment as of September 2006 was only 6,467 students. For example, two of the aforementioned nine schools had enrollments of less than 60 percent of the schools' capacity for two consecutive years but had major renovations totaling approximately \$20 million. BCPS' decision, based on the age of the schools, to spend \$20 million to renovate these schools may not have been the best option without considering other alternatives.

Additionally, although BCPS used independent studies to assess alternatives to address overcrowding and utilization issues, BCPS did not always coordinate the timing of its studies with their long-

term planning process. Specifically, BCPS hired a consultant⁹ to conduct an independent study by May 2008 of the utilization of elementary and middle schools in the southeast area even though renovations with a budgeted cost of approximately \$46 million for 4 middle schools in this area with student enrollment ranging from 54 percent to 75 percent of available capacity were already near completion as of November 2007.

Change Orders for Public School Construction Projects Should Be Submitted to the State as Required

BCPS failed to submit change orders for school construction projects to the State's Interagency Committee (IAC) for Public School Construction Program (PSCP) as required. As a result, BCPS lost State funding for change orders related to certain construction projects. In an audit report dated May 23, 2007, PSCP auditors disclosed that BCPS did not always submit change orders to the IAC, as required by PSCP's *Administrative Procedures Guide*. In this regard, BCPS was instructed to repay \$12,255 for the State's share of the funding for the change orders tested by the auditors. Our test of 31 change orders totaling \$779,872 for school construction projects disclosed that, as of October 30, 2007, none of the change orders tested had been submitted to the IAC for periods ranging from 10 to 35 months after approval by the Board. Although our test showed delays in change orders being submitted for IAC approval, in the cases tested there was no additional loss of State funding. Subsequent to our testing, BCPS staff submitted these change orders to IAC during the period from October 31, 2007 to November 7, 2007.

BCPS Needs to Improve Oversight of School Maintenance Operations to Eliminate the Backlog of Repair Projects

Corrective actions are needed to eliminate the backlog of open maintenance work orders – BCPS had not analyzed the reasons for, and determined the appropriate corrective actions

⁹ The consultant was hired to assist in conducting various utilization studies over a five-year period at an estimated cost of \$450,000.

needed to address, an increasing backlog of open work orders. Specifically, as of November 19, 2007, our audit disclosed that there were 8,168 open work orders for maintenance repairs according to the automated work order system, including a total of 946 (11.6 percent) work orders that were supposed to be completed within seven days of the request. Also, 2,769 (34 percent) of the work orders had been open more than 6 months, including 314 of these work orders that should have been completed within seven days. The number of open work orders increased by 28 percent from June 30, 2005 to June 30, 2007. Additionally, BCPS had not established a process to verify that requested work order repairs were completed. Specifically, completed maintenance work was not inspected by a supervisor to ensure that the repairs were completed fully and properly. This backlog still exists even after BCPS completed over 5,100 work orders during the period from January 1, 2007 to July 24, 2007, and allocated \$1.6 million for contractual maintenance services to reduce the backlog of open work orders based on a curriculum audit conducted by PDK Consulting that was critical of the condition of BCPS' physical plant.

BCPS should use its automated work order system's capabilities to monitor efficiency – BCPS did not fully use its automated work order system when assigning significant maintenance work and tracking the completion of assigned tasks to help it control costs and assess performance. We noted that, although all work orders along with information related to the actual resources used to perform the task (including labor hours) are logged, no information was entered indicating the resources expected to be used to perform the task, based on either past history or industry guidebooks. As a result, completed work orders could not be evaluated for efficiency or used to assess the performance of both individual employees and the entire Department of Physical Facilities. An effective work order system can be used to generate a variety of statistical data including employee productivity, cost reports and facility assessments, all of which are key pieces of a performance measurement system.

Customer satisfaction survey results should be used to help resolve school maintenance deficiencies

— Each year, BCPS' Department of Physical Facilities mailed out "Performance Surveys" to have each school principal rate the quality of custodian, maintenance, and grounds services and provide comments about specific areas in need of improvement. However, corrective actions were not taken to address maintenance deficiencies identified in the returned surveys. Department management informed us that survey respondents were expected to initiate a work order for any needed repairs, although this was not explicitly stated in the surveys.

Our analysis of the ratings for surveys sent to principals of 164 schools and centers for the 2006–2007 school year disclosed that 77 schools (47 percent) responded as needing improvement to the maintenance services for the schools mechanical equipment and plumbing. In addition, these 164 surveys indicated improvements were needed in the areas of concrete and blacktop repairs at 48 schools (29 percent), restroom conditions at 37 schools (23 percent), and general maintenance at 39 schools (24 percent). As previously indicated, BCPS has a backlog of maintenance work orders.

BCPS Should Compare Its Facilities Staffing Levels to Other School Systems and Should Document the Cost Benefit of Outsourcing Maintenance Services

BCPS had not implemented a performance measurement system to measure and assess the efficiency of its maintenance and custodial operations, both for internal self-evaluation purposes and for comparisons with other systems (which could identify other best practices). While we noted that BCPS used a staffing formula to determine the need for custodial personnel within the school system, a staffing formula was not used for maintenance personnel. (BCPS has 61,129 square feet per maintenance worker, and the national median in an April 2004 survey was 80,887 square feet per maintenance worker.) Furthermore, we determined that BCPS had not compared the actual costs of custodial and maintenance operations to similarly-sized districts in Maryland or other states. Comparability with other systems in

Maryland could not necessarily be done unilaterally since there would need to be a consensus on the measures and methodology; however, other states (for example, Michigan and Florida) have established measures and benchmarks (such as maintenance expenditures per square foot) to assist schools in the evaluation of costs and practices.

The Office of Maintenance also did not perform a documented analysis of the cost benefit of outsourcing certain maintenance services (such as window replacement, plumbing, and painting) versus using in-house maintenance staff. In fiscal years 2005 and 2006, BCPS had contracted maintenance costs totaling approximately \$6.9 million and \$7.1 million, respectively.

Recommendations

10. BCPS should consider all available courses of action to provide long-term solutions to school overcrowding, including those actions previously discussed (such as, increased use of existing schools where student enrollment is significantly below capacity limits). While BCPS may be able to minimize the need for new construction by considering alternatives to alleviate overcrowding, BCPS should, in any event, ensure that independent enrollment and construction studies are properly coordinated with the long-term planning process to maximize the usefulness of these studies. BCPS should also consider other factors besides a school's age when planning construction projects and should align its construction project planning with student enrollment trends.
11. BCPS should submit all change orders to the IAC timely in accordance with PSCP's *Administrative Procedures Guide*.
12. BCPS should take corrective actions to reduce the backlog of open maintenance work orders, and to ensure work orders are completed within the expected timeframes. BCPS should also establish a procedure to inspect maintenance repairs to ensure repairs were fully completed for closed work orders.
13. BCPS should use its automated work order system to track the estimated job labor and material costs and to compare

the estimates to the actual job costs to ensure work orders are being completed efficiently.

14. BCPS' Department of Facilities should establish a procedure to use feedback surveys from school principals to prioritize necessary repairs and to gain additional information to improve the quality of maintenance services provided. More frequent and job specific surveys could also be used to gauge the principals' satisfaction soon after work is completed.
15. BCPS should periodically perform a comparison of its maintenance costs, square feet per maintenance worker, and contractual costs to other similar school systems or nationally recognized standards. BCPS should also perform a documented analysis of the cost benefit of outsourcing maintenance services versus using in-house maintenance services.

Chapter 8

Transportation Services

BCPS used a number of recognized best practices to increase student transportation efficiency, such as staggering school arrival and dismissal times to enable buses to perform multiple trips. Nevertheless, we noted that BCPS should implement its electronic routing software to further increase operational efficiency.

Background

Over 70,000 students are eligible to ride one of the 820 route buses. BCPS owns and operates 729 (89 percent) of the 820 buses. The remaining 91 (11 percent) buses are owned and operated by private contractors. According to BCPS reports, BCPS fiscal year 2006 transportation costs totaled approximately \$47 million for 14.9 million route miles. Disabled students were 4.4 percent of all riders, but accounted for 40.7 percent of the total mileage and 48 percent of Transportation Department expenditures. For fiscal year 2006, the average transportation costs per disabled student and non-disabled students were approximately \$8,020 and \$451, respectively.

BCPS transportation costs appear to be low when compared on a cost per rider and cost per mile basis to similarly-sized school systems. (See Table 4 on the following page).

Table 4
Comparison of Transportation Costs per Rider and per Mile
Fiscal Year 2006 (Unaudited)

| School System | Number of Eligible Riders | | Miles (in thousands) | | Expenditures (in thousands) | Average Annual Cost per | |
|-------------------------------|---------------------------|----------|----------------------|----------|-----------------------------|-------------------------|--------|
| | Non-Disabled | Disabled | Non-Disabled | Disabled | | Rider | Mile |
| Baltimore Co. | 66,998 | 3,108 | 8,843 | 6,072 | \$47,050 | \$671 | \$3.15 |
| Prince George's Co. | 85,852 | 5,464 | 12,334 | 7,769 | 111,212 | 1,218 | 5.53 |
| Montgomery Co. | 90,682 | 5,180 | 9,797 | 9,086 | 85,098 | 888 | 4.51 |
| Anne Arundel Co. | 53,698 | 1,651 | 6,207 | 3,427 | 34,161 | 617 | 3.55 |
| Average of Comparable Schools | 76,744 | 4,098 | 9,446 | 6,761 | \$76,824 | \$950 | \$4.74 |

Source: MSDE 2005-2006 Fact Book

Several Best Practices Were in Place to Maximize Efficiency and Minimize Costs

The BCPS transportation department used many best practices to increase efficiency and control costs, such as:

- Staggering school arrival and dismissal times to enable certain buses to perform multiple runs on the same day. Buses made an average of three trips in the morning and in the afternoon, with some buses making up to five trips each.¹⁰
- Establishing minimum walking distance requirements for students to determine eligibility for transportation services.
- Using multiple drop-off points on certain bus runs to reduce the number of routes and maximize the number of students transported on each trip, such as transporting middle and high school students on the same trip to different schools.
- Using centralized bus stops for magnet schools to enable consolidation of students into fewer buses.
- Monitoring costs for in-house and outsourced transportation costs, and the costs of special needs bus routes.

¹⁰ Staggered start and departure times allow a school bus to serve 3 schools (that is, elementary, middle, and high school) in the morning and in the afternoon. Certain buses also had mid-day runs.

- Assigning routes based on geographic location of bus depots in order to reduce deadhead miles (the distance traveled by buses when not transporting students).
- Utilizing a geographic feeder system for special needs students (where applicable), which helped keep students in their geographic area and reduce ride times and bus costs.
- Participating in a multi-government procurement for fuel to obtain lower prices.
- Procuring school buses and the related financing on a competitive basis.

Computerized Routing Software Should Be Used to Assist in Developing More Efficient Bus Routes

BCPS' transportation department is organized by the five geographic areas of the county (NE, SE, SW, NW, and Central). Accordingly, personnel assigned to each area conduct the routing of buses. This is a manual process which involves the flow of paper documents between schools, area bus depots, and the BCPS business office. This process also involves an Assistant Principal at each school or routing assistant in each area manually determining the closest bus stop for each eligible rider. During fiscal year 2007, the gross pay for the 27 routing assistants employed by BCPS totaled approximately \$1.1 million.

Recognizing the potential benefits of a computerized routing system, BCPS purchased routing software in fiscal year 2004. However, the routing software has not been used due to the implementation of other projects, such as a new student database and a global positioning system for the transportation of special needs students.

Using routing software is a recognized best practice that can reduce the time it takes to design efficient routes, reduce student ride time, and better ensure that routes minimize the number of buses needed to transport students. In addition, the use of routing software can automate current manual processes such as electronically mapping student addresses and developing routes.

Manual bus routing may contribute to the under-utilization of buses. For example, our analysis of BCPS' Fall 2006 time and mileage reports for 69 randomly selected buses that did not transport disabled students disclosed that the buses were used significantly below the BCPS capacity rates, as shown in Table 5 below:

| Table 5 Utilization of 69 Buses | | | | |
|------------------------------------|-----------------------|----------------------------|---------------------------------------|-----------------------------|
| Route Type | Manufacturer Capacity | BCPS Capacity ^① | Average Students Transported per trip | % Utilized of BCPS Capacity |
| Elementary | 64 | 55 | 28 | 51% |
| Middle/High | 64 | 45 | 28 | 62% |

Source: BCPS Fall 2006 time and mileage reports.

^① We have found that many school systems do not attempt to operate buses at manufacturer's stated capacity to accommodate student comfort.

Recommendation

16. BCPS should implement its automated routing software to assist in developing more efficient bus routes and potentially reduce labor costs incurred for the manual routing process.

Chapter 9

Food Services Operations

BCPS has implemented a number of best practices in its food services operations. For example, it developed performance measure standards (such as meals per labor hour) and regularly compared its operating results to those standards to determine whether operations were meeting expected efficiencies or needed to be revised. BCPS also used available United States Department of Agriculture (USDA) commodities effectively and had procedures in place to help maximize participation in the federal free and reduced-price school meal programs. However, BCPS did not include all indirect costs when determining the self-sufficiency of its food service operations.

The BCPS internal audit department conducted audits of cash receipt operations at cafeterias. The results of the internal audits reviewed were generally favorable. Where the internal auditor had identified controls that could be improved, management had taken actions to strengthen controls and the actions were monitored by the internal audit staff.

Background

Table 6 below shows cost-per-meal data that indicate that BCPS' average cost per meal is slightly lower than the average cost of similarly-sized school systems.

| Table 6 Comparison of Cost per Meal Fiscal Year 2006 (Unaudited) | | | | | |
|---|---------------------------|--|---|--------------|------------------------------|
| School System | Total Expenditures | Meals Served | | | Average Cost Per Meal |
| | | Breakfast (paid, free, and reduced) | Lunch and Snacks (paid, free, and reduced) | Total | |
| Baltimore Co. | \$33,252,499 | 2,517,983 | 9,116,159 | 11,634,142 | \$2.86 |
| Montgomery Co. | 40,734,260 | 2,678,719 | 9,732,986 | 12,411,705 | 3.28 |
| Prince George's Co. | 55,643,961 | 4,292,965 | 13,817,600 | 18,110,565 | 3.07 |
| Anne Arundel Co. | 17,919,649 | 1,207,998 | 5,222,528 | 6,430,526 | 2.79 |
| Baltimore City | 29,888,058 | 3,230,274 | 9,384,138 | 12,614,412 | 2.37 |
| Average of Comparable Schools | \$36,046,482 | 2,852,489 | 9,539,313 | 12,391,802 | \$2.91 |

Sources: MSDE 2006 Fact Book and Bluebook, and LEA statistics and CAFRs.

BCPS has cooking cafeterias at 48 of its 168 schools and centers, as well as 114 satellite kitchens, which receive prepared food from another school; meals are not served at 6 of the centers. BCPS reports on food service operations indicated that food service revenues exceeded expenditures by \$537,855 for fiscal year 2006. See Table 7 on the following page for information regarding fiscal year 2006 food services.

**Table 7
Food Service Facts for Fiscal Year 2006**

| | | | |
|--|------------------|------------------|--------------------------|
| Average cost per meal | | \$2.86 | |
| Number of meals served | | | |
| Breakfast | Paid | 657,548 | |
| | Free | 1,499,526 | |
| | Reduced price | <u>360,909</u> | <u>2,517,983</u> |
| Lunch | Paid | 4,327,066 | |
| | Free | 3,449,101 | |
| | Reduced price | <u>1,155,092</u> | <u>8,931,259</u> |
| Snack | | | 39,143 |
| Summer Food | | | 145,757 |
| Total meals served | | | <u>11,634,142</u> |
| School locations served | | | 162 |
| Kitchens/cafeterias | | | 48 |
| Full-time employees | | | 94 |
| Part-time employees | | | 821 |
| Revenues | | | |
| Federal | Cash payments | \$14,243,289 | |
| | USDA commodities | <u>1,704,486</u> | \$15,947,775 |
| Sales and other sources | | | 17,021,290 |
| State aid | | | <u>821,289</u> |
| Total Revenue (all sources) | | | \$33,790,354 |
| Total Expenditures | | | <u>33,252,499</u> |
| Excess of Revenue over Expenditures | | | <u>\$537,855</u> |

Sources: Comprehensive Annual Financial Report, MSDE 2005-2006 Fact Book

Certain Best Practices Were in Place

BCPS has implemented several practices to contain food services costs – These measures helped to both increase operational efficiency and reduce food supply and material costs.

- BCPS regularly compared industry standard performance guidance, such as meals per labor hour, to monthly financial reports to monitor the operating efficiency at each of its school cafeterias.

- BCPS participated in the USDA commodities free food program. Per the audited financial statements, \$1.7 million in USDA commodities were received in fiscal year 2006.
- BCPS had bid out the procurement of food and supplies, and purchased in bulk in order to maximize its buying power and reduce costs.
- BCPS established standard serving sizes and recipes to economize on food purchases and preparation.
- BCPS used 48 schools as base kitchens to help prepare meals for the remaining 114 schools that operated simpler finishing kitchens.
- Central office staff conducted unannounced reviews and evaluations of cafeteria operations to include cash register procedures, product accountability, payroll procedures, and performance data.

BCPS used several best practices to encourage participation in the national school meals programs –

These practices include the use of a family application process – instead of individual student applications – to simultaneously qualify more students for the programs, and the use of a keypad/card swipe system in cafeterias to eliminate the easy identification (and any perceived stigma) of students in the free and reduced-price meal programs. Also, BCPS obtained information from the local department of social services to identify those students automatically eligible for the programs based on the receipt of other benefits, and cafeteria managers' pay was based in part on program participation levels. According to MSDE records, approximately 33 percent of BCPS students qualify for the program. For fiscal year 2007, 78 percent of BCPS students eligible to receive free lunches and 72 percent of the students eligible to receive reduced price lunches actually participated in the programs, which is nearly identical to the Statewide average participations.

Appropriate Indirect Expenses Are Not Recognized in Certain Financial Reports Related to the Food Service Department

BCPS food service operations are accounted for in a proprietary fund to reflect this as a separate business unit. As such, separate financial statements are prepared indicating yearly revenues and expenses for the food service operations. For fiscal year 2006, the food service department reported that revenues exceeded expenditures by \$537,855. However, this amount does not include all of the indirect costs associated with food service operations.

Specifically, when preparing the food service annual budget, BCPS calculates and budgets the amount of indirect costs applicable to food service operations in accordance with a methodology established by MSDE. For fiscal year 2006, the amount of indirect costs budgeted for food services totaled approximately \$4.9 million. However, at the end of fiscal year 2006, only \$744,000 of indirect costs was charged to the food services department (that is, approximately \$4.1 million less than budgeted). Thus, rather than being self-sufficient for fiscal year 2006, food service operations may actually have incurred a \$3.6 million deficit. We were informed by BCPS that, to avoid having to raise student meal prices, it was a conscious decision by management, with the Board's knowledge, for other departments and the general fund to absorb the remaining indirect costs. Nevertheless, the financial reports did not disclose the actual indirect costs or any BCPS revenue subsidies. Similar conditions occurred for fiscal years 2004 and 2005.

Recommendation

17. To provide a more complete and accurate financial picture of food service operations, BCPS should ensure that all appropriate food service indirect costs are recognized in its financial reports.

Chapter 10

School Board Operations and Oversight

Oversight of BCPS operations includes a comprehensive budget process that has received the “Distinguished Budget Presentation Award” from the Government Finance Officers Association (GFOA) for the last two years. The Board has adopted detailed policies governing the operations of the Board and BCPS. Financial information is made available to the proper parties (such as the Board, principals, and administrative supervisors) in a timely and consistent manner. BCPS also has an internal audit function that reports directly to the Board, and the Board had adopted a detailed ethics policy that applies to Board members and all employees of BCPS. The Board should consider including in its operating budget and master plan additional financial-related objectives, goals, and performance measures to assess the cost effectiveness and efficiency of various departments.

Background

BCPS is governed by an 11-member board appointed by the Governor of Maryland. The Board has an established committee structure, including an active audit committee consisting of five board members. To assist in oversight, the Board contracts for independent audits of BCPS’ financial statements and federal programs, has an internal audit function directly reporting to the audit committee, and receives regular updates from BCPS management personnel on a broad range of financial, administrative, and academic topics.

The Board is ultimately accountable for the success of BCPS in providing the children of Baltimore County with a quality education, while wisely spending local, State, and federal funds. BCPS' stated vision, mission, and goals are:

Vision

Baltimore County Public Schools' graduates will have the knowledge, skills, and attitudes to reach their potential as responsible, productive citizens in a global economy and multicultural society.

Mission

The Baltimore County Public Schools' mission is to provide a quality education that develops the content knowledge, skills, and attitudes that will enable all students to reach their maximum potential as responsible, life-long learners and productive citizens.

Goals

To improve achievement for all students
To maintain a safe and orderly learning environment in every school
To use resources effectively and efficiently

Source: www.bcps.org

Certain Oversight Has Been Put in Place

The Board used a number of methods to broadly oversee the operations of BCPS – The Board used a number of methods to oversee the operations of BCPS. The Board contracts annually for the audit of its Comprehensive Annual Financial Report. The Board also employs an independent internal audit function that reports directly to the Board. The internal auditors perform annual audits at schools of student fund activity, cafeteria receipts, and follows up on external audit findings. The internal auditors also assess compliance with Board policy, regulations, and laws. The Board receives and discusses detailed budget and expenditure information as part of the budget approval process. In addition, members receive a detailed expenditure report each month with comparisons to budgeted amounts. The Board also reviews and

monitors key performance indicators related to academic operations of BCPS. Finally, the BCPS budget has received the “Distinguished Budget Presentation Award” from the GFOA for the last two years.

A detailed ethics policy has been established – The BCPS Board of Education has adopted a detailed conflict of interest policy that covers Board members as well as employees. BCPS policy details conflict of interest and ethics requirements conforming to State law in those areas. BCPS maintains an Ethics Panel to interpret ethics policies, provide advice on policy implementation, and review and rule on any reported complaints of ethics violations. The policy identifies a number of supervisory employees required to file annual financial disclosure statements. Our testing did not identify any required statements that were missing.

Additional Financial-Related Performance Measures Should Be Considered for the Board’s Budget and the Master Plan

The BCPS budget should include additional financial-related goals, objectives, and performance measures. Without certain information, the Board cannot fully evaluate programs in its budget and Master Plan. Examples of additional useful financial performance measures would include cost comparisons, such as transportation and facility costs per student, and the comparative information on direct labor costs, direct supplies costs, and indirect costs per meal served. When implemented correctly, performance measures can be used to assist in decision-making processes such as allocating resources and budgeting, and to report on departmental effectiveness and efficiency.

GFOA recommends that program and service performance measures be developed and used as an important component of long-term strategic planning and decision making which should be linked to governmental budgeting.

Recommendation

18. The Board should develop and use additional performance measures to help monitor adherence to the BCPS budget and implementation of the Master Plan.

Chapter 11

Other Financial Controls

This chapter addresses the management of cash, risk, and debt within BCPS. BCPS has appropriate procedures in place to govern its cash and investments and appeared to cover risks adequately through insurance policies. By law, BCPS is not permitted to issue bonds or other long-term debt instruments to finance capital or operational needs and its use of lease/purchase agreements for acquiring school buses and other equipment was relatively minor and directly controlled by the Board with significant County government input. BCPS had procedures in place to investigate student residency issues and collect tuition payments for non-resident students.

Cash and Risk Management Best Practices

According to BCPS' records, cash and investments as of June 30, 2007 totaled \$4.4 million and \$26.2 million, respectively, and were managed in compliance with its investment policy, which BCPS formally adopted in April 2005. Our review of the policy confirmed that it was in accordance with the Annotated Code of Maryland and the Maryland State Treasurer's regulations for local government investment policies. BCPS' policy for risk management is to protect itself from losses through its memberships in the Maryland Association of Boards of Education Group Insurance and Baltimore County's self-insurance program, which provide casualty and property insurance, and worker's compensation coverage. In addition, BCPS has insurance coverage for underground tanks and

catastrophic student accidents. The notes to the fiscal year 2007 audited financial statements stated that settled claims had not exceeded coverage in any of the past three fiscal years.

Procedures Were in Place to Investigate Student Residency Issues and Collect Tuition for Non-Resident Students

BCPS established policies and procedures for investigating student residency issues and collecting tuition for non-resident students. The Department of Student Support Services (DSSS) was responsible for conducting investigations of possible non-resident enrollments, with 36 pupil personnel workers, 5 residency assistants, and the Residency Liaison involved with this task. In addition, each school had at least one employee responsible for monitoring student residency information at the time of enrollment. DSSS employees conducted 1,785 residency investigations resulting in 564 cases where withdrawal for improper enrollment was recommended during the 2006-2007 school year.

The DSSS Residency Liaison was also responsible for the recordkeeping of tuition amounts due and processing of cases where tuition payments were past due. During the 2006-2007 school year, there were 915 tuition-paying students attending BCPS schools who were required to pay tuition totaling \$7.2 million.

Recommendations

None

Audit Scope, Objectives, and Methodology

Scope

We conducted a performance audit to evaluate the effectiveness and efficiency of the financial management practices of the Baltimore County Public Schools (BCPS). We conducted this audit under the authority of the State Government Article, Section 2-1220(e) of the Annotated Code of Maryland and performed it in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Objectives

We had two broad audit objectives:

1. To evaluate whether the BCPS procedures and controls were effective in accounting for and safeguarding its assets
2. To evaluate whether the BCPS policies provided for the efficient use of financial resources

In planning and conducting our audit, we focused on the major financial-related areas of operations based on assessments of materiality and risk. Our audit approach, including the specific

objectives of our local school system audits, was approved on September 14, 2004 by the Joint Audit Committee of the Maryland General Assembly in accordance with the enabling legislation. As approved, the audit objectives excluded reviewing and assessing student achievement, curriculum, teacher performance, and other academic-related areas and functions. We also did not review the activities, financial or other, of any parent teacher association, group, or funds not under the local board of education's direct control or management. Finally, we did not evaluate the BCPS Comprehensive Education Master Plan or related updates.

Methodology

To accomplish our objectives, we reviewed applicable State laws and regulations pertaining to public elementary and secondary education, as well as policies and procedures issued and established by BCPS. We also interviewed personnel at BCPS, the Maryland State Department of Education (MSDE), and staff at other local school systems in Maryland (as appropriate¹¹). Our audit procedures included inspections of documents and records, and observations of BCPS operations. We also tested transactions and performed other auditing procedures that we considered necessary to achieve our objectives, generally for the period from July 1, 2005 through June 30, 2007. For our audit work on revenue and federal grants, we primarily relied on the results of an independent audit of fiscal year 2006 activity; accordingly, our revenue and federal grants work was limited to this period.

In addition, we contacted a number of other state auditors' offices and legislative program evaluation agencies that had a history of conducting audits or reviews of local school systems. We interviewed those officials and inspected their work programs and resultant reports to identify specific audit techniques and operational practices at schools that could be adapted for our school system audits. Finally, we used certain statistical data--including financial and operational--compiled by the MSDE from various informational reports submitted by the Maryland local school systems. This information was used in this audit report for background or informational purposes, and was deemed

¹¹ During the course of the audit it was necessary to contact other systems to identify policies or practices for comparative purposes and analysis.

reasonable. For comparison purposes, information provided in this report was generally limited to those Maryland school systems of similar sizes, based on student enrollment and/or system budget. In many cases, this information was self reported by the school systems. The data were neither audited nor independently verified by us.

Other Independent Auditors

When developing the approach for the audits of school system financial management practices, a consideration was the reliance on the work of other independent auditors to the extent practicable to avoid unnecessary duplication of audit effort. With respect to BCPS, the results of other auditors that we considered were reported in three distinct audit reports: one related to the administration of its federal grants, another was the management letter from the audit of its Comprehensive Annual Financial Report, and the third was the independent audit of the School Activities Fund.

During the course of this audit, we relied on these results. We performed certain steps to satisfy ourselves as to the reliability of the reported results of the independent federal grants audit of the BCPS fiscal year 2006 federal financial assistance programs for compliance with federal laws and regulations and the BCPS fiscal year 2006 financial statement and fiscal year 2007 School Activity Fund audits. We also reviewed for consistency the federal financial assistance program and financial statement audit reports for fiscal year 2007 that were issued shortly before the end of fieldwork. Accordingly, we significantly reduced the scope of our work in Chapter 1 "Revenue and Billing Cycle," and in Chapter 2 "Federal Funds."

Limitations of Internal Control

BCPS management is responsible for establishing and maintaining effective internal control. Internal control is a process designed to provide reasonable assurance that objectives pertaining to the reliability of financial records, effectiveness and efficiency of operations including safeguarding of assets, and compliance with applicable laws, rules, and regulations are achieved.

Because of inherent limitations in internal control, errors or fraud may nevertheless occur and not be detected. Also, projections of any evaluation of internal control to future periods are subject to the risk that conditions may change or compliance with policies and procedures may deteriorate.

In addition to the conditions included in this report, other less significant findings were communicated to BCPS that did not warrant inclusion in this report.

Fieldwork and BCPS Responses

We conducted our fieldwork from May 2007 to January 2008. The BCPS response to our findings and recommendations is included as an appendix to this report. As prescribed in the State Government Article, Section 2-1224 of the Annotated Code of Maryland, we will advise BCPS regarding the results of our review of its response.

APPENDIX

BALTIMORE COUNTY PUBLIC SCHOOLS

Joe A. Hairston, Superintendent

6901 Charles Street Towson, MD • 21204-3711

October 13, 2008

Mr. Bruce A. Myers, CPA
Legislative Auditor
Department of Legislative Services
Room 1202
301 West Preston Street
Baltimore, MD 21201

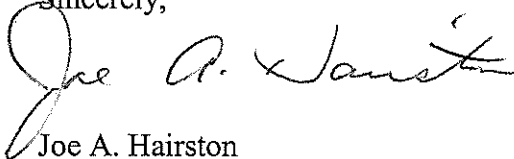
Dear Mr. Myers:

Enclosed is Baltimore County Public Schools' response to the draft legislative audit report dated September 2008.

An electronic copy of the response was sent on Wednesday, October 8, 2008. A hard copy is attached.

If there are any additional questions, please feel free to contact me.

Sincerely,



Joe A. Hairston
Superintendent

JAH/tcg

Attachment

Response to Legislative Auditors' Draft Report
September, 2008

PROCUREMENT & DISBURSEMENT CYCLE

Recommendation 1 – BCPS should limit employee capabilities on the procurement and accounting system to those necessary for their job duties to ensure that segregation of duties is not compromised and to ensure that an independent review of every procurement and disbursement transaction is properly completed.

Response – BCPS agrees with the recommendation. In January 2009, we will begin an upgrade to version 3.7 of our Advantage Financial system. At that time, we will evaluate the security controls provided by the system and determine the feasibility of implementing improved electronic controls. Additionally, BCPS will evaluate the processes implemented by the Baltimore County government, who recently implemented version 3.7 of the same system.

Recommendation 2 – BCPS should segregate the duties of ordering new credit cards from the initial receipt and distribution of the cards.

Response – We are in agreement with the recommendation concerning the segregation of duties in the ordering and distribution of our credit cards. The duties of ordering new credit cards and the initial receipt and distribution of the cards were segregated before the conclusion of the field work of the audit.

HUMAN RESOURCES AND PAYROLL

Recommendation 3 – BCPS should take the necessary corrective actions to ensure that adequate internal controls are in place over the human resource and payroll system. For example, users' system capabilities and job duties should be segregated and an independent review and approval process should be established over payroll-related changes recorded in the system.

Response – We are in agreement with the auditors' recommendation. BCPS has begun a major upgrade in its HR system. It is anticipated that in conjunction with this upgrade that significant revisions will be made in most HR related processes. The auditors' recommendation will be considered in revising these processes. The upgrade is scheduled to be completed by March 2010.

Recommendation 4 – BCPS should establish procedures to ensure that all employee time records are independently approved and that verifications to source documentation (such as time clock cards) are documented and retained for review purposes. In addition, BCPS should ensure that payroll adjustments recorded in the automated system are independently reviewed and that such reviews are documented. Furthermore, BCPS should restrict employees with the ability to process adjustments from having access to the related paychecks.

Response – We are in agreement with the auditors’ recommendation. BCPS has begun a major upgrade in its HR system. It is anticipated that in conjunction with this upgrade that significant revisions will be made in most HR related processes. The auditors’ recommendation will be considered in revising these processes. The upgrade is scheduled to be completed by March 2010.

Recommendation 5 – BCPS should expand its workforce planning to include long-term needs for both critical instructional and non-instructional positions.

Response – BCPS is in agreement with the finding. The Baltimore County Public School system will expand its workforce planning to include a long-term plan to meet the needs of hiring exceptional employees for critical instructional and non-instructional positions. The Department of Human Resources, in collaboration with the Department of Professional Development, will develop a long-term plan by December 2009.

INVENTORY CONTROL AND ACCOUNTABILITY

Recommendation 6 – BCPS should establish an equipment policy requiring that computers and sensitive items susceptible to theft (such as PDAs, digital cameras and audio/video equipment), be added to its inventory records and counted during periodic physical inventories. In addition, BCPS should establish a policy to verify the accuracy of the completed capital equipment inventory counts.

Response – The above recommendations actually involve three separate areas and our responses are as follows:

- BCPS agrees with the need to implement a system to inventory and track all computer equipment and other sensitive items throughout the system. The Department of Technology is implementing an inventory tracking application that will collect computer equipment information automatically over the BCPS network. To track sensitive items such as digital cameras, audio/visual equipment, and personal digital assistants (PDAs), BCPS will use the Maryland State Department of Education’s electronic survey instrument when it becomes available next spring. Physical counts will be conducted periodically to verify the information collected by these automated tools.
- We agree with the auditors’ recommendation concerning capital equipment. BCPS currently has an automated system for tracking capital equipment throughout the entire school system. A set of policies and procedures are currently in place to maintain the records necessary for our capital equipment. Additionally, in Spring 2009, we will begin having our internal auditors perform physical verifications when they visit a school to conduct an audit. Since the Office of Food and Nutrition Services already has a staff person who verifies food service equipment, we will have that person also verify the other fixed assets inventory at the school.

Recommendation 7 – BCPS should better account for its textbooks by developing and enforcing written policies and procedures to govern the accounting and safeguarding of these items. Specifically, BCPS should maintain comprehensive centralized textbook records and document all physical inventories, including supervisory approval for any subsequent adjustments needed to the records. BCPS also should use the results of its textbook physical inventories to enhance redistribution in lieu of purchasing new textbooks.

Response – BCPS is in agreement with the finding. BCPS is currently evaluating “Destiny Textbook Manager,” a textbook inventory management system. The Destiny system is currently being piloted in seven BCPS schools, and the initial review of the system has been favorable. It is the intention of BCPS to implement “Destiny Textbook Manager” or a similar textbook inventory management system as funding becomes available for schools to convert to the new system. BCPS is also reviewing the process, time, and funding requirements to conduct a retrospective conversion of textbook assets.

INFORMATION TECHNOLOGY

Steps Should Be Taken to Ensure Adequate Security Over IT Applications

Changes should be made to existing procedures to ensure that all access is appropriate. Specifically, user access to computer resources was commonly controlled through the use of individual passwords and user logon ids; however, these tools could be more effectively used. For example, default system accesses were not disabled or otherwise modified. Also, automatic password expirations (requiring periodic password changes) were not enforced for all users. BCPS did not fully use existing system audit software to monitor security events, access permissions, and failed attempts to access certain critical data and, as a result, unauthorized or inappropriate activities affecting the integrity of critical production applications, data, and system files could occur and remain undetected. Finally, certain operating system security options were not properly configured, which could enable hackers to exploit vulnerabilities.

Recommendation 8 – BCPS should implement appropriate security measures to safeguard, and monitor the security over, its applications and data systems.

Response – BCPS has reviewed and made changes to default system accesses where appropriate. The Department of Technology has purchased and installed an automated password reset utility to provide users with the ability to reset network passwords themselves. Users will be required to change their passwords every 90 days beginning with the 2009-2010 school year. BCPS will use system audit software to monitor security events, access permissions, and failed attempts to access certain critical data, and will properly configure certain operating system security options.

Data Processing Functions Should Be Better Safeguarded From Disruption

Physical access to the computer room was not adequately controlled as the access code for one of the doors to the room had not been changed in at least a year, which could allow unauthorized access by individuals no longer employed by BCPS. In addition, critical financial information system backup files were not stored at an appropriate off-site location to protect the information in case of catastrophic damage to the computer room. Finally, BCPS lacked a formal, comprehensive, disaster recovery plan, which should include:

- the identification of an alternate site in the event of a disaster
- applications prioritized for recovery
- disaster recovery team designations and areas of responsibility
- testing of the disaster recovery plan
- restoration of network connectivity

Recommendation 9 – BCPS should improve physical controls and safeguards over its computer operations, should institute appropriate off-site backup procedures, and should develop a comprehensive disaster recovery plan.

Response - BCPS has eliminated the need for access codes by installing swipe devices for the building security system on both doors to the data center. BCPS now stores copies of critical financial information system backup files at an appropriate off-site location. Through a partnership with Baltimore County government, BCPS has a second data center in an undisclosed location to be used in the event the primary center ceases to operate. A comprehensive disaster recovery plan is also under development at the present time.

FACILITIES, CONSTRUCTION, RENOVATION, AND MAINTENANCE

Recommendation 10 - BCPS should consider all available courses of action to provide long-term solutions to school overcrowding, including those actions previously discussed (such as, increased use of existing schools where student enrollment is significantly below capacity limits). While BCPS may be able to minimize the need for new construction by considering alternatives to alleviate overcrowding, BCPS should, in any event, ensure that independent enrollment and construction studies are properly coordinated with the long-term planning process to maximize the usefulness of these studies. BCPS should also consider other factors besides a school's age when planning construction projects and should align its construction project planning with student enrollment trends.

Response – BCPS agrees with the finding. Board of Education of Baltimore County Policy 1280 was established to address the scope of redistricting. This policy recommends some limits to redistricting in the interests of preserving the integrity of neighborhood schools and the continuity of program for students. These include:

1. Avoiding redistricting a neighborhood more than once every five years.
2. Redistricting only when A) opening/closing a school or B) when redistricting can alleviate overcrowding in a school or schools.
3. Attempt to maintain community school concepts (e.g. avoid creation of satellite, (non-contiguous) boundaries and avoiding redistricting schools several degrees of adjacency from their immediate neighborhoods).

Additionally, BCPS convened a utilization study of the Southeast Area of the county. The purpose of this study was to address the schools that are over capacity and to develop short- and long-term strategies to remediate this issue. For school year 2008-2009, a boundary change committee has been initiated to balance the enrollment between Edgemere and Chesapeake Terrace Elementary Schools. The recommendation will be voted on by the Board of Education in March 2009 to be implemented in school year 2009-2010.

Each year BCPS develops an *Educational Facilities Master Plan*, the purpose of which is to align facilities planning, program development and student enrollment trends when planning renovations, new construction and other strategies for addressing student enrollment. BCPS' departments of Facilities, Planning and Support Operations, and the appropriate curricular offices work together in program planning and relocation of programs from schools that are over capacity to schools where there are more available classroom space. This plan is presented to the Board of Education in May or June of each year.

Recommendation 11 – BCPS should submit all change orders to the IAC timely in accordance with PSCP's *Administrative Procedures Guide*.

Response - We agree with the auditors' recommendation. BCPS personnel currently review and approve all construction change orders. The settlement of projects and open items has at times resulted in change orders not being sent to the State of Maryland on a timely basis. The Department of Physical Facilities has conducted an internal review of procedures and staff responsibilities relating to the processing of construction change orders and is currently in compliance with Interagency Committee procedures for new projects.

Recommendation 12 - BCPS should take corrective actions to reduce the backlog of open maintenance work orders, and to ensure work orders are completed within the expected timeframes. BCPS should also establish a procedure to inspect maintenance repairs to ensure repairs were fully completed for closed work orders.

Response - We agree with the auditors' recommendation. The Office of Maintenance completed a study in FY2006 which focused on the problems relating to work order backlog. One of the results of this study was the implementation of strategic initiatives in

FY2007, FY2008 to increase the capacity of the maintenance and construction programs in order to reduce the backlog of open work orders. The Superintendent has secured additional funds in the current operating budgets to increase staffing, supplies, and outsourcing activities.

Recommendation 13 - BCPS should use its automated work order system to track the estimated job labor and material costs and to compare the estimates to the actual job costs to ensure work orders are being completed efficiently.

Response – We agree with the auditor’s recommendation. On August 1, 2007, BCPS implemented the CMMS, an automated system to track open work orders and to capture the labor and material costs associated with specific work performed.

Recommendation 14 - BCPS’ Department of Facilities should establish a procedure to use feedback surveys from school principals to prioritize necessary repairs and to gain additional information to improve the quality of maintenance services provided. More frequent and job specific surveys could also be used to gauge the principals’ satisfaction soon after work is completed

Response – We agree with the auditors’ recommendation. A Quality Control Survey was implemented on July 1, 2008, and provides real-time feedback. The information is compiled and reviewed quarterly and serves to evaluate the program’s success in establishing appropriate prioritization of projects and can assist in employee evaluations.

Recommendation 15 - BCPS should periodically perform a comparison of its maintenance costs, square feet per maintenance worker, and contractual costs to other similar school systems or nationally recognized standards. BCPS should also perform a documented analysis of the cost benefit of outsourcing maintenance services versus using in-house maintenance services.

Response – We agree with the auditors’ recommendation. The Office of Maintenance participates in annual meetings with LEA maintenance representatives to discuss best practices and to share current maintenance data including costs, staffing, and outsourcing activities. Although there is no formal pool of information to draw specific conclusions, staff does review the published operating budgets of comparable jurisdictions on an annual basis. In addition, we are exchanging Comprehensive Maintenance Plans (CMP) with two jurisdictions to draw specific comparisons.

TRANSPORTATION SERVICES

Recommendation 16 - BCPS should implement its automated routing software to assist in developing more efficient bus routes and potentially reduce labor costs incurred for the manual routing process.

Response – We agree with the auditors’ recommendation. The Office of Transportation has purchased the *Transfinder* automated routing software and will begin implementing this system during FY2009, with full implementation scheduled for the spring of 2010.

FOOD SERVICES OPERATION

Recommendation 17 - To provide a more complete and accurate financial picture of food service operations, BCPS should ensure that all appropriate food service indirect costs are recognized in its financial reports.

Response - BCPS and Montgomery County Public Schools are the only two school systems in Maryland that report food services as an enterprise fund. Accordingly, we provide more detailed financial information in both the annual CAFR and operating budget documents. Budget indirect overhead charges and actual indirect overhead costs are reported in these documents.

SCHOOL BOARD OPERATIONS AND OVERSIGHT

Recommendation 18 - The Board should develop and use additional performance measures to help monitor adherence to the BCPS budget and implementation of the Master Plan.

Response - We agree with the auditors’ recommendation. When the master plan process is redone by the Maryland State Department of Education, BCPS will evaluate this recommendation as part of our new submission.

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