School Efficiency Review
of
Bedford County Public Schools

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P R I S M A T I C
S E R V I C E S , I N C .

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May 2014

"Planning is bringing the future into the present so that you can do something about it now."

-Alan Lakein

PRISMATIC
SERVICES, INC.

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Introduction

In 2003, the Commonwealth of Virginia announced several initiatives to address a host of childhood and adult education needs, including the School Efficiency Review initiative. The purpose of the reviews is to identify savings that can be gained through best practices in other non-instructional areas, so that savings can be redirected to the classroom in better service of Virginia's school children. To date, 39 school efficiency reviews have been completed under this initiative. Two more are underway.

The Virginia Department of Planning and Budget (the Department) contracted with Prismatic Services, Inc., in October 2013 to complete the 41st school efficiency review, of Bedford County Public Schools (BCPS). This report is provided in fulfillment of that contract.

BCPS is located in central Virginia at the foot of the Blue Ridge Mountains between Roanoke and Lynchburg, Virginia. The city of Bedford has recently reverted to town status, and the schools have gone from a city-based to a countywide school system. There are 22 schools in BCPS, with a total enrollment of approximately 10, 500. In recent years, the division has struggled with declining student enrollment and budget constraints. Approximately 36 percent of BCPS students qualify for free- or reduced-price meals, an indicator of the level of poverty in the division. Approximately 10 percent of BCPS students are identified as having a disability.

A. Methodology

Prismatic used an 11-step work plan to conduct this school efficiency review:

1. Initiate project.
2. Conduct initial meeting.
3. Complete initial comparative analyses.
4. Conduct fieldwork:
   a. Review divisional administration.
   b. Review educational service delivery costs.
   c. Review human resources.
   d. Review facilities use and management.
   e. Review financial management.
   f. Review transportation.
   g. Review technology management.
   h. Review food services.
5. Develop interim briefing document.
6. Develop first draft report.
7. Complete internal quality control.
8. Review exposure draft report.
9. Develop final report.
10. Present report.
11. Submit concluding documents and close project.

Prismatic provided a team of eight consultants, as well as clerical and technical staff. The project manager and one consultant completed the initial meeting and advance visit to the division November 4-5, 2013 to collect initial documentation and make logistical arrangements for the full team visit. The advance team also interviewed a number of the division's leaders to gather initial opinions on the efficiency and effectiveness of operations.

The full team completed fieldwork December 2-6, 2013. The consultants interviewed school board members, county administrative staff, and key division staff members. The consultants also conducted focus groups of various staff groupings, collected additional documentation, toured division facilities, and observed daily operations. All BCPS facilities were visited at least once by a consulting team member.

All consulting team members adhered to the requirements of the Department's *Protocol Manual*. The *Protocols* provide a thorough blueprint for assessing operations in the division under review.

Peer comparisons are made throughout the report. Peers were selected in consultation with the BCPS superintendent and approved by the Department. The peers selected were:

- Augusta County;
- Franklin County;
- Frederick County;
- Montgomery County;
- Rockingham County; and
- Washington County.

B. Study Context

Every study has a unique context, depending on the stated objectives, organization, and time frame. Relevant context for this report included:

- BCPS and the previous Bedford City Schools divisions consolidated in July 1, 2013, as part of the reversion of Bedford City to town status. This made some of the longitudinal data for the division somewhat more difficult to interpret.
- This review was stipulated by the Virginia Assembly as a condition for the division to receive state funding associated with the reversion. This is the first time a School Efficiency Review has been required for this reason and also the first time that the school division has been required to fund the entire study, without Department support.
- The division is working to implement Personalized Learning as part of its strategic plan. Personalized Learning represents a transformation in how learning environments are structured in this country. While the concept of Personalized Learning has been discussed for a long time, it has only recently, with the advent of robust technology, come to the forefront as a strongly viable education concept. At the time of the consulting team's fieldwork, the transition to Personalized Learning was underway in BCPS, but not completely implemented. This made assessing efficiency and effectiveness somewhat difficult. Moreover, the *Protocols Manual*, while not endorsing any particular pedagogy, were developed before Personalized Learning came to the forefront, making its application in some areas somewhat challenging.

C. Acknowledgements

Prismatic acknowledges the assistance of the following individuals in the preparation of this report:

- Superintendent Doug Schuch;
- Mr. Randy Hagler, chief financial officer; and
- Ms. Sherry Ratliffe, BCPS board clerk.

Prismatic also thanks the many other BCPS department heads, principals, and staff members who provided time, assistance, observations, and data for this review.

D. Report Organization

All references to years in this report indicate schools years. For example, "2012-13" refers to the school year 2012-13 which ran from July through June. All dollars presented in cost or savings projections are shown in 2014 dollars; inflation factors and cost-of-living adjustments are not included for future years.

The remaining chapters of this report are organized by review area, as delineated in the *Protocol Manual*:

- Chapter 2: Divisional Administration;
- Chapter 3: Educational Services Delivery;
- Chapter 4: Human Resources;
- Chapter 5: Facilities Use and Management;
- Chapter 6: Financial Management;
- Chapter 7: Transportation;
- Chapter 8: Technology Management; and
- Chapter 9: Food Services.

2 Divisional Administration

This chapter addresses the division management, procedures, planning, budgeting, and evaluation functions of Bedford County Public Schools (BCPS) in the following sections:

A. Division Management
B. Procedures
C. Planning, Budgeting, and Evaluation

The organization and management of a school division involves cooperation between elected members of the school board and staff of the division. The school board's roles are to establish goals and objectives for the division in instructional and operational areas, determine the policies that will govern the division, approve the plans to implement policies, provide the funding sources necessary to carry out plans, and evaluate the results of the plans.

Once the school board adopts goals and objectives for the division, it is the responsibility of the superintendent and staff to establish administrative regulations and procedures to achieve the desired results. That achievement involves recommending the hiring and retention of employees, as well as ongoing communication with the community to ensure a clear understanding of the goals and the division's efforts to accomplish them.

Background

BCPS is located in central Virginia at the foot of the Blue Ridge Mountains between Roanoke and Lynchburg, Virginia. The city of Bedford has recently reverted to town status, and the schools have gone from a city-based to a countywide school system. The reversion process provides some additional money to the school system to accomplish any changes. There are 22 schools in BCPS, with a total enrollment of approximately 10, 500.

The BCPS mission statement and defined goals are as follows:

Mission: To prepare our students to be productive and responsible citizens in our community and the world.

Vision: A community dedicated to our students and their future.

Strategies:

- *create personalized learning experiences for all students*

- *strengthen and include more students in college level programs*

- *revise Career and Technical Education programs to include future career fields and expanded student career internship opportunities*

- *strengthen alternative education programs for all students*

- *develop and implement a comprehensive student academic/career planning system for students*

- *improve student readiness to learn when entering kindergarten[1]*

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[1] http://bedford.sharpschool.net/about_us

Exhibit 2.1 provides an overview of BCPS and the selected peers. With an average daily membership (ADM) of 10,188, BCPS was the third largest division and slightly below the peer average. However, BCPS was tied for the second highest number of schools and had two more than the peer average of 19.

Exhibit 2.1
Comparison to selected peer school systems

School Division	ADM	Number of Schools
Augusta County	9,961	21
Franklin County	7,049	16
Frederick County	12,874	18
Montgomery County	9,388	19
Rockingham County	10,609	23
Washington County	7,089	15
Peer Division Average	**9,485**	**19**
Bedford County	**10,188**	**21**

Source: 2011-12 VDOE Superintendents Annual Report.

Exhibit 2.2 compares BCPS and the peers on several factors related to student populations and their special needs. BCPS had the second lowest free- and reduced-priced lunch eligibility, the third lowest percentage of economically disadvantaged, and the fourth lowest percentage of students with disabilities. BCPS was lower than peer division averages in all three areas.

Exhibit 2.2
Factors related to student population needs

School Division	% Free/Reduced Lunch	% Economically Disadvantaged	% Students with Disabilities
Augusta County	39.9%	41.3%	8.2%
Franklin County	50.8%	53.7%	15.8%
Frederick County	34.0%	34.6%	11.0%
Montgomery County	38.3%	42.9%	9.8%
Rockingham County	54.6%	21.3%	9.0%
Washington County	45.8%	47.7%	15.6%
Peer Division Average	**43.9%**	**40.3%**	**11.6%**
Bedford County	**36.0%**	**36.9%**	**10.3%**

Source: 2011-12 VDOE Superintendents Annual Report.

Exhibit 2.3 shows that in 2011-12, BCPS has the third lowest administration staffing among the peer group and had 3.6 positions less than the peer average. BCPS was also below the peer average for the number of principals and assistants per 1,000 students.

Exhibit 2.3
Administration staffing comparisons

School Division	ADM	Division Administration	Principals and Assistants per 1000 students
Augusta County	9,961	10.0	4.1
Franklin County	7,049	15.5	4.2
Frederick County	12,874	28.0	3.8
Montgomery County	9,388	38.2	3.7
Rockingham County	10,609	26.5	4.2
Washington County	7,089	21.6	3.4
Peer Division Average	**9,485**	**24.0**	**3.9**
Bedford County	**10,188**	**20.4**	**3.4**

Source: 2011-12 VDOE Superintendents Annual Report and Prismatic, 2013.

Exhibit 2.4 reflects the number of central office positions in 2013-14, by position title, for BCPS and the peers. The data suggest that when compared to peers, BCPS has less overall administrative staff, less upper management, and larger numbers in lower-salaried supervisor positions.

Exhibit 2.4
Current central office comparison by position

School Division	Sup./ Office staff	Chief/ Asst. Sup.	Exec. Director	Director/ Asst.	Coord.	Supv.	Total Admin.
Augusta County	2	4	0	4	3	13	24
Franklin County	2	1	0	6/1	5	3	18
Frederick County	2	2	6	5/7	13	13	46
Montgomery County	4	2		5		7	18
Rockingham County	4	1		9	5	3	22
Washington County	No data						
Peer Division Average	**2.5**	**2**	**1**	**6.8**	**4.8**	**8.7**	**25.3**
Bedford County	**2**	**2**		**4**	**3**	**13**	**24**

Source: 2013-14 division websites, December 2013.

Exhibit 2.5 shows that BCPS had the second lowest number of elementary teaching positions (K-7) in 2011-12 when compared to peers, and was 71 teachers below the peer division average. This translated into the highest number of students per classroom of any of the peer divisions and a higher ratio than the peer average.

Conversely, BCPS had the fourth highest number of teachers at the secondary level (8-12) and was 86 teachers above the peer division average. This resulted in a student/teacher classroom ratio at the secondary level that was below the peer division averages, although it was not the lowest.

Exhibit 2.5
Teaching staff and class size

School Division	Elementary Teaching Positions	Secondary Teaching Positions	Students per Classroom Teacher	
			Grades K-7	Grades 8-12
Augusta County	475	318	13.2	11.5
Franklin County	345	215	12.7	12.4
Frederick County	543	424	14.7	11.5
Montgomery County	356	422	16.3	8.5
Rockingham County	452	423	15.5	8.6
Washington County	370	193	11.9	14.0
Peer Division Average	**424**	**332**	**14.0**	**11.1**
Bedford County	**353**	**418**	**17.3**	**9.8**

Source: 2011 -12 Superintendents Annual Report.

Exhibit 2.6 reviews instructional spending. BCPS had both the lowest instructional spending per pupil and the lowest administration spending per pupil of the peers. It was well below the average in both areas, spending $867 less per pupil on instruction and $84 per pupil on administration. These figures also showed a greater proportionate spending on instruction in BCPS. While its instructional spending per pupil was 12 percent less than the peer average, its administrative spending was 37 percent less than the peer average.

Exhibit 2.6
Administration and instruction spending comparison

School Division	Instruction Spending per Pupil	Administration Spending per Pupil
Augusta County	$ 6,759	$ 183
Franklin County	$ 7,427	$ 177
Frederick County	$ 7,618	$ 359
Montgomery County	$ 7,623	$ 199
Rockingham County	$ 7,319	$ 216
Washington County	$ 6,844	$ 224
Peer Division Average	**$ 7,265**	**$ 226**
Bedford County	**$ 6,398**	**$ 142**

Source: 2011-12 VDOE Superintendents Annual Report.

Exhibit 2.7 shows that BCPS had the third lowest contribution from sales and use tax of the peer divisions and was also below the peer average by more than $800,000. State funding for BCPS was the third lowest of the peer division, and more than $4.5 million below the peer average. The same was true for local funds, as BCPS was nearly $7 million below the peer average. The "other" revenue for BCPS included funding that was available prior to the reversion, not just in 2013-14.

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Exhibit 2.7
Revenue source comparisons

School Division	Sales and Use tax	Federal Funds	State Funds	Local Funds	Other
Augusta County	$ 10,938,454	$ 10,248,043	$ 40,858,685	$ 40,544,992	$ 3,702,719
Franklin County	$ 7,372,437	$ 9,233,569	$ 28,527,736	$ 29,922,649	$ 3,652,458
Frederick County	$ 12,649,913	$ 11,190,615	$ 48,480,852	$ 70,996,456	$ 3,778,160
Montgomery County	$ 10,569,144	$ 9,191,657	$ 37,690,911	$ 49,956,049	$ 2,946,377
Rockingham County	$ 11,634,767	$ 10,082,987	$ 43,713,118	$ 46,516,236	$ 4,600,921
Washington County	$ 6,763,901	$ 7,991,004	$ 30,881,147	$ 20,668,927	$ 4,390,851
Peer Division Average	**$ 9,988,102**	**$ 9,656,312**	**$ 38,358,741**	**$ 43,100,884**	**$ 3,845,247**
Bedford County	**$ 9,132,404**	**$ 9,933,843**	**$ 33,701,587**	**$ 36,209,072**	**$ 8,041,074**

Source: 2011-12 VDOE Superintendents Annual Report.

As shown in **Exhibit 2.8**, BCPS had 703 more students than the peer division average but nearly $8 million less in available funding. The largest single-category inequities in funding were at the state and local levels.

Exhibit 2.8
Peer division versus Bedford funding

Source of Funding	Peer Division Average	BCPS	Difference
Sales and Use Tax	$ 9,988,102	$ 9,132,404	$ (855,698)
Federal Funds	$ 9,656,312	$ 9,933,843	$ 277,531
State Funds	$ 38,358,741	$ 33,701,587	$ (4,657,154)
Local Funds	$ 43,100,884	$ 36,209,072	$ (6,891,812)
Other	$ 3,845,247	$ 8,041,074	$ 4,195,827
Total Funds	**$ 104,949,286**	**$ 97,017,980**	**$ (7,931,306)**
Students	**9,485**	**10,188**	**703**

Source: 2011-12 VDOE Superintendents Annual Report and Prismatic, 2013.

In total, the consulting team gave nine commendations in this chapter:

- BCPS has an effective governance structure.

- The superintendent encourages innovation and forward thinking in his executive staff, leading by example and implementing tools in BCPS administration that are designed to inform its current and future success.

- The superintendent blends his staff in a manner that leads to continuity with a willingness to change and consider new ideas in an effort to improve BCPS.

- BCPS has developed structures that encourage communication within internal and external stakeholders.

- The superintendent and assistant superintendent successfully developed the principal's professional development program.

- The work of the assistant superintendent in developing and facilitating the tiered discipline plan for the division is exemplary.

- BCPS has an efficient process in place for the timely review and posting of school board policies.

- The involvement of all stakeholders in the development of the strategic plan is exemplary.
- The superintendent has established his vision for the division of a continuous improvement model that guides central office departments and focuses on school improvement.

The consulting team also made seven recommendations in this chapter:

- Improve the organization of the central office: Add two positions, enhance one position, and adjust reporting lines.
- Enhance communication efforts from central office to schools and with central office departments.
- Develop procedures in each department both for internal staff use at the central office and to guide principals in division-related work on a day-to-day basis.
- Provide training for the school board on strategic planning, goal development, and program evaluation.
- Improve the linkage between the strategic plan and the SIPs by creating specific short-term, SMART goals that support long-range goals.
- Provide program evaluation training for all division and department staff involved in the implementation of action plans and school improvement plans.
- Utilize research on what makes an effective school board.

The estimated fiscal impacts of those recommendations for which the consulting team could reasonably quantify into dollars are shown below. Some recommendations will have fiscal impacts that depend on the specific implementation path chosen by the division while others will only require staff time; fiscal impacts for those recommendations are not shown here.

Recommendation		2014-15	2015-16	2016-17	2017-18	2018-19	Total
2.4	Improve the central office organization.	($186,000)	($186,000)	($186,000)	($186,000)	($186,000)	($930,000)

A. Division Management

Virginia state education laws, as codified in the Code of Virginia and division policies, establish the powers and responsibilities of the division school board and the superintendent in § 22.1-1 through 22.1-7.1 and § 22.1-71 through 22.1-87. Each chapter provides legal guidance for school division governance and operations. Key duties prescribed include establishing board policies, building and operating schools and related facilities, and contracting for an annual audit of all division and school activity funds.

The Code of Virginia also addresses the size and election of school boards and § 22.1-76 provides a description of the required officers for school boards. The BCPS board consists of seven elected members, all serving staggered four-year terms (**Exhibit 2.9**). There has been turnover in BCPS school board membership in the last three years, primarily from resignations.

Exhibit 2.9
BCPS board members

Board Member	Region	Location	Term
Mr. Richard P. Downey	1	Goodview	2012 - 2015
Mr. Jason W. Johnson	2	Moneta	2014 - 2017
Dr. John Hicks	3	Ewington	2014 - 2017
Mr. Gary Hostutler, Chairman	4	Forest	2014 - 2017
Mrs. Julie M. Bennington, Vice Chair	5	Lynchburg	2012 - 2015
Mrs. Kelly Harmony	6	Bedford	2012 - 2015
Mr. Kevin Wills	7	Bedford	2012 - 2015

Source: Compiled by Prismatic, 2013.

The BCPS school board meets on the first Thursday of the month at 6:00 p.m. in the administration building. The meeting place and time may be changed by agreement of a majority of the board members. Special meetings are held as needed, and board members receive agendas and any supporting information in advance of the meeting. The central office secretary, who also serves as the school board clerk, attends the meeting and prepares the board minutes for approval by the board.

The superintendent of a school division serves as the chief executive officer and is the administrative leader responsible for policy implementation and day-to-day operations. The BCPS superintendent, Dr. Douglas R. Schuch, has 20 years of experience in public schools and has served as the BCPS superintendent for four years. In interviews and focus groups, BCPS staff consistently described Dr. Schuch as visionary, intelligent, and well-organized.

FINDING 2.1

The division has an effective governance structure. The relationship between the superintendent and board of education results in well-thought-out decisions. The superintendent is striving to develop better relationships with the county board of supervisors and progress has been made in establishing some joint committees.

COMMENDATION

BCPS has an effective governance structure.

FINDING 2.2

The superintendent has introduced a large amount of new thinking to BCPS and is leading by example by heading several key committees himself, such as blended learning and teacher evaluation. The strategic plan is based on a continuous improvement process that focuses central office staff to advance through goals and objectives, still maintaining dialogue so that the plan can be changed and become a fluid document.

The superintendent's approach to interviewing new administrative staff is an example. He focuses on how the individual thinks, takes a writing sample, and then has an informal lunch with the finalist. The atmosphere in the division, which has been previously described by staff as dictatorial and micro-managed, is now more cohesive.

Dr. Schuch has been particularly successful in launching planning tools and structures which were not present in BCPS prior to his arrival. These include:

- an organizational chart and plan;
- staffing standards;
- long-range facility planning;
- enrollment forecasting;
- a policy review process;
- a strategic plan;
- a blended learning initiative; and
- new staff evaluation instruments and processes.

COMMENDATION

The superintendent encourages innovation and forward thinking in his executive staff, leading by example and implementing tools in BCPS administration that are designed to inform its current and future success.

FINDING 2.3

The superintendent has blended existing experienced central office staff with new staff. The consulting team found that the central office staff works well together as a team, is sincere in their willingness to improve, and is supportive of the superintendent's direction for the school division. During interviews, several individuals mentioned that the superintendent urged the central office staff to be honest and frank with the consulting team. The willingness to look constructively at the division and make any changes necessary permeates throughout the central office.

The current organization of the BCPS central office is shown in **Exhibit 2.10**. The chart shows all direct reports to the superintendent and some detail in levels below that.

Exhibit 2.10
BCPS current 0rganizational chart

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                                    ┌──────────────────┐
                                    │  Superintendent  │
                                    └────────┬─────────┘
                    ┌───────────────────────┼──────────────────────┐
            ┌───────┴────────┐                          ┌──────────┴──────────┐
            │   Assistant    │                          │ School Board Clerk  │
            │ Superintendent │                          │  & Secretary to     │
            └───┬────────┬───┘                          │   Superintendent    │
    ┌───────────┘        │                              └─────────────────────┘
┌───┴────────┐  ┌────────┴────────┐
│ Principals │  │ Supervisor of   │
└────────────┘  │ Administrative  │
                │  Programs (0.5) │
                └─────────────────┘
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| Director of Instruction | Director of Special Services | Chief Financial Officer | Director of Technology | Director of Human Resources | Supervisor of Testing and Planning | Coordinator of Public Information and Community Outreach |

- Instructional Supervisors (3)
- Supervisor of Electives (0.5)
- Career and Technical Supervisor
- BSTC Administrator
- Supervisor of Alternative Education

- Supervisor of Special Services
- Supervisor of Health Services
- Safety and Security Manager

- Child Nutrition
- Maintenance
- Transportation

- Coordinator of Data Analysis and Planning

Source: BCPS, December 2013.

COMMENDATION

The superintendent blends his staff in a manner that leads to continuity with a willingness to change and consider new ideas in an effort to improve BCPS.

FINDING 2.4

The BCPS central office is lightly staffed for the role it must play in a county-wide division, based on comparative data, interviews with staff, and principal focus groups. The lower central office staffing levels can be finessed for a short while, but as state and federal mandates impinge on staff time, low staffing can lead to fatigue and becomes a factor in accomplishing quality work and planning improvements.

Additionally, in relation to low staffing levels, there are no cross-trained back-up people for the directors in finance, technology, and human resources. The knowledge on how these areas get their primary work done is in the directors' heads or those of staff. Most processes are not committed to writing. An example of the impact of low staffing levels is seen in **Exhibit 2.11**, which juxtaposes time killers identified by the staff members with what these same people know they need to be doing in their roles. These are hard-working, sincere people who simply cannot get to some important tasks that need to be completed for the good of the school division.

Exhibit 2.11
Division time killers and relationship to future efforts

Positions	Time Killers	Planned Activities With Reduced Distractions
Superintendent	Time spent driving to VDOE meetings, regional meetings; conferences are always on the coast	Be in the schools more and meet with the school leadership teams
Chief Finance Officer	E-mail and phone calls	Forward thinking instead of reacting; work on improving processes
Assistant Superintendent	Handling student discipline hearings and all that goes with it	Support principals in instructional programming and improve student achievement; help principals be the best they can be
Director of Technology	The volume of vendor calls, plus the pop-in and -out visits; lately personnel issues	Be more proactive and be at school sites with principals and teachers to analyze needs in real-time
Director of Human Resources	Personnel issues that are parent versus teacher; the time spent investigating them	Develop a training program for employees in the areas of retirement planning, sexual harassment, civil rights
Director of Special Services	Special education complaint resolution and trouble shooting on IEP issues	Spend more time on guidelines for truancy and attendance; develop more training for staff; acquire more tools for special education teachers to use, and help them keep up with new trends
Supervisor of Testing and Planning	Meetings in which personal and outside issues lengthen time	Provide more interpretation and analysis of test scores; spend time assisting instruction on what to do
Director of Instruction	Routine administrative tasks.	Spend more time in schools, communicating with schools and departments and planning ahead for improvement initiatives.
Coordinator of Public Information and Community outreach	Answering requests for information from the public. E-mail and phone.	Spend more time promoting our schools and marketing our division.

Source: Prismatic, 2013.

Currently, the superintendent and finance officer have too many direct reports that require evaluation, weekly guidance, and oversight. Additionally, the superintendent must concern himself with school board development and a good working relationship with the county board of supervisors. The large number of superintendent direct reports also hampers key relationship development with principals and teachers and other aspects of strategic planning, visioning, and overall guidance of the division. The chief financial officer acknowledged that he is stretched thin and has little time to think and plan for improvements in departments he oversees. Additionally, principals in focus groups identified more time with the chief financial officer as one of their primary needs, particularly as it relates to budgeting and managing activity accounts.

The role developed for the assistant superintendent is not complete in its responsibilities, nor is the position fully utilized in support of the superintendent. The assistant superintendent is not

currently heavily involved in efforts to implement the division's vision and direction. The use of this position to cross division lines and achieve collaboration and stakeholder involvement is critical to the success of division improvements in student achievement.

The instructional division is not staffed at the field level in a manner that will provide the opportunity for innovation, support for changes in teaching technique, and support for improved student achievement. Specifically:

- The library-media specialists are not aligned with instruction. The library-media specialists are, and should be, a teaching resource to students and teachers, aligning them closely with instruction.

- Likewise, the instructional technology resource teachers are not currently aligned with the instructional department. These teachers are in unique positions that must inspire confidence from other teachers, both in their ability to work equipment with minimum assistance and the instructional use of the equipment to enhance and inform learning. Cross-functional training and communication must be maintained with technology for this group of employees, but infusion in the instructional department's decision-making is of critical importance in implementing instructional improvements in classrooms. This change can also contribute to a different concept regarding teacher roles that will push instructional technology initiatives further and faster. With closer organization alignment, the instructional technology resource teacher coordinator and the personalized learning supervisor can better team to enhance overall training offered to school sites. Concurrently, they can also develop and launch a technology training program for master teachers, as envisioned by BCPS.

- The instructional supervisor structure seems incomplete with math combined with science, and no clear reading instruction supervisor. The additional field-level staff missing from the instructional department involves the use of a master teacher concept at each school site. As envisioned by division leadership, the master teacher would teach part-time, use personalized learning concepts, and help other teachers use these personalized learning techniques. As noted in a previous exhibit, the BCPS elementary schools have fewer teachers with higher class sizes than selected peer schools. This indicates that adding master teacher positions is a feasible method of lowering class sizes and advancing a school division initiative. Conversely, the BCPS secondary schools have the lowest teacher/student ratio of the selected peers. Excess teacher staffing at this level could be converted to the desired master teacher positions.

Regarding the technology director, the span of control is already heavy and, as the demand for technology grows, this will become a larger issue. Additionally, some duties of the technology director could be moved elsewhere to free time for more strategic activities. For example, the public information and community involvement coordinator currently compiles the leadership training material that is posted and archived for principals and staff to use. The technology director must do the actual posting and archiving.

The coordinator for instructional technology resource teachers is currently the webmaster and posts corrected and updated information to the webpage. This responsibility more properly rests with the public information coordinator.

An effective central office organizational structure is essential to the efficient delivery of services throughout a school division. Efficient central office organizational structures have the appropriate spans of control for division leadership with clearly defined lines of authority that

are reflected in the division's organization charts. Effective central office structures encourage communication at all levels.

RECOMMENDATION 2.4

Improve the organization of the central office and create a two-year plan for adding positions: Add three positions for the upcoming budget year, enhance one position, and adjust reporting lines of the three resulting executive tier positions.

The consulting team recommends the creation of the positions of chief operations officer and the upgrade of the current chief financial officer position to assistant superintendent level pay grade. The new positions and adjusted reporting lines are shown in **Exhibit 2.12**.

The instruction of students is the key job of the school system and the chief target for innovation. All of the various parties to this instructional process must be brought together in cross-functional collaboration, communication, and creativity. The assistant superintendent is the unique position to accomplish this by bringing principals and teachers together for collaboration with central office instructional experts. In order to accomplish this collaboration, the assistant superintendent should be overseeing, but not involved in, the managing of discipline in the schools. The chief operations officer would become the disciplinary hearing officer for the division.

Additionally, during the second year a director of elementary and secondary education reporting to the assistant superintendent would be established. The new role would include assuming some of the responsibility for principals' evaluations, discipline procedures, trouble shooting, and the development of more standardized operating procedures for all schools. The current half-time position assisting with discipline hearings and electives would be eliminated. Instruction and the areas most closely involved with instruction would be moved to line report to the assistant superintendent. Finally, the instruction department would have a math supervisor allocated in the first year of implementing this recommendation.

In the interest of a balanced organization, the superintendent and school board must also be concerned about the efficiency of departments that support the main goal of instructing students. The idea is to implement support with the least impact on division finances, but with the most efficiency, safety, and quality possible. The new position of chief operations officer would be an assistant level positions and will oversee the support departments of food services, maintenance, technology, and transportation. The chief operations will also oversee the testing and planning department. In order to accomplish broader oversight, the chief operations officer will need a position called 'director of business services' during the second year of implementation, in order to provide day-to-day supervision of support departments (food services, maintenance, and transportation).

The chief financial officer should be at the same level of responsibilities as the assistant superintendent. This position will acquire oversight of human resources.

The superintendent in this framework is working closely with the assistant superintendent, chief financial officer, and chief operations officer in all aspects of oversight. The meetings with the superintendent's cabinet, which comprises all directors and other designated positions, can remain the same. The superintendent typically would meet as necessary with the three top assistants. Additionally, one department would remain as a direct line report to the superintendent: public information and community involvement.

Exhibit 2.12
Recommended organization for 2014-15
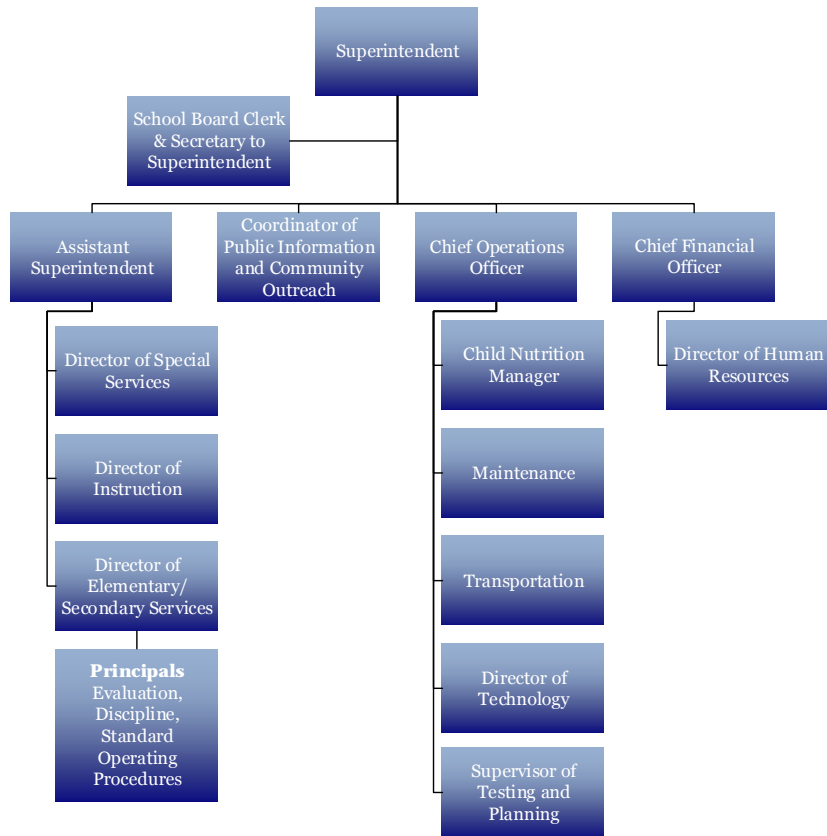
Source: Prismatic, December 2013.

FISCAL IMPACT

The consulting team estimates salaries and benefits costs of:

- chief operations officer - $115,000 per year;

- math supervisor - $56,000; and

- chief finance officer – upgrade of current position to assistant superintendent level, at an approximate cost of $15,000 per year.

Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19
Create chief operations officer position.	($115,000)	($115,000)	($115,000)	($115,000)	($115,000)
Create math supervisor position.	($56,000)	($56,000)	($56,000)	($56,000)	($56,000)
Upgrade finance director position to assistant superintendent level.	($15,000)	($15,000)	($15,000)	($15,000)	($15,000)
Total	**($186,000)**	**($186,000)**	**($186,000)**	**($186,000)**	**($186,000)**

The consulting team recommends the consideration of additional positions for 2015-16 and beyond, depending on the superintendent's evaluation of needs and the ability to pay for new positions. Other desired positions mentioned in interviews and focus groups are reflected in **Exhibit 2.13**.

Exhibit 2.13
Potential new positions 2015-2017

Position	Year	Approximate Cost
Director of Elementary and Secondary Education Services	2015-16	($90,000)
Director of Business Services	2015-16	($90,000)
Network Manager No. 2*	2016-17	($58,000)
Systems Engineer No. 2*	2016-17	($58,000)
Reading Supervisor	2016-17	($56,000)

Source: Prismatic, December 2013.
*The two technology positions should be reviewed for possible outsourcing rather than hiring.

FINDING 2.5

The division has developed structures that encourage collaboration and communication with all stakeholders. The organizational structure of BCPS includes opportunities for information giving and receiving. The meetings provide some opportunity for dialogue on issues, as well as troubleshooting on division processes, shown in **Exhibits 2.14** through **2.16.**

18

Exhibit 2.14
Stakeholder committees and opportunities for input

Board	Superintendent	Assistant Superintendent
• School Board meetings • School board public hearings Example: Budget, Facilities • Joint County Board of Supervisors and School Board Committee	• School board • Executive Cabinet Meetings: Action Planning and School Division Operations • Superintendent's (Teacher) Advisory Committee • Teacher Evaluation Committee: Sub-committees on teacher evaluation instrument and career ladder • Personalized Learning Committee • Chamber of Commerce Board of Directors • Regional Economic Advisory Committee • Virginia School Boards Association Virtual Learning Task Force • Leadership Training Packets • Regional Workforce Investment Board • Bedford Area YMCA Strategic Planning Team	• Principals Monthly Meeting • Quarterly Principals Leadership Meeting • Zone Meetings Principals Leadership Team • Positive Behavioral Interventions and Support (PBIS) Leadership Team • Assistant Principals Meeting • Principal Evaluation: Effectiveness Project Team for School Administrators • Plan of Improvement Committees • Round Tables as needed • Parent Involvement Committee • Bedford Area YMCA Strategic Planning Team • All Points Employee Assistance Program Board

Source: Compiled by Prismatic, 2013.

Exhibit 2.15
Stakeholder committees and opportunities for input

Instruction	Technology	Finance
• Collaborating Meeting with Testing, Technology, Special Services • Gifted Advisory Meeting • Gifted Plan Review Committee • Smart Beginnings Task Force • Title Federal Program Committees • Instructional staff meetings	• Technology Plan Committee • Technology Committee at each School Site • Acceptable Use Committee • Library-Media Specialists Quarterly Meeting • Technology Department Monthly Meetings • Infrastructure/Device Personalized Learning Subcommittee	• Budget Meetings with School board, Principals, PTA Council

Source: Compiled by Prismatic, 2013.

Exhibit 2.16
Stakeholder committees and opportunities for input

Special Services	Human Resources	Public Relations
• Special Ed. Advisory Committee • Community Policy and Management Team • Parent Resource Center • School Health Advisory Board • Student Wellness Committee • Family Assessment and Planning Team • Special services staff meetings • Truancy Review Team • Regional Special Education Directors	• Employee Wellness Committee	• Bedford County Student Advisory Council • PTA County Council • Bedford County Teacher of the Year Selection Committee

Source: Compiled by Prismatic, 2013.

COMMENDATION

BCPS has developed structures that encourage communication with internal and external stakeholders.

FINDING 2.6

Although the division has a number of structures for communications, the results of interviews and focus groups reflect numerous current concerns regarding interdepartmental communications. Stakeholders identified functional and communication silos between central office areas and principals that need to be addressed. In addition, though meeting structures are present, there is little time for dialogue on issues. There are misunderstandings related to hierarchy and how it impacts communication and collaboration. Additionally, there are trust issues such that some administrators do not feel comfortable expressing plans or sharing information due to fear of criticism, lack of confidentiality, and turf issues. The result is that there is a tendency to roll out projects with little or no stakeholder collaboration or input. **Exhibit 2.17** summarizes comments heard in interviews and focus groups regarding communication.

Exhibit 2.17
Examples of communication disconnects

Interview and Focus Group Comments Regarding Communication
• Principals are not treated as partners in decision-making.
• Hierarchical chain of command impedes communications.
• Time for thoughtful dialogue is lacking.
• Staffs at various levels don't have a good grasp of who to go to for what.
• No clarity on what is a school-based decision.
• Principals have little or no say in budgeting.
• Staffing allocation only looks at numbers; no dialogue on differences in schools.
• Not enough time to discuss issues pertinent to the practical daily running of a school.
• Vision is disconnected from practical reality of responding to state mandates in schools.
• Dialogue and partnering is needed between instruction department and special services department.
• Dialogue and partnering is needed regarding issues with maintenance and transportation.
• Logistics and roll outs from technology and instruction are done without practical input from principals.
• Book study takes up to much of meeting time.
• There is not a free exchange of information between the various central office departments.
• Territoriality is an issue in central office.
• Need more collaborating with principals.
• Leadership training packets intent is good but explanations are not deep enough.
• Want principals' viewpoint considered in special services decisions.
• Want the same type of relationship we have with instruction and special services that we have with assistant superintendent.
• There are situations daily where decisions by departments and support seem arbitrary.
• More discussion time is needed with directors present in meetings.
• Not much direct communication from superintendent.
• Need more access to chief finance officer.
• Communication issues are impairing efficiency.
• Communication seems disconnected now.
• Chain of command may be too military in nature.
• No sense of family and trust yet between senior staff.
• Senior staff does not dialogue about the budget or budget priorities.
• Getting off track in meetings inhibits message delivery and dialogue.
• Need to more readily share information about department plans and activities.
• There are blocks in communication because of heavy responsibilities.
• Departments need to share information more with each other.

Source: Prismatic interviews, December 2013.

RECOMMENDATION 2.6

Enhance communication efforts from central office to schools and with central office departments.
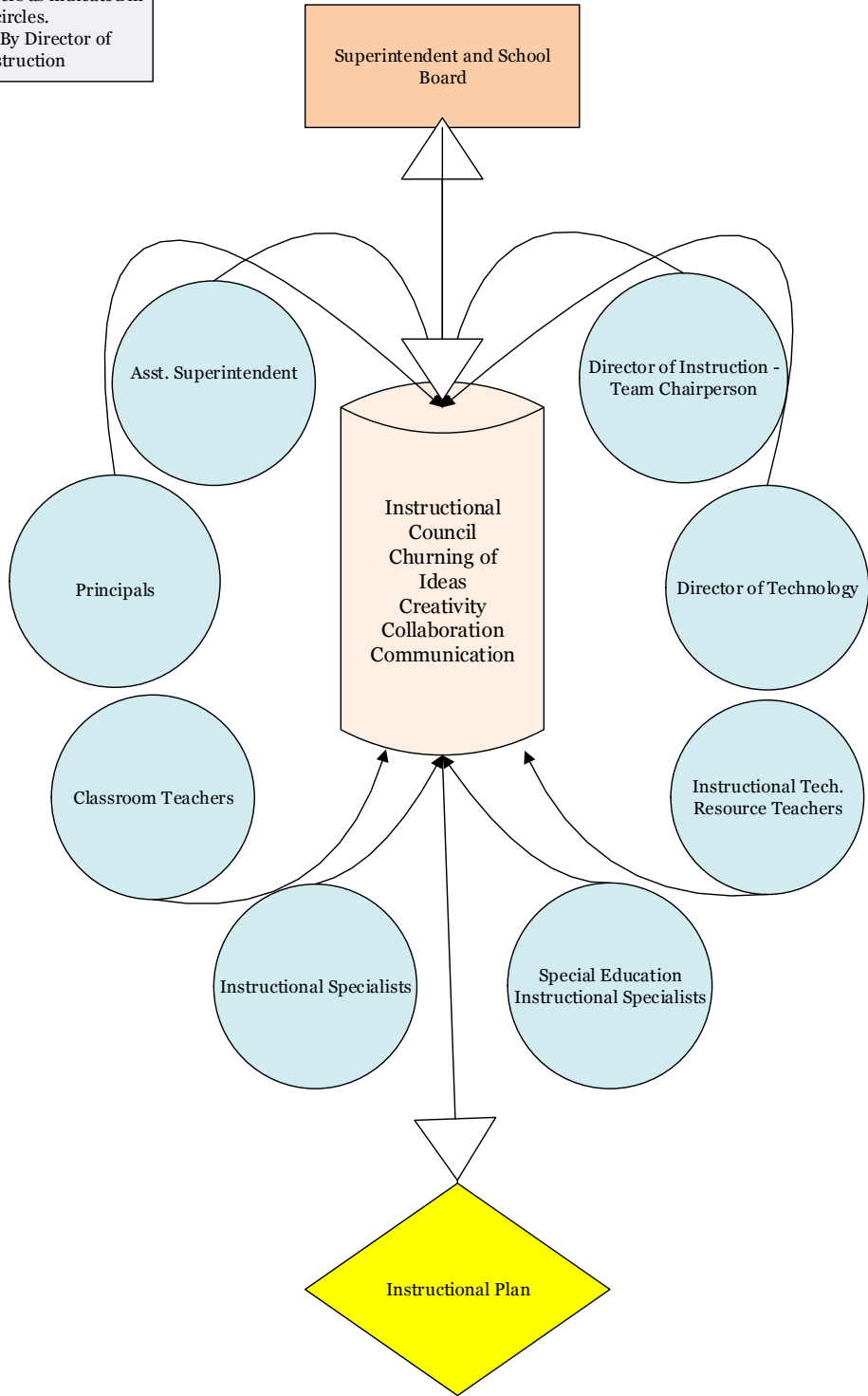
Improving communication issues will require continuous work from the cabinet level positions. A culture of trust, openness, and sharing needs to develop. The superintendent and assistant superintendent must become champions of that viewpoint. Part of the solution is to realign the organization as presented in the previous recommendations. The other is to create more time for dialogue in meetings, require that planning and logistics meetings be cross-functional and include representatives of all stakeholders in decisions. Finally, broad sharing of the results of cross-functional meetings to all stakeholders must be commonplace.

Exhibit 2.18 is an example of a cross-functional team for BCPS that incorporates two consulting team suggestions. The first is the establishment of an instructional council to develop a comprehensive instructional plan that is responsive to the practicalities of schools regarding test results, and also includes the innovative instructional practices that the division is embracing. The second is the establishment of cross-functional teaming and communication. The team is responsible for determining the chronology of an initiative, logistics, and support structures, plus communication and implementation adjustments as needed.

The example in **Exhibit 2.19** is self-explanatory, but the key is that every participant is responsible for communicating accurately back to others in their sphere of influence. Every cross functional team will have multiple spheres of influence. Cross-functional teams can be large teams concerning large overriding issues or small ones concerning specific project roll-outs. A division this size should have multiple cross-functional teams: some that are long-term and some that come and go as their function is needed. The use of cross functional teams is not restricted to the department directors. Cross functional teams can be formed at any level of the organization where planning is practiced or a problem is identified that involves multiple departments.

Exhibit 2.18
Cross functional team - instructional council

CROSS-FUNCTIONAL TEAM
3-Principals
3-Classroom Teachers
All Supervisors of Instruction
Other members as indicated in circles.
Chaired By Director of Instruction

Superintendent and School Board

Asst. Superintendent

Director of Instruction - Team Chairperson

Principals

Director of Technology

Instructional Council Churning of Ideas Creativity Collaboration Communication

Classroom Teachers

Instructional Tech. Resource Teachers

Instructional Specialists

Special Education Instructional Specialists

Instructional Plan

Source: Created by Prismatic, 2013.

Exhibit 2.19
Cross-functional communication - sphere of influence
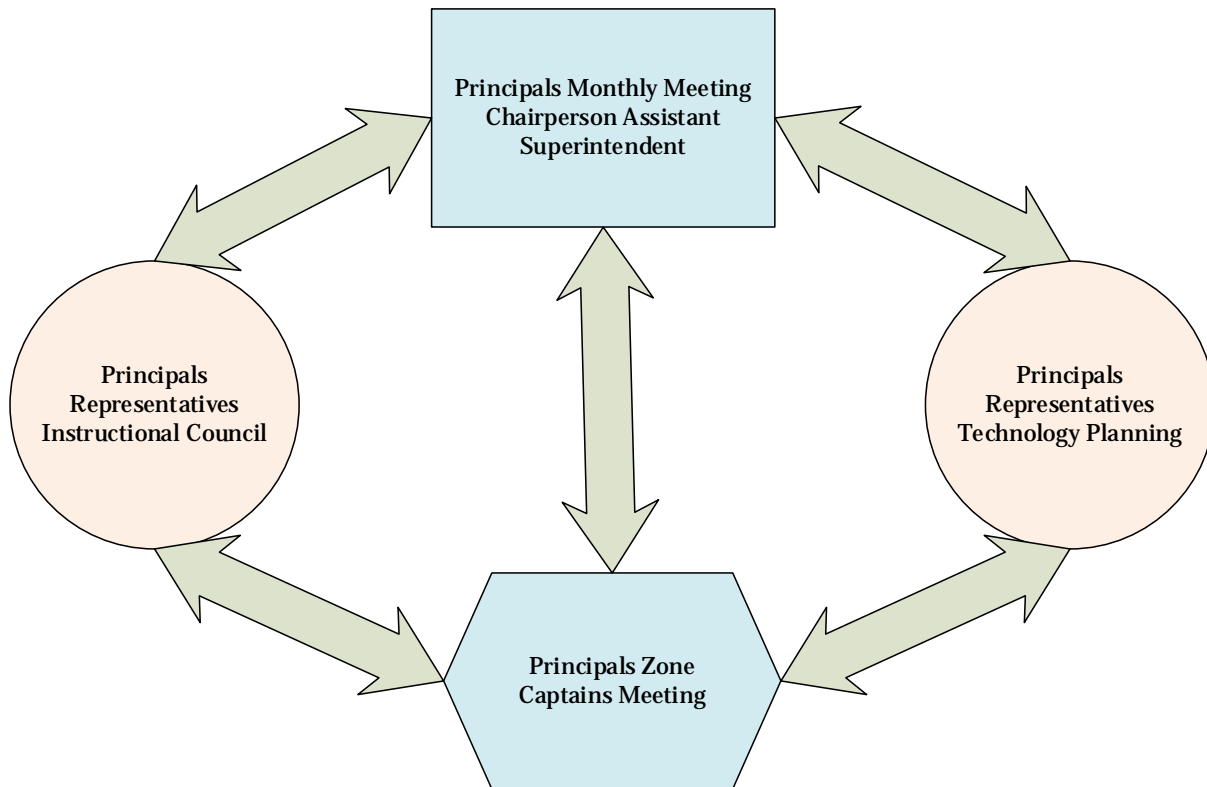
Source: Created by Prismatic, 2013.

FISCAL IMPACT

Implementing this recommendation will require varying levels of effort from current staff, but can be accomplished as part of their regular duties. The superintendent and assistant superintendent should lead the effort, perhaps beginning with the superintendent devoting an hour or so each week to a divisionwide email communication effort.

FINDING 2.7

BCPS has established a professional development program for principals based on a continuous improvement model. Termed locally as continuing leadership education (CLE), the training is a scheduled part of the principals' monthly meeting and involves a book study with discussions and homework. The superintendent selects the book and participates with the principals. The assistant superintendent schedules the meetings, acquires supportive speakers, and facilitates the meeting. The principals receive professional development credit as a part of their VDOE requirements, and the schedule is posted before the beginning of school year. **Exhibit 2.20** indicates the schedule for this year, giving two example months of work, **Exhibit 2.21** reflects a sample of pages in the syllabus, and **Exhibit 2.22** gives information in the syllabus on points earned.

Exhibit 2.20
CLE program agenda

September 14		
8:30 a.m.	Working with Court Services	Judge Lewis Harrison
9:00 a.m.	Working with the Sherriff's Department	Captain Tim Hayden & Sergeant David Mays
9:30 a.m.	Employee Assistance Program	Mary Ann Sigler, EAP Counselor
9:45 a.m.	Break	
10:00 a.m.	Introduction to Focus Group Book, *Outliers*	Dr. Schuch
10:45 a.m.	Technology in Our Schools	Mr. Hoisington
	Data Quality	Mr. Harrison
	Power Teacher Updates	Mr. Hoisington
	Internet Safety and the AUP	Ms. Piestrak
After Lunch	Perfect Attendance Recognition in High Schools	Dr. Whitehurst
(High School & Middle School Principals Only Required to Attend)		Mr. Hoisington
		Mr. Harrison
After Lunch	Transportation of High School Students in Cars	Mr. Hagler
(High School Principals Only Required to Attend)		
	May 10	**Change to Original Syllabus**
8:30 a.m.	Focus Group *Outliers* Chapter 8 & 9	Dr. Schuch
9:15 a.m.	Strategic Planning in Our Schools	Dr. Schuch & Mr. Blankenship
10:00 a.m.	Break	
10:15 a.m.	Instructional Practices in Our Schools	Dr. Duis & Staff
11:15 a.m.	School Comprehensive Planning Template	Dr. Whitehurst

Source: BCPS, December 2013.

Exhibit 2.21
Sample of pages in the syllabus

Continuing Leadership Education Program Description
For the 2012-13 school year, eleven sessions have been planned for your Continuing Leadership Education (CLE). The sessions are designed specifically for you in your current role as a principal in Bedford County Public Schools. The goal of this CLE program is to enhance your knowledge, skills, and communication in various areas of school leadership that will better inform the decision-making in your schools. Specific CLE topics include the following:

- Updates on division's strategic plan action plans
- Effort-based instruction introduction
- Bully prevention policy review and school's legal responsibilities
- Epinephrine administration for anaphylaxis
- Effectively implementing formative and summative assessments
- Gang awareness training
- Working with school finances
- Web pages: educational leadership administrative tool
- Truancy and tardy guidelines

- Guidelines for the prevention of sexual misconduct and abuse in Virginia Public Schools
- Hot topics in school law
- Hot topics/trends in special education
- Enhancing learning through current technology
- Implementing the grading policy and regulations/rules
- Using formative and summative assessments
- Working without juvenile court system
- Changing the culture in schools

Source: BCPS, December 2013.

Exhibit 2.22
Syllabus information about points earned

Prerequisites
To participate in this Continuing Leadership Education Program, you must be a principal in Bedford County Public Schools.

Focus Book
The first semester of the 2012-2013 school year CLE sessions will incorporate a discussion of the book, *Schools Cannot Do It Alone: Building Public Support for America's Public Schools.* You will be provided with a copy of this book. It is expected that you will have read the assigned chapter prior to each session.

Vollmer, J. (2010), *Schools Cannot Do It Alone: Building Public Support for America's Public Schools.* Fairfield, IA: Enlightenment Press.

Renewal Points

As provided through one of the renewal options listed in the Virginia Licensure Renewal Manual, you will receive 36 hours of professional development credit upon completion of this CLE program under Option 8: Professional Development Activity.

Should you have any questions about this syllabus or your renewal points, please feel free to contact Dr. Whitehurst.

Source: BCPS, December 2013.

COMMENDATION

The superintendent and assistant superintendent successfully developed the principal's professional development program.

FINDING 2.8

The work by the assistant superintendent on a consistent discipline policy across the division is exemplary. The work included the establishment of committees at each school site, a division committee, and a tiered discipline matrix designed to bring consistency across the school division. **Exhibit 2.23** outlines the strategies included in the tiered discipline matrix used by BCPS.

Exhibit 2.23
Levels of interventions to support positive behaviors

Sample Tier I	Sample Tier II	Sample Tier III
• Class rules/procedures • Positive supports in the classroom • Reinforcement of appropriate behaviors • Problem solving activates • Seat change • In-class time-out • Time-out in another classroom setting • Time-out office • Verbal reminder/warning • Teacher-student conference • Parent-teacher conference • Guidance counselor referral	• Social skills enhancement through small-group learning • Self-management/self-monitoring contacts • Mentors • Check-in/check-out systems • Peer tutoring/peer network • Academic support	• Active use of functional behavior assessment and behavior improvement plan process • Individualized social learning opportunities with counselors • Intensive check-in/check-out • Continued academic support • Individual behavioral incentive/contract plans • Intensive mentoring contacts • Staff advocate in discipline

Source: BCPS, 2013.

Positive Behavioral Interventions and Supports (PBIS) is an initiative in BCPS that includes proactive strategies for defining, supporting, and teaching appropriate behaviors to create positive learning environments. Attention is focused on developing a structured system of support to enhance student learning. Students often need targeted intervention to build skills to improve their behavior. School staff recognize that improving and maintaining student behaviors involves a continuum of supports and interventions.

When planning for behavioral intervention with students, school planning teams may explore the general classroom and school management programs to ensure that consistent behavioral expectations are present across the school setting, and each classroom utilizes a variety of positive strategies to promote adherence to school rules and principles of good school conduct. If students are having continued difficulty displaying expected behaviors in the school setting, school planning teams may want to explore more individualized or student-specific interventions, much like they would with academic remediation. These supports are often referenced as 'tiers' of intervention, with Tier I providing general strategies across the school and classroom environments and Tier II/Tier III moving toward more small-group or individual supports to target behaviors of concern.

COMMENDATION

The work of the assistant superintendent in developing and facilitating the tiered discipline plan for the division is exemplary.

FINDING 2.9

BCPS has just completed a comprehensive policy update. Coordination of policy review is provided by the coordinator of public relations and community outreach. The process involves departmental reviews of policies that affect them and revisions to the policy if necessary. There were 10 administrative staff members involved in policy review activities. Updates to policies are regularly dispersed to appropriate staff and are brought before the school board for consideration on a regular basis throughout the school year.

BCPS attends the Virginia School Board Association conference in May each year to discuss major changes in policy following the conclusion of the Virginia general assembly session. BCPS uses Emerald Data Solution's "Board Docs" to electronically house its school board policy manual. The manual is linked to the school system's website and can be found under the "Policies" tab. **Exhibit 2.24** reflects a sample review schedule for Human Resources.

Exhibit 2.24
2013 policy review schedule and policyholder's review checklist

Initial	Date	Human Resources					
		January	February	March	April	May	June
		AC	GA	GBE	GBL	GBOA	GCBD
			GAA	GBEA	GBLA	GC	GCBDD
			GB	GBEB	GBM	GCA	GCBE
			GBA	GBEBB	GBMA	GCB	GCBEA
			GBC	GBEB	GBN	GCBA	GCBEB
						GCBB	
		July	August	September	October	November	
		GCBI	GCE	GCN	GDPD	GD	
		GCBJ	GCG	GBEF	GCQA	GDB	
		GCCA	GCI	GCPA	GCQAB	GDBA	
		GCCB	GCL	GCPB		GDBD	
		GCD	EBAB			GDD	
		GCDA	EBBB			GDG	
		GCDB				GDI	
		GCDC					

Source: BCPS, 2013.

COMMENDATION

BCPS has an efficient process in place for the timely review and posting of school board policies.

B. Procedures

Once the school board develops policies, it is incumbent on the superintendent to direct the creation and implementation of efficient, effective procedures. Likewise, each department head directs the use of regular operating procedures to handle daily work tasks in an efficient and consistent manner.

FINDING 2.10

There is little to no documentation of administrative processes and procedures.
The division is dependent on institutional knowledge of department directors and others in the divisions to operate. There are minimal standard operating procedures (SOP) for principals' reference.

Compounding the problem, BCPS has many manual, paper-intensive processes throughout the school system. While some software products have been purchased to streamline specific areas, management has not undertaken a major effort to re-engineer its processes and take full

advantage of technological solutions and tools. **Exhibit 2.25** is a summary of comments made in interviews and focus groups that reflect procedural issues.

Exhibit 2.25
Examples of procedural disconnects

Interview and Focus Group Comments Regarding Procedures
• No administrative procedures handbook
• No standard operating procedures for schools
• No tardy policy
• No finance manual for activity accounting
• No one writes anything down
• There are no firm standards for vertical alignment that must be adhered to
• There is no guide for facilitating decisions
• No standards on bell schedule or school grade organization
• When a program is developed and promised to students and parents the next school level can choose not to adhere to it
• Logistics and roll outs from technology and instruction are done without practical input from principals
• Staffs at various levels do not have a good grasp of who to go to for what
• There are situations daily where decisions by departments and support areas seem arbitrary
• Processes are in my head and I know they need to be written

Source: Prismatic interviews, December 2013.

RECOMMENDATION 2.10

Develop procedures in each department both for internal staff use at the central office and to guide principals in division-related work on a day-to-day basis.

The division should record procedures used internally in each department and identify those necessary for the principal at the school building level to have as standard operating procedures. Once procedures are identified, BCPS leaders should work in cross-functional teams to assess any needed updates and changes. This should also include a review of whether there are technology solutions that would improve efficiencies of the processes under discussion. The technology director will be a key person in making sure that technology is supportive of administrative processes and instructional innovation. As administrative technology is brought online, key processes will have to be reviewed and re-engineered.

A method of achieving this would be to assign the coordinator of public information to gather the written material from each department and organize it into a manual format. Once organized, cross-functional teams could be appointed to review procedures and suggest changes as necessary. A staggered review schedule similar to the one used on board policy reviews would ensure that procedures are kept up to date.

FISCAL IMPACT

The coordinator of public information would likely need to spend 40 hours in the initial collection and organization of existing information. After that, the amount of time cross-functional teams would need to spend would depend on the number of procedures needing immediate work compared to the number needing regular and routine review.

C. Planning, Budgeting, and Evaluation

The Virginia Board of Education has published a set of goals based on broad input in a strategic planning process. The goals are designed to give direction to all public schools in Virginia. **Exhibit 2.26** is a side-by-side comparison of state goals and BCPS goals. The BCPS goals and action plans that address steps to achieve goals and timelines compare favorably with the state goals.

Exhibit 2.26
State and BCPS comprehensive planning goals

State Goals	BCPS Goals
Goal 1: Accountability for Student Learning The Board of Education will support accountability for all public schools by establishing policies that help schools increase the academic success of all students, especially those who are at risk or in underperforming school systems. Incorporating student academic progress and narrowing of achievement gaps into the accountability system will provide for a more comprehensive identification of student achievement at each school.	Transition to a primary instructional delivery model of a 'personalized learning environment' that includes a continuum of traditional and technology based methods and individualized time-independent student pacing/progress; supervisor of testing and planning identifies achievement gaps for staff and through reports to school board; action plan is working on new teacher evaluation model that addresses student academic progress
Goal 2: Rigorous Standards to Promote College and Career Readiness	Action plans are in place to strengthen advanced placement programs
Goal 3: Expanded Opportunities to Learn The Board of Education will put in place policies and initiatives that expand learning opportunities for all children. These policies and initiatives will include high-quality charter schools, college partnership laboratory schools, online learning programs, and Governor's Science, Technology, Engineering, and Mathematics (STEM) academies. Such learning opportunities provide options for parents and students while allowing communities and educators to create innovative instructional programs that can be replicated elsewhere in the public school system.	Strengthen alternative education programs for all students, develop and implement a comprehensive student academic/career planning system for student; BCPS participated in summer STEM academies
Goal 4: Nurturing Young Learners The Board of Education will work cooperatively with partners to promote new and innovative partnerships that help to ensure that all children enter kindergarten with the skills they need for success in school.	Improve student readiness to learn when entering kindergarten
Goal 5: Highly Qualified and Effective Educators The Board of Education will establish policies and standards that strengthen the preparation, recruitment, and retention of the best and brightest educators, including meaningful and ongoing professional development, especially in teacher shortage areas and in hard-to-staff schools.	An action plan is in place at BCPS to develop a master teacher program with a career ladder salary differential

Source: VDOE and compilation by Prismatic, 2013.

VDOE requires in accreditation standard six that BCPS initiate and sustain a long-range planning process. Standard six is as follows:

B. Each local school board shall adopt a division-wide comprehensive, unified, long-range plan based on data collection, an analysis of the data, and how the data will be utilized to improve classroom instruction and student achievement. The plan shall be developed with staff and community involvement and shall include, or be consistent with, all other division-wide plans required by state and federal laws and regulations. Each local school board shall review the plan biennially and adopt any necessary revisions. Prior to the adoption of any division-wide comprehensive plan or revisions thereto, each local school board shall post such plan or revisions on the divisions Internet website if practicable, and, in any case, shall make a hard copy of the plan or revisions available for public inspection and copying and shall conduct at least one public hearing to solicit public comment on the division-wide plan or revisions.

Exhibit 2.27 compares the state-level planning requirements and planning done in BCPS. As shown, BCPS is closely aligned with standard six.

Exhibit 2.27
Virginia planning goals and BCPS goals

Virginia Planning Requirement	BCPS Planning
The objectives of the school division including first; strategies for improving student achievement particularly of at-risk students, then maintaining high achievement.	Six objectives developed in 2009-10 through stakeholder and school board meetings; additional goals added under each objective in an action plan format with expected completion dates.
An assessment to the extent of which these objectives are being achieved.	Action Plans with assigned central office champions and a required report of progress periodically to the school board.
A forecast of enrollment changes.	Established a supervisor of testing and planning with a coordinator of data analysis and planning position as an assist; forecasted enrollment data have been developed and published.
A plan for projecting and managing enrollment changes including consideration of the consolidation of schools to provide for a more comprehensive and effective delivery of instructional services to students and economies in school operations.	The division has successfully accomplished one redistricting of attendance boundaries and is contemplating another; BCPS has also discussed closing several small schools.
An evaluation of the appropriateness of establishing regional programs and services in cooperation with neighboring school divisions.	The division is in the first year of consolidation of a city school division and a county school division as a result of the Bedford City's reversion to town status.
A plan for implementing such regional programs and services when appropriate.	Plan is ongoing.
A technology plan designed to integrate educational technology into the instructional programs of the school division, including the school division's career and technical education programs, consistent with, or as a part of, the comprehensive technology plan for Virginia adopted by the Board of Education.	The division has an established plan and has hired instructional technology resource teachers to assist teachers with integrating technology into instructional practice.
An assessment of the needs of the school division and evidence of community participation, including parental participation, in the development of the plan.	Initial assessment of needs has been done and a full performance review is underway; parent representation is evident during group presentations.
Any corrective action plan required pursuant to § 22.3-253.13:3.	Ten schools started with corrective action plans last year and that is down to five in the current year.
A plan for parent and family involvement to include building successful school and parent partnerships that shall be developed with staff and community involvement, including participation by parents.	There are action plans developed as a part of the division-wide plan.
A report shall be presented by each school board to the public by November 1 of each odd-numbered year on the extent to which the objectives of the division-wide comprehensive plan have been met during the previous two school years.	A review of school board agendas reflect that a review was completed Sept. 26, 2013.
Each public school shall also prepare a comprehensive, unified, long-range plan, which the relevant school board shall consider in the development of its division-wide comprehensive plan.	School improvement plans have been developed in all school locations and were reviewed by central office staff while developing the division-wide plan; the superintendent visited each school location and spoke with the school leadership team about their plan and the division wide plan.

Source: VDOE and compilation by Prismatic, 2013.

PRISMATIC
SERVICES, INC.

FINDING 2.11

The school board and numerous stakeholder groups were involved initially in providing input to the strategic plan goals for the division during the superintendent's first two years in BCPS. During his transition in 2009, the superintendent conducted approximately 120 interviews with a cross section of the community.

In 2010, BCPS conducted several focus groups (parents, students, principals, and teachers) as part of the strategic planning process. Following the 2009 and 2010 efforts, the superintendent in 2012-13 made approximately 45 presentations about the strategic plan to school and community and solicited feedback at each of these sessions. The superintendent and cabinet members met in numerous planning sessions to finalize goals and format a strategic plan.

COMMENDATION

The involvement of all stakeholders in the development of the strategic plan is exemplary.

FINDING 2.12

The superintendent has worked to develop a model that focuses the division leadership on continuous progress regarding the strategic plan goals, objectives, and action steps. This includes a focus on data analysis, long-range planning, strategic planning, personalized learning, and technology improvements.

The superintendent assigned the strategic plan to members of the cabinet 'Staff Champions,' and provided a schedule for reviewing their progress on goals just prior to senior staff meetings. He also urged staff not to wait until the appointed time but to bring updates to regular senior staff meetings as well. The schedule for Staff Champion reviews with the senior cabinet is reflected in **Exhibit 2.28**.

Exhibit 2.28
Schedule of action plan reviews

Group 1 - February 4th, June 17th, and October 7th
• Develop and implement a comprehensive student wellness program
• Develop and implement a comprehensive employee wellness program
• Improve individual student behavior
• Promote student collaboration and teamwork
• Improve student readiness to learn when entering Kindergarten
Group 2 – March 4th, July 15th, and November 18th
• Transform primary instructional delivery model to a "personalized learning environment" that includes a continuum of traditional and technology-based methods and individualized time-independent student pacing/progress
• Strengthen alternative education programs for all students
• Solicit investments for the school division from government and private sources
• Review, revise, and streamline business and budget processes
Group 3 – April 15th, August 19th, and December 2nd
• Strengthen Advanced Placement programs
• Develop and implement a comprehensive student academic/career planning system for students
• Develop and implement a comprehensive long-range facility plan
• Form partnerships with local businesses in support of student learning
Group 4 – May 20th, September 9th, and January 13, 2014
• Implement a comprehensive energy efficiency plan
• Revise Career and Technical Education programs to include current/future career fields and expanded student career internship opportunities
• Encourage and equip parents to support individual student learning
• Develop and implement comprehensive evaluation system for teachers and administrators
• Enhance hiring practices to improve quality of workforce

Source: BCPS, December 2013.

The superintendent is leading by example on this model by assigning several of the goals to himself. The task of recording and keeping track of progress on the strategic plan was assigned to the coordinator of data analysis and planning and that person attends all of the scheduled meetings.

The superintendent scheduled a review of the strategic plan on September 26, 2013 in a school board work session. In that work session he reported that nine objectives had been revised after experience working with them, and four were completed in the 2012-13 school year. The four completed were:

- Develop and implement a comprehensive policy review and update process that is aligned with current statutes and consistent with current practices.

- Review, revise, and streamline budget processes.

- Develop and implement a comprehensive long-range facilities plan.

- Implement a comprehensive energy efficiency plan.

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COMMENDATION

The superintendent has established his vision for the division in a continuous improvement model that guides central office departments and focuses on school improvement.

FINDING 2.13

There is a gap with board involvement in evaluating the results of the strategic plan and re-visiting goals to determine if the plan should be adjusted. Initially, school board involvement in strategic planning took place in a retreat with goals-on-the-wall activities. Described in interviews, the school board is now receiving information in meetings about goals that the superintendent has developed and how he plans to reach them. The superintendent is then evaluated. The 'Action Plans' are reported to the school board and revisions are recommended. The superintendent then writes new strategies and the school board approves them.

The school board gets an overall report once per year, and also has a chance for input during that work meeting. The school board seems to have a rather passive role in guiding school division decision-making. While the school board is described by administration as hard-working, the amount of time school board members invest is dependent on their work schedule. Due to work schedules and other factors, some school board members have not developed a global perspective about the school system that would provide them a basis for providing greater input on planning. Additionally, there has been some turnover in school board membership as reflected in **Exhibit 2.29**.

Exhibit 2.29
School board member and officer changes (2008-2013)

- Only two of the board members serving in 2013 (Bennington and Hostutler) have served since 2008.

- Three new board members (Downey, Harmony, and Willis) were elected in November 2011.

- In Division 2, Huff resigned in February 2009. Vaden was appointed to replace Huff in April 2009. Vaden was elected to the board in November 2009 and resigned in April 2012. In June 2012, Merritt was appointed to replace Vaden. In November 2012 Johnson (current board member) was elected to the board.

- In Division 3, Black resigned in July 2010. Toler was appointed to replace Black in August 2010. Whorley was elected to the board in November 2010 and resigned in March 2012. Hicks (current member) was appointed to the board in April 2012 to replace Whorley. Hicks was then elected to the board in November 2012.

- The board seat for the Bedford City representative was eliminated in July 2013.

- In January 2012 Vaden was appointed Chairman and Whorley was appointed Vice Chairman. After Whorley's resignation in March 2012, Bennington was appointed Vice Chairman in April 2012. After Vaden's resignation in May 2012, Hostutler was appointed Chairman in the same month.

Source: BCPS, December 2013.

BCPS school board members are largely trusting of the division and do not wish to become overly involved in details and want to allow the administration to do its job. Despite that, it is incumbent on the superintendent and school board president to make sure the school board has ample time to consider goals for the division.

According to Cook (2000), strategic planning requires total concentration of the organization's resources on mutually pre-determined measurable outcomes.[2] Strategic planning allows an organization to have a clear focus on its current progress and what it intends to do, based upon established and monitored goals. A strategic plan will include long-term goals, which typically can be achieved in five to ten years. Short-term goals, which can typically be achieved in a year, support the attainment of the long-term goals.

RECOMMENDATION 2.13

Provide training for the school board on strategic planning, goal development, and program evaluation.

The National School Board Association (NSBA) and the associated Virginia School Board Association (VSBA) are great sources of information and training. A strategic planning process can start with an annual superintendent's report to the board on the state of the school division. This can also provide a great orientation tool for new school board members. A performance review is a great launching point for strategic planning. Once a strategic plan is established, a follow-up annual retreat, attended by the board, superintendent, and other key administrative

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[2] Cook, Jr., W. (2000). *Strategics: The art and science of holistic strategy.* Westport, Connecticut: Quorum Books.

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staff, should be scheduled in order to review the division's progress and adjust goals accordingly. Such a review may include specific long-, mid-, and short-term goals.

Additional meetings can be handled through school board meetings during the year. The key is that the planning process should become systemized as an annual undertaking by the board and superintendent. More strategic planning in all areas of BCPS operations can assist in efforts to improve student academic achievement, address facility needs, establish appropriate roles and responsibilities for staff members and clarify perceptions and the goals of the school board. Most importantly, communicating the goals and plans to all levels of the organization and the community will promote a positive perception that the board understands the needs of the division. A successful, forward-looking school division is the best method of attracting students and quality teachers.

FISCAL IMPACT

This recommendation can be implemented using some of the funds already available for school board member training.

FINDING 2.14

While the division's strategic initiative to implement personalized learning is designed to assist in the students' success, there are still steps to be taken before that initiative is effective. In the meantime, the strategic plan does not drill past the principal to the classroom teacher, where the real impact on achievement happens. The blended learning initiative is not consistently included in school improvement plans (SIPs) and does not have a teacher objective component that is evaluated by principals. The plan lacks specific short-term goals that support established long-range goals. Short-term goals should be classified as 'SMART,' which stands for: specific, measurable, achievable, relevant, and time-bound.

The consulting team found that SIPs were not tied in a detailed and recognizable way to the division's strategic plan. More clearly detailed short-term goals in the strategic plan might help schools bridge the distance between the strategic plan and the SIP. For example, currently the Goal for Instruction in the strategic plan is "prepare students to be successful in college and career fields." This goal would mean different things for each school level. Then, there are more than 40 action steps identified under this goal. The action steps seem focused on removing barriers to achieving the goal but they often are not quantifiable, such as the action step to "revamp K-12 math curriculum to include more rigor and higher expectations." Neither "rigor" nor "higher expectations" are defined. In interviews, school-based staff opined that goals and action plans at the central office do not match the reality their schools face in terms of improving student performance.

Many school divisions use a balanced scorecard approach to strategic planning. This approach ties mission and vision with sound business practices, explicit expected employee behaviors, and planned daily operations that will achieve desired results. Using the plan, decisions are clearly tied to priorities, related actions, and employee/community satisfaction. It focuses actions on data, efficiency, prioritized initiatives, improved communications, and a purposeful connection between the budget and goal achievement. **Exhibit 2.30** shows the process. The Balanced Scorecard Institute also outlines nine key critical elements for strategic planning on its website.[3]

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[3] Balanced scorecard institute. Retrieved from
http://www.balancedscorecard.org/BSCResources/TheNineStepstoSuccess/tabid/58/Default.aspx

Exhibit 2.30
Balanced scorecard logic

Source: Balanced Scorecard Institute, September 2008. [4]

RECOMMENDATION 2.14

Improve the linkage between the strategic plan and the SIPs by creating specific short-term, SMART goals that support long-range goals.

All too often, organizations develop strategic plans that are broad statements with no ties to specific goals. For example, a school division may establish a goal to improving student performance without setting a target or identifying the strategies it plans to employ. A better goal would be something like, "Improving student achievement by 10 percent from last year to this year as measured by state standardized testing." The division would then identify the means by which this goal would be achieved, such as through additional small group instruction with benchmark testing to monitor progress. Even with the transformation types of improvements envisioned in the current strategic plan, ultimately each teacher in the division must be able to answer the question as to what she must do tomorrow, next month, and next semester to contribute to achieving each strategic goal.

FISCAL IMPACT

This recommendation will require time from the current BCPS leadership, both at the central office and in schools. The consulting team recommends that the superintendent and cabinet begin to implement this recommendation by devoting at least four hours in joint meetings to identify initial short-term SMART goals, with the principals and teachers devoting six hours.

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[4] Balanced scorecard institute. Retrieved from
http://www.balancedscorecard.org/BSCResources/TheNineStepstoSuccess/tabid/58/Default.aspx

Evaluation

Evaluation is a critical component of high performance schools. One aspect of evaluation is to identify the match between programs under consideration and actual student academic needs and demographics. Additionally, programs in place should have formative evaluations conducted to determine the need for change and refine strategies for effectiveness. Having a regular effective process of program evaluation ensures that the division realizes the greatest benefit from expenditures. It examines both formative and summative stated goals and objectives and their alignment with actions and intended achievements. Benchmarking can provide an interim examination of implementation and guide revisions and adjustments to make a program more effective.

FINDING 2.15

There is no formal program evaluation model implemented in the division. There are many pieces implemented or in the process of implementation, but no overall conceptual model or strategies have been outlined. In addition, BCPS does not have a defined process for evaluating the major pilot programming and initiatives launched by the school division.

General data analysis is available to administrators and the school board. A recent report to the school board by the director of testing and planning presented information on state accreditation and federal accountability. That report noted that BCPS had nine schools that met all federal AMOs (annual measurable objectives) and 12 schools that did not meet them. Five focus schools have been identified, but it was pointed out that four of these schools had shown improvement.

Regarding state accreditation, ratings on SOL tests and other approved assessments in English, History, Science, and Math revealed that BCPS had nine schools that were fully accredited and 12 schools that are accredited with warning. In 2012-13, BCPS had 16 schools that were fully accredited, and five that were accredited with warning. These same five schools were accredited with warning again this year.

Beyond these accountability reports, the consulting team found no true program evaluation activities, such as research to understand how four of the five focus schools made the improvements they did or research to help division leaders understand why some schools achieved full accreditation while others did not. Program evaluation also typically extends to discrete programs within a division, such as a literacy initiative or an after-school tutoring program.

RECOMMENDATION 2.15

Provide program evaluation training for all division and department staff involved in the implementation of action plans and school improvement plans.

Program evaluation requires benchmarks on progress toward a goal. The American Evaluation Association provides a number of resources to support effective evaluation.

A good rule of thumb is that every action strategy with an ending date should have a rubric on evaluating the success or failure of the strategy. That approach will take some of the subjectivity out of evaluating progress. Establishing the evaluation method up front also helps clarify for individuals what the action strategy is intended to produce. Ideally, the evaluation rubric should

be outlined at the outset of each new program and it should be explained in the action planning completed by divisions. The Title II monitoring audit is a good example of an evaluation rubric.

FISCAL IMPACT

The director of planning and a cross-functional team should spend several hours in meetings to review evaluation models and recommend some standards for the schools and divisions to follow regarding program evaluation. Providing training in the standards will likely take no more than a few hours for each trainee.

Additionally, divisions and principals should prioritize all current programs for evaluation. Those found to be most effective could be replicated across the division.

FINDING 2.16

The BCPS school board has never implemented a self-evaluation, nor has it established a regular self-improvement and renewal regimen that seeks continuous improvements of the board. The division administration and school sites are committed to continuous improvement but the school board is not currently committed to doing the same.

A recent study published by the Center for Public Education cites eight characteristics of effective school boards.[5] **Exhibit 2.31** shows the eight characteristics and the evidence the consulting team found regarding whether BCPS school board processes meet the eight characteristics. An effective self-evaluation instrument could be based on these eight characteristics.

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[5] http://www.centerforpubliceducation.org

Exhibit 2.31
Eight characteristics of effective school boards

Characteristic	Rating

1. **Effective school boards commit to a vision of high expectations for student achievement and quality instruction and define clear goals toward that vision.**
    a. Establishing "non-negotiable goals" (that is, goals all staff must act upon once set by the board) in at least two areas: students achievement and instruction goals;
    b. having the board align with and support division goals;
    c. monitoring goals for achievement and instruction; and
    d. using resources to support achievement and instruction goals.
	Part Present

2. **Effective school boards have strong shared beliefs and values about possibilities for students and their ability to learn and of the system and its ability to teach all children at high levels.**
    a. Board members consistently expressed their belief in the learning ability of all students and gave specific examples of ways that learning had improved as a result of division initiatives.
    b. Poverty, lack of parental involvement and other factors were described as challenges to be overcome, not as excuses.
    c. Board members expected to see improvements in student achievement quickly as a result of initiatives.
    d. Comments made by board members are indicative of the differences. High achieving board member noted, "This is a place for all kids to excel." Another board member noted, "Sometimes people say the poor students have limits. I say all have limits. I believe we have not reached the limits of any of the kids in our system." Low achieving divisions make excuses for kids.
	Part Present

3. **Effective school boards are accountability driven, spending less time on operational issues and more time focused on policies to improve student achievement.**	Part Present
4. **Effective school boards have a collaborative relationship with staff and the community and establish a strong communications structure to inform and engage both internal and external stakeholders in setting and achieving division goals.**	Part Present
5. **Effective boards are data savvy; they embrace and monitor data, even when the information is negative, and use it to drive continuous improvement.**	Not Present
6. **Effective school boards align and sustain resources, such as professional development, to meet division goals.**	Not Present

7. **Effective school boards lead as a united team with the superintendent, each from their respective roles, with strong collaboration and mutual trust.**
    a. a trusting and collaborative relationship between the board and superintendent;
    b. creation by the board of conditions and organizational structures that allowed the superintendent to function as the chief executive officer and instructional leader of the division;
    c. evaluation of the superintendent according to mutually agreed upon procedures; and
    d. effective communication between the board chair and superintendent and among board members.
	Present

8. **Effective school boards take part in team development and training, sometimes with their superintendents, to build shared knowledge, values, and commitments for their improvement efforts.**	Not Present

Source: Center for Public Education and Prismatic, February 2014.

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RECOMMENDATION 2.16

Utilize research on what makes an effective school board.

The school board should seek assistance from the Virginia School Board Association (VSBA) regarding training and leadership.[6] The board should develop a self-evaluation based on tools available through the VSBA or the work of the Center for Public Education.

FISCAL IMPACT

If the school board decides to do a self-evaluation utilizing assistance from the VSBA, the cost will depend on how much the school board does on its own, and how much training and facilitating is needed.

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[6] Virginia School Boards Association. Retrieved from
http://www.vaschoolboards.org/images/uploads/BoardDevWhitepages.pdf

3 Educational Service Delivery

This chapter provides commendations and recommendations related to these aspects of educational service delivery management in Bedford County Public Schools (BCPS):

> A. Organization and Management
> B. School Administration and Decision-Making
> C. Curriculum Policies and Management
> D. Special Education
> E. Gifted and Talented Education

School divisions must deliver high quality educational services. Divisions must have detailed processes and procedures in place that align with federal, state, and local mandates. The processes and procedures must drive all curricular and instructional decisions. They must appropriately identify student need, provide educational services to address the needs, measure student performance, and make needed adjustments.

In total, the consulting team gave four commendations in this chapter:

- BCPS has allocated in an equitable manner its teaching staff and exceeds SOQ minimums.

- BCPS is commended for visionary thinking regarding the future for the division's student learning environment.

- The division has done a commendable job of implementing Response to Intervention (RTI) and interfacing it with the School Consultation Team (SCT) program to serve special education students.

- There are exceptional efforts in BCPS to offer multiple learning opportunities for gifted students in the elementary grade levels.

The consulting team also made eight recommendations in this chapter:

- Develop scheduling plans for middle schools and high schools that synchronize with and support personalized learning.

- Develop and implement uniform processes, procedures, and sources for administering formative and benchmark assessments.

- Implement a comprehensive ongoing process for analyzing student performance data throughout the school year.

- Develop and implement processes and procedures to manage, revise, and update pacing guides, curriculum maps, and educational resources based on student performance data and educational changes.

- Implement processes and procedures to ensure all teachers implement the written, taught, and tested curriculum with integrity.

- Develop and implement a multi-year comprehensive division-wide instructional plan.

- Establish regularly scheduled time for teacher collaboration and implement division-wide release time for staff collaboration and planning.

- Monitor the implementation of appropriately enhanced educational learning opportunities for all gifted and talented BCPS students.

Most of the recommendations in this chapter will only require time from existing staff to implement. Some recommendations will have fiscal impacts that depend on the specific implementation path chosen by the division.

A. Organization and Management

Successful educational services are delivered across all grade levels based on effective and efficient organization and management. Divisions must adequately staff and provide support services to meet all student needs. The organization and management of educational services must include training and support services for instructional staff, content, and program specific resources along with classroom technology. The division must have adequate organizational structure to support both central office responsibilities and school-based personnel.

The central office organization in place to support the educational service delivery of the division's 23 schools is shown in **Exhibit 3.1**.

Exhibit 3.1
BCPS central office organization
(showing only those positions most closely involved in daily instruction)
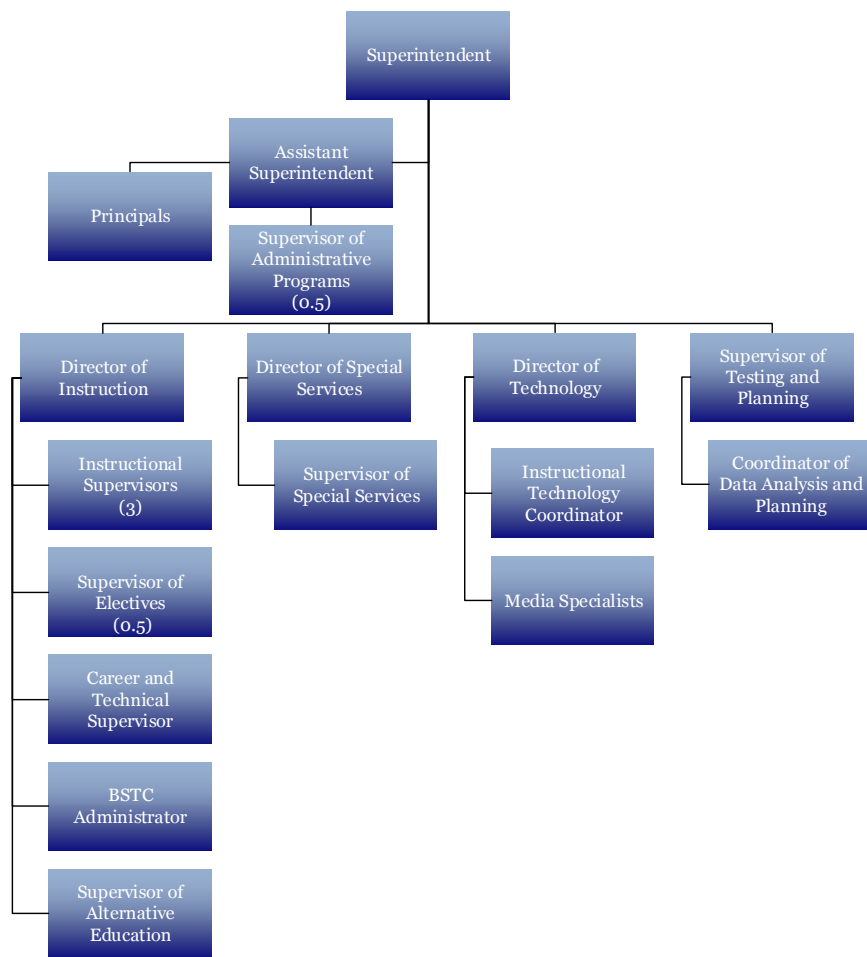
Source: BCPS, December 2013.

FINDING 3.1

BCPS has adopted teacher staffing standards that promote equity among its schools and exceed Virginia Standards of Quality (SOQ) requirements. In doing so, the division has allocated significant resources directly into the classroom.

For 2013-14, the division allocated classroom teacher staffing in a manner that is richer than the minimums required by the SOQ. The SOQ requires:

- a division-wide ratio of students in Kindergarten to regular classroom teachers of 24 to 1, with no class larger than 29;

- a division-wide ratio of students in grades 1-3 to regular classroom teachers of 24 to 1, with no class larger than 30;

- a division-wide ratio of students in grades 4-6 to regular classroom teachers to of 25 to 1, with no class larger than 35; and

- school-wide ratios of middle and high students to regular classroom teachers of 21 to 1.

The division has used a staffing allocation formula for the past several years. For 2013-14, elementary teachers were allocated to schools at a ratio of one per 20.5 students in grades K-3 and at a ratio of one per 21.5 students in grades 3-6. Eight elementary schools received an additional teacher on top of the staffing allocation as a small school adjustment. BCPS classroom teachers were allocated among the middle and high schools at a rate that resulted in a ratio of one per 18 students.

COMMENDATION

BCPS has allocated in an equitable manner its teaching staff and exceeds SOQ minimums.

B.   School Administration and Decision-Making

In a division, the individual schools are the core of educational service delivery. This is where most decisions are made regarding instruction. Each site needs adequate administrative and classroom staffing, but also effective and efficient processes and procedures that manage and align school level decision-making.

School level personnel need adequate resources to deliver high-quality instruction, along with accountability to decide how to improve student performance. Division and school level personnel need appropriately designed decision-making processes to ensure the educational and instructional plans, programs, and performance objectives meet high standards of quality and consistency. These processes and procedures must also include an appropriate support and accountability system.

School leaders play a vital role in setting the directions for successful schools. Successful school leaders influence student achievement and school effectiveness.

FINDING 3.2

BCPS envisions a long-term goal of personalized learning for all students. The division anticipates stepping out of the traditional industrial school model and evolving into an instructional environment where student learning is relevant, rigorous, and student-centered. It is the superintendent's vision to offer students an innovative educational approach, using technology and blended teaching strategies to personalize learning, customize curriculum, and maximize achievement. The foreseen system is one of student empowerment and taking a "differentiated" curriculum to a completely new level for all students.

The division is in the initial stages of moving toward this paradigm shift. The shift calls for not only revised thinking regarding instructional delivery, but also having the technologies in place to make this possible. The processes and procedures it will take to support the futuristic mindset calls for methodical planning and strategic thinking.

As part of this process the division is currently involved in a book study entitled *Inevitable: Mass Customized Learning* by Charles Schwahn and Beatrice McGarvey. The book outlines a blueprint for assisting school leaders in navigating through a system-wide transformation towards mass customization of student learning. The division is making concerted effort to equip the leadership staff with a clear and coherent roadmap for their performance roles in making the mass, customized learning vision a BCPS reality.

COMMENDATION

BCPS is commended for visionary thinking regarding the future for the division's student learning environment.

FINDING 3.3

BCPS master schedules at the middle schools and high schools differ. No standardized, division-wide processes or procedures exist for managing student curricular, instructional, and learning gaps that occur due to the varied implemented schedules. The rationale for implementing differing schedules was unclear. In focus groups and interviews, the cost, effectiveness, and advantages for exposing students to differing schedules was inconsistent and often based on personal preference and site-based decisions rather than research and best practice.

The division implements AB block, modified block, and 4x4 block. The block-scheduled courses meet for 90 minutes a day for approximately 90 days, or half a school year. In a modified block, only select days are 90 minutes and the remaining days are traditional periods. Within the division, one high school also has a traditional six or seven period day. The school schedules six or seven 40- to 55-minute classes per day. These classes meet for 180 days during the school year.

The consulting team was unable to determine the degree to which teachers in block schedule schools have altered their instructional delivery strategies to ensure success of block scheduling. Participants in focus groups and interviews indicated various degrees of teacher resistance to changing how they do business and resistance toward altering how they teach and deliver instruction. Discussions revealed teachers still spending a majority of class time lecturing and monitoring students doing homework. Thus, it appears teachers are missing the point of instructional delivery in block scheduling. Research has not yet shown a clear impact on student achievement because of block scheduling. One study noted, in part, "How effectively students and teachers engage in the teaching-learning process appears to matter much more than the length of class periods."[7] A more recent Virginia study of 8,000 college students found that students who had block scheduling in high school performed worse in college science courses.[8]

The division-wide policy and procedure for dealing with absenteeism was unclear. Students missing a block-scheduled day can miss a considerable amount of material in a single subject, which can make it more difficult to catch up on missed work. Consistent procedures and consistent management of the missed work is not evident. The standard procedures for students catching up and receiving remediation for missed exposure and practice to content is inconsistent. It is not clear if division students are better able to manage nightly homework in traditional daily classes or if students do better with larger homework assignments spaced over several block-scheduled days.

The on-site discussions rendered limited procedural information regarding student mobility. There was no substantive explanation for dealing with mobility between schools, such as mid-term transfers between schools with different schedules. The process for handling credits and

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[7] http://www.educationnews.org/articles/block-scheduling-research.html

[8] Anne Bromley. 2006. *Block Scheduling: Not Helping High School Students Perform Better in College Science.* Inside UVA Online. Retrieved from http://www.virginia.edu/insideuva/2006/08/block_scheduling.html

coursework for students transferring from a traditional schedule to a block schedule was unclear.

RECOMMENDATION 3.3

Develop scheduling plans for middle schools and high schools that synchronize with and support personalized learning.

The consulting team has concerns with the division implementing differing master schedules across the division. As the division moves forward toward personalized learning, processes and procedures need development. Student coursework and graduation requirements from differing master schedules need to be funneled into the personalized learning process. This is labor intensive and requires multiple plans and processes to accommodate personalized student learning schedules.

BCPS administrators need to determine which schedule to adopt for the middle schools and which for the high schools. The adopted schedules must accommodate the transition to personalized student learning. This decision involves study and informed input from teachers, principals, community patrons, students, and parents. The division should also review the degree to which teachers have evolved and are willing to evolve from the traditional modes of instructional delivery to the more personalized classrooms.

The decision of which schedule(s) to choose should synchronize and blend existing schedules with the division's future vision for personalized learning. Since personalized learning provides for more individual student pacing, even the "traditional master schedule" concept, which allots an equal amount of time for each student in each subject area, needs to be replaced with a more flexible and innovative model. Financial, technology, and curricular resources also need consideration. However, the most important consideration for adopting middle school and high school schedules is one that best supports individual student learning.

FISCAL IMPACT

Developing the scheduling plan can be completed by current staff in the instructional department, with significant input from the superintendent and other department heads. The consulting team estimates that at least several weeks of work for all assigned staff will be necessary to develop the plan. Implementing the scheduling plan may have a fiscal impact, as any schedule revisions could result in a need for more (or less) teachers.

FINDING 3.4

Not all BCPS teachers administer formative and benchmark assessments in a timely manner. There are inconsistencies across the schools regarding the timely administration of formative and benchmark tests, along with the sources for test development. In focus groups and interviews it was noted that some teachers administer formative and benchmark assessments once during the semester, only following summative end of instruction, while others reported following the pacing guides and administering multiple formative assessments before the summative assessment.

The consulting team found that the division dropped Pearson Benchmark testing in 2010-11, due to budget shortfalls. At that time, teachers were also voicing concerns that there was too much testing taking place, according to BCPS staff. The division has included a request for this formative assessment software in its 2014-15 budget.

Since then, BCPS staff reported using different question banks and sources to build the formative and benchmark assessments. Some used Interactive Achievement, ExamView, or personal teacher-built assessments, and other teachers reported relying mostly on summative textbook assessments. Reports in interviews and focus groups revealed that not all sources align closely with the Virginia Standards of Learning (SOLs), neither did all testing banks and sources use the electronically enhanced questions, which is part of the VDOE assessments. Several interviews and focus groups alluded to the importance of "building capacity" regarding the use assessments.

Discussion also indicated several school sites administering formative assessments and using the assessment data to improve and plan instruction. This is positive. Overall, staff reported random and sporadic implementation of formative testing and the use of the resulting data. There was no indication of consistency across the division for administering formative and benchmark assessments.

The division has no comprehensive assessment process in place. Interviews and focus groups reported that in the past, assessments were developed, administered, and disaggregated by the assessment and planning department. Interviews revealed this is no longer standard practice. Assessing students division-wide requires planning and purpose, along with pragmatic and teacher-friendly processes and procedures.

Best practice research on formative and benchmark assessment came to the education forefront with the *No Child Left Behind Act (NCLB)*. It produced a heightened awareness and interest in the use of formative assessment to measure and improve student learning. Teachers realized that test data from annual state tests and summative assessments came too little and too late to support and improve student learning.
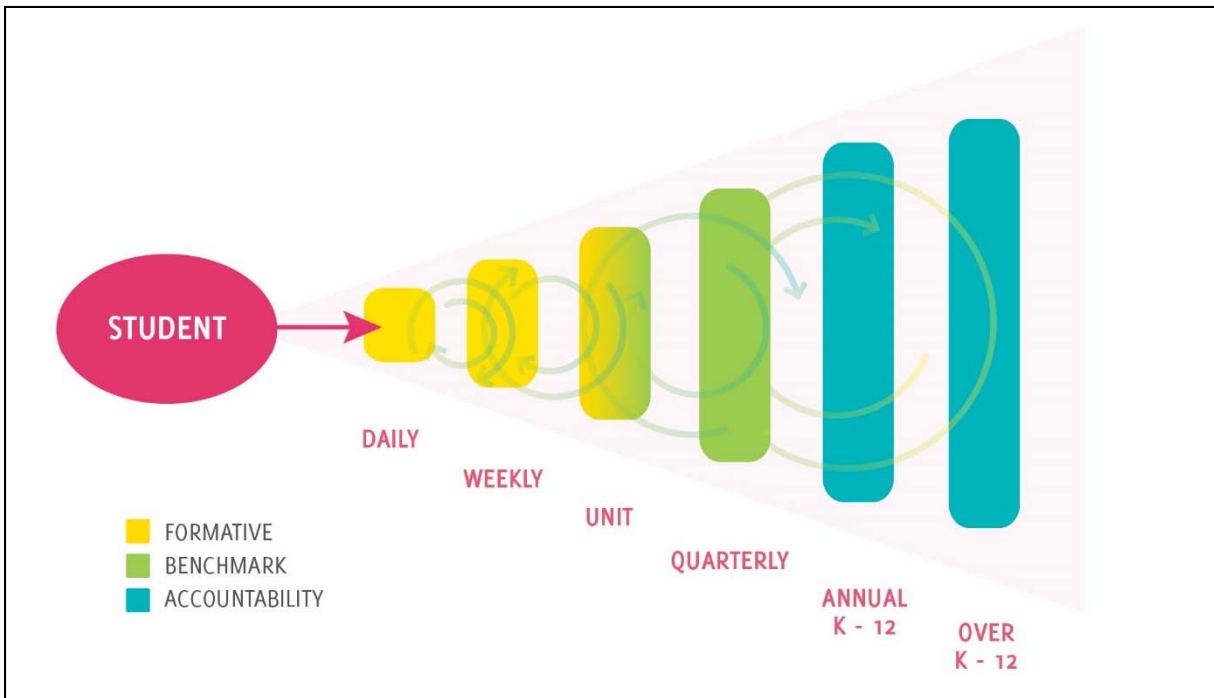
Formative and benchmark assessments are assessments given periodically throughout a teaching segment and at appropriate times during a curriculum sequence. The assessments evaluate students' knowledge and skills relative to the specified curriculum. The design and choice of formative and benchmark assessments should mirror the design and specifications of the summative assessment. Formative and benchmark assessments are used to inform remediation, design instruction, and secure additional resources, as well as inform decision-making at the classroom level. It alerts the teacher of trends and patterns in their instructional delivery, and can be used to inform long-range instructional planning and policies at the division levels.

The learning targets assessed by frequent formative assessment in the classroom build toward the longer-term targets addressed by periodic benchmark assessments. Benchmark data inform teaching and learning that occurs prior to the annual summative assessment, which in turn transfers into subsequent years of teaching, learning, and assessment.

Exhibit 3.2 illustrates the interrelationships between three types of assessments—formative, benchmark, and summative assessment in a comprehensive assessment system. The learning targets assessed by frequent formative assessment in the classroom build toward the longer-term targets addressed by periodic benchmarks. The data inform teaching and learning that occurs prior to the summative, annual assessment, which in turn transfers into subsequent years of teaching, learning, and assessment. The smaller, more frequent assessments build onto and support each other to keep moving forward.[9]

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[9] Data Use for Improving Learning. Retrieved from http://datause.cse.ucla.edu/ba_comprehensive.php

Exhibit 3.2
Assessment breakdown

Balance between frequency of testing and alignment of format, skills, and content marks the effectiveness of a school's implemented assessment process. Too much formative testing with demanding reviews and arbitrary scheduling can lead to student and teacher apathy toward assessment. Yet if schools do too little formative testing, it can lead to failing marks on the summative assessments. Formative testing informs the teacher and student regarding the level of mastery. Students need to know "what they don't know" and teachers need to design instruction to remediate or re-teach what students have not learned.

High quality aligned and balanced formative and benchmark assessments provide divisions with data that do the following:

- determine how well current programs, curriculum, and resources are helping students achieve learning goals;
- help teachers and administrators make mid-course adjustments and modifications if student performance is lagging or excelling;
- highlight curriculum maps and pacing guides; and
- evaluate the effectiveness of programs or instructional approaches not meeting summative goals.[10]

All components of a coherent system align with the key goals (standards) for student learning. A comprehensive assessment system addresses a full range of knowledge and skills expected by

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[10] *Purpose of Benchmark Assessments. Data Use for Improving Learning.* Retrieved from
http://datause.cse.ucla.edu/ba_purpose.php

standards. It provides educators at different levels in the system (division, school, and classroom) with on-going streams of information about student learning throughout the year. Assessment data from a coherent, comprehensive, and continuous system helps educators monitor student learning by establishing a pragmatic foundation for understanding, monitoring, and adjusting student achievement.[11]

RECOMMENDATION 3.4

Develop and implement uniform processes, procedures, and sources for administering formative and benchmark assessments.

The division has the annual or summative assessment process in place. The gap occurs because the division needs to implement comprehensive division-wide formative and benchmark assessments. The implementation of a comprehensive system should involve the cooperation of the BCPS departments of planning and assessment, technology, instruction, and special education, as well as teacher representatives. The formative assessment process can support and provide statistical data for the master teacher plan and the career ladder teacher effectiveness plan.

The major tasks will be determining the best source or question bank, the technology needed, scheduling and timelines, training on the use of results, and determining a system of accountably and monitoring. It will also benefit the division to continue forward thinking and review how the formative assessment system will interface with the future of customized learning.

FISCAL IMPACT

Developing the processes and procedures can be led by the supervisor of testing and planning. The consulting team estimates this will require 80 hours of work. The consulting team understands that the monies for the assessment system have already been included in the 2014-15 budget request. This request should be funded.

FINDING 3.5

There are inconsistencies showing how student performance data are translated into meaningful instruction and remediation for students. The entire division dialogs extensively regarding data. However, there are varying expectations, procedures, and processes for accountability and monitoring the use of student performance data to design meaningful individual and classroom instruction.

BCPS is not implementing an ongoing division-wide process to continuously analyze student performance data and apply the results to instructional practice. Interviews indicated intermittent training through the leadership teams, lead teachers, and instructional coaches, but no consistent delivery of services exists throughout the division.

The division's data disaggregation and analysis process could be improved. This includes analysis of local and state summative or annual student assessment data, benchmark data, demographic data, and daily formative monitoring of student progress. No presented evidence indicated consistent use of data to adjust and realign pacing guides, curriculum maps, design

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[11] NRC, 2001.

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instruction and inform remediation. Division-wide, BCPS teachers and administrators do not practice common processes for an in-depth understanding for data analysis. The input was inconsistent regarding use and interpretation of data to support continuous improvement in student performance.

Assessment data comes from a variety of sources throughout the school year. There is local, Commonwealth, and national test data available to the division. Without implementing a division-wide process to analyze these data, teachers are not aware of the immediate strengths and weaknesses of both the curriculum maps and pacing guides, and specific student instructional needs. Some teachers reported giving random formative benchmark tests. Interviews and focus group discussions revealed that all teachers are aware of the division's performance on state mandated tests. Yet, there was no consistent evidence that teachers in one grade level used student data information to support areas of weakness in a previous grade level or deficiencies for the next grade.

Meaningful dialog about data precedes the application of research into best practice. Performance test results are most powerful when teachers break down the data into an item analysis for the individual student level. The information filters into instructional design, curricular, and pacing adjustments. Parents and students need access to this information along with grade levels and content areas. Communication with parents and students regarding curricular and instructional adjustments is vital. Analysis of data builds the curricular foundations. Knowing the degree to which students are mastering basic skills centers the instruction on student need. Parents also need consistent and clear communication regarding their student's performance data. In order to focus on continuous improvement that meets specific student needs, analysis of data at the individual student level is necessary. Reviewing and analyzing data determines individual learning growth.

One of the seven correlates of effective schools, according to Lawrence Lezotte, an American education researcher and consultant, is the "frequent monitoring of student progress." As stated in effective schools information:

> *The effective school frequently measures academic student progress through a variety of assessment procedures. Assessment results are used to improve individual student performance and also improve instructional delivery. Assessment results will show that alignment must exist between the intended, taught, and tested curriculum.*[12]

RECOMMENDATION 3.5

Implement a comprehensive ongoing process for analyzing student performance data throughout the school year.

BCPS should develop and implement a process to analyze test data throughout the school year. The assessment and planning department should assist with implementation of processes for analyzing. Communicating among departments, and working with teachers, the superintendent, assistant superintendent and principals, the division should develop a detailed timeline, procedure, and expectation for analysis of formative and summative testing. Common processes and procedures enable the use and classroom application of data. The division leadership should develop and implement training and system-wide processes for analyzing student performance data. The processes should work in concert with the division's transition to a teacher career

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[12] Lezotte, L. (1994). Nexus of instructional leadership and effective schools. *American Association of School Administrators, 51*(6), 20-23.

ladders system reviewed in Chapter 4 of this report and the master teachers discussed in Chapter 2 of this report. Teachers should focus on determining the strengths and weaknesses of the students, designing instruction and remediation, and adjusting the division's instructional programs.

With systemic data analysis in place, the division can more successfully develop action plans built on determined strengths and address weaknesses in instructional programs. Professional development days and collaborative release time both provide time for analysis of performance data. Through division-wide data analysis procedures, teachers determine if the instructional approach is to re-teach, remediate, or move to maintenance and periodic review. Pragmatic use of data becomes the first step in monitoring teaching and aligning instruction with learning needs and improved student performance.

FISCAL IMPACT

Apart from the acquisition of the aforementioned commercial assessment system, implementing this recommendation will require staff leadership time to develop the processes and procedures to be followed. The division already has professional development days and collaborative release time allocated which can be used for teacher training and then data analysis.

C. Curriculum Policies and Management

With increased accountability and high stakes testing, effective curriculum management and policies are critical to a division's success. Due to the multiple subgroups such as ethnicity, disability, socioeconomic status, and limited English proficient, school divisions are finding that data-driven decisions are essential to identifying targeted areas and gap groups in need of improvement. Curriculum management procedures and process make these decisions operable.

The processes and procedures also manage and evaluate meeting all mandates of federal, Commonwealth, and local requirements. They ensure that all students are showing progress. A division must ensure that curriculum management is effective, monitored, and systematic across the division. Curriculum policies provide the direction and guidance for how the curriculum should be developed, revised, and implemented. The school board policy defines the division's goals and expectations. The division must have in place clearly defined and well-managed processes and procedures for directing instruction, designing curriculum, and securing resources to support all educational efforts.

FINDING 3.6

BCPS lacks consistent processes, procedures, or expectations for all teachers, at all sites, to flex the pacing guides based on student performance data. All pacing guides and curriculum maps reflect student learning trends and patterns based on formative and summative student performance data. Student performance results drive subsequent instruction. The division does not currently have processes and procedures that ensure all instruction, pacing guides, and curriculum maps receive timely updates reflecting student learning trends and patterns.

As an example of an effective process, Fayetteville Public Schools recently developed structures to manage a student-centered curriculum. The described framework ensures the effective management of the written, taught, and tested curriculum. As noted in the article, "This comprehensive plan provides the structure to ensure quality control of the designed and

delivered curriculum, internal consistency, and resources necessary to address the division's mission and goals."[13]

RECOMMENDATION 3.6

Develop and implement processes and procedures to manage, revise, and update pacing guides, curriculum maps, and educational resources based on student performance data and educational changes.

The division needs a comprehensive management process to revamp the curriculum system, designed to address the changing needs of all students. This effort culminates in a systematic, ongoing program of curriculum evaluation, revision, and development. Systematic processes and procedures ensure the quality and control of the curriculum. The processes and procedures guide updating, adjusting, and revamping curriculum maps and pacing guides.

These adjustments ultimately drive daily instruction and remediation. Trends and patterns indicating that content and skills are not being mastered demand curriculum changes. Changes in SOL standards and requirements need continuous incorporation into the mapping system. Along with managing and adjusting the written documents, a routine process for inventory of resources is available for teaching the skills and content.

FISCAL IMPACT

The director of instruction should lead a comprehensive revamping. The consulting team estimates the initial work will require at least 40 hours. Once the initial process has been developed, the division should realize greater efficiencies in identifying where instruction needs adjustment.

FINDING 3.7

BCPS does not have common procedures, processes, and expectations for ensuring that all staff teaches the adopted curriculum with integrity. Focus group discussions and interview dialog pointed out school and division-based differences regarding monitoring of the written, taught, and tested curricula. Participants revealed monitoring and accountability for implementing the curriculum occurred through various efforts. Monitoring takes place via lesson plans, grade level planning, content area team meetings, vertical team meetings, SOL assessment results, various walk-through and walk-about initiatives, and teacher evaluation observations. All efforts are viable measures for monitoring implementation of the written, taught, and tested curriculum. However, these efforts were sporadic, random, and not implemented with a common division-wide focus, intent, expectation, and understanding.

While all of these efforts take place within the division, these efforts were not driven by a consistently implemented policy articulating process and procedures that ensured the written curriculum is taught with integrity at all grade levels and in all content areas. There is not a division-wide tracking system, a common lesson planning document or formal structure to ensure curriculum equity for all students.

All students are entitled to the same curriculum that prepares them for success at the next level of learning. Interviews with division directors and supervisors indicated both vertical and horizontal curriculum alignment. The consulting team was unable to identify a consistent or

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[13] Fayetteville Public Schools. Retrieved from http://www.fayar.net/administration/curr_design.html

standardized process to ensure equitable delivery of the curriculum. A standardized process would also monitor if the curriculum is adapted to meet the instructional and curricular needs of special populations.

Miami-Dade County Public Schools has a process to monitor curriculum. An interdisciplinary review team manages and facilitates the process, focused primarily on reading, math, science, and social studies.[14]

RECOMMENDATION 3.7

Implement processes and procedures to ensure all teachers implement the written, taught, and tested curriculum with integrity.

The superintendent, assistant superintendent, department directors, and principals should set clear expectations for implementing the adopted curriculum. The policies and procedures for monitoring and accountability may include such vehicles as lesson plans, daily and weekly classroom visits, and teacher evaluation processes. The master teacher concept and teacher career ladder process, both outlined in the division's strategic plan, should work in concert with this recommendation. Close examination of student performance data also provides evidence of the successful implementation of the written, tested, and taught curriculum.

FISCAL IMPACT

The superintendent, assistant superintendent, department directors, and principals can outline the expectations in a matter of hours. The amount of time required to monitor teacher implementation will depend on the vehicles chosen. For example, reviewing lesson plans will take less time than an intensive schedule of classroom visits. Once implemented, the division should be more effective in ensuring the curriculum is taught with integrity.

FINDING 3.8

The division does not have an instructional plan driven by policies and procedures that manage all curricular and instructional decisions. The division's curricular and instructional decisions have no filtering and monitoring system related to a comprehensive instructional plan. The division has implemented unique and specialized initiatives in the areas of classroom observations, differentiated instruction, blended and personalized learning, flipped classrooms, "walk-abouts" and "walk-throughs," and various professional development trainings such as thinking paths. However, there is no division plan in place that filters, unifies, and standardizes all instructional components. There is no plan that interfaces and ensures all the instructional needs and components found in the SIP, strategic, Commonwealth, and federal program instructions work in concert.

The literature is replete with research that emphasizes the importance of basing good instruction on planned, consistent curriculum, robust student engagement, rigorous expectations for all students, and strong teacher-student relationships. Instructional plans are the framework and scaffolding for interfacing and making sure all the division's programs and plans' documents work in concert.

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[14] The Broad Prize for Urban Education. Retrieved from http://www.broadprize.org/asset/1356-rriculum%20implementation.pdf

Generally, an instructional plan defines and outlines the following:

- timelines;
- evaluation processes and procedures;
- needs assessments and data collected and analyzed;
- fundamental cultural and demographic issues;
- guidelines, strategies, and methods for instructional delivery;
- measurement and tracking of student performance;
- financial resources - budgeting and purchasing processes and procedures;
- technology needs;
- staffing;
- facility and maintenance resources; and
- decision-making filters.

RECOMMENDATION 3.8

Develop and implement a multi-year comprehensive division-wide instructional plan.

The plan interfaces and works in concert with the strategic, school improvement, instructional technology, and professional development plans. The plan incorporates, but is not limited to, instructional design principles, data driven decision-making, technology and instructional software, student performance data and assessment, classroom-based inventories, guidance for perusal and piloting instructional materials and resources, summative and formative assessment processes and procedures, professional development training, purchasing guidelines, and procedural framework for implementation and monitoring.

The division already has a visionary strategic plan; its instructional plan should both support and inform the strategic plan. The development and implementation of the instructional plan should include input from the superintendent, assistant superintendent, and staff from all departments that influence, support, and interact with classroom instruction. Principals from all school levels and grade level teachers must also provide input. The most appropriate time for development takes place during the summer months.

FISCAL IMPACT

The consulting team estimates that the director of instruction will need to devote at least 100 hours to the creation of the initial plan and will likely need the input of various staff in the instruction department as well.

FINDING 3.9

There are inconsistencies across the division for teacher planning and collaboration. Some sites provide common planning and release time for teachers while other sites expect teachers to meet randomly, or before and after school. The division does not currently provide regularly scheduled release time for collaboration and planning for all teaching staff at all campuses.

In virtually all focus groups and interviews, participants were keenly aware of the need for teachers to collaborate regarding planning of instruction, assessment, discussing student performance and addressing behavioral needs. There is need for sharing effective interventions and daily remediation practices across grade levels and subject areas.

The consulting team found that the majority of BCPS teachers share randomly and discuss or plan instruction informally. Several campuses have regularly scheduled release time or common planning periods. However, most teachers indicated sharing best practices, new ideas, teaching strategies, or use of technology is casual and by chance.

The current schedules at all the elementary, middle, and high schools vary. Most do not provide time during the school day for teachers to dialog or have focused meetings concerning student learning needs. There is no standardized process in place that gives teachers targeted time to address specific student performance, remediation efforts, or instructional and learning issues. There is random use of staff meetings for professional growth, collaborative discussions, and addressing student instructional needs. Overall, across the division, there are no scheduled, intentional, focused, and job-embedded collaborative instructional planning opportunities in place.

With the evolving trends and patterns for instruction, along with the division's vision for customized learning, collaboration between and among teachers, principals, and division leadership is vital. The expected transitions cannot take place without time for discussion and collaborative planning. Successful implementation of innovations requires cross-curricular dialog and planning that only evolves through corporate thinking and shared decision-making. Implementations of new initiatives, along with the day-to-day decisions in schools are maximized and more robust when divisions provide teachers with collaborative opportunities.

The primary purpose of teacher collaboration is to design, adjust, and implement daily instructional practices. Four critical questions drive effective collaboration among teachers. These critical questions are as follows:

- How will we teach to all students?
- How will we know if each student has learned it?
- How will we respond when some students do not learn it?
- What will we do with the students who have already learned it?

The Learning Forward organization (previously the National Staff Development Council) speaks to the importance of teacher collaboration in its standards for professional learning. [15] Their standards identify "Learning Communities: Professional learning that increases educator effectiveness and results for all students occurs within learning communities committed to continuous improvement, collective responsibility, and goal alignment."

Many divisions face challenges in providing collaboration time during the school day for teachers. Examples from Richard DuFour's book, *Learning by Doing*, (2006) show how some divisions have overcome these challenges (**Exhibit 3.3**). The Learning Forward organization also provides additional ideas on how to find time for teacher collaboration. Finally, additional support for collaboration can be found in a 2008 practice guide from the U.S. Department of Education. The guide, "Turning Around Chronically Low-Performing Schools"[16] cites collaboration as a frequent approach to improving instruction in 35 chronically low-performing schools that achieved dramatic turnarounds (substantial gains in student achievement within three years).

Exhibit 3.3
Examples for providing collaboration time

Common Prep Time - build a master schedule to provide daily common prep time for teachers of the same course or department.

Parallel Scheduling - schedule common prep time by assigning elective and special teachers to provide lessons to students across an entire grade level at the same time each day.

Adjust start and end times - gain collaborative time by starting the workday early or extending the workday one day each week to gain time.

Shared Classes - combine students across two different grade levels or courses into one class for instruction.

Group Activities, Events, and Testing - teams of teachers and non-teaching staff coordinate activities that require supervision of students rather than instructional expertise.

Banking Time - over a period of days, extend the instructional minutes beyond the school day.

In-Service and Faculty Meeting Time - schedule extended time for teams to work together on staff development days and during faculty meeting times.

Source: Dufour, R. (2006). Learning by doing: A handbook for professional learning communities at work. Bloomington, IN: Solution Tree.

RECOMMENDATION 3.9

Establish regularly scheduled time for teacher collaboration and implement common release time for staff collaboration and planning.

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[15] Standards for Professional Learning. Retrieved from http://learningforward.org/standards-for-professional-learning#.UzXYL_ldUmA

[16] Institute of Education Sciences. Retrieved from http://ies.ed.gov/ncee/wwc/practiceguides

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The BCPS superintendent, assistant superintendent, and division supervisors should start with the principals and teachers to determine what needs exist. The focus of collaboration efforts begins at the classroom teacher level. Division leadership needs input and ground level information from teachers regarding how to create schedules and pragmatic agendas that generate productive and useful collaborative planning time for teaching staff. Each collaborative release time should have agendas and a system of accountability built into the collaborative structure.

Framing the collaborative opportunities into a variety of flexible configurations with pragmatic agendas is important. The collaboration time should be teacher driven, focused, and organized with intended outcomes. Each collaborative session needs a focus for how better to teach students. The session needs an accountability component to ensure the time is productive and used to make a positive difference.

Collaborative release time can also include division-wide focus. However, most sessions need site-based agendas and not top-down assignments. Each session must have a practical focus where teachers work collectively to influence decisions related to school improvement, curriculum and instruction, and professional development. The sessions also must be about improved student achievement via teacher collaboration around curriculum, instruction, and site-based needs.

FISCAL IMPACT

Depending on the school schedules the division adopts, this recommendation will require no additional resources, but should free teachers for needed collaboration. Some schedules may require the division to provide funding for substitutes so that teachers are free to meet.

D. Special Education

The *Individuals with Disabilities Education Act* (*IDEA*), *Part B* is the federal law that supports special education and related service programming for children and youth with disabilities ages two through 21. The major purposes of *IDEA* are as follows:

- to ensure that all children with disabilities have available to them a free appropriate public education that emphasizes special education and related services designed to meet their unique needs and prepare them for employment and independent living;
- to ensure that the rights of children and youth with disabilities and their parents are protected; and
- to assess and ensure the effectiveness of efforts to educate children with disabilities.

The VDOE maintains the responsibility for the general supervision of compliance with federal and state requirements for providing services for students with disabilities under *IDEA* and its amendments. The focus for the VDOE, in collaboration with the local education agencies, is on the improvement of the educational performance for all students in Virginia.[17]

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[17] *Regulations Governing Special Education Programs for Children with Disabilities in Virginia.* Virginia Department of Education Division of Special Education and Student Services. Retrieved from http://www.doe.virginia.gov/special_ed/regulations/state/regs_speced_disability_va.pdf

Divisions must develop an Individualized Education Plan (IEP) for each student receiving special education services under *IDEA*. The IEP must include input from the parent and regular education teachers and be aligned with education plans for students in regular education classrooms. The IEP is designed to meet the unique educational needs of students with disabilities, provide educational opportunity in the general curriculum to the extent possible, and prepare students with disabilities for opportunities in postsecondary education, employment, and independent living.[18]

The reauthorization of *IDEA* in 2004 included provisions significantly changing the identification of learning-disabled students. One change in the law addressed early intervention services and creating opportunities for scientific-based interventions to determine a student's Response to Intervention (RTI). With RTI, schools identify students at risk for poor learning outcomes, monitor student progress, provide evidence-based interventions, and adjust the intensity and nature of those interventions depending on a student's responsiveness.

IDEA now allows a school division to use up to 15 percent of its allocation to support services to students who have not been identified as needing special education services but who need additional academic and behavioral support to succeed in a general education environment. Professional development funds are available for scientifically based interventions, literacy instruction, and the use of adaptive or instructional technology. It also permits the use of funding for educational and behavioral assessments.

IDEA defines an effective special education program as having the following elements:

- pre-referral intervention in regular education;
- referral to special education for evaluation;
- comprehensive nondiscriminatory evaluation;
- initial placement through an IEP meeting;
- provision of educational services and supports according to a written IEP;
- annual program review;
- three-year re-evaluation; and
- dismissal from the special education program.

FINDING 3.10

The BCPS special education program not only meets all Commonwealth and federal requirements, the division is proactive in dealing with student IEPs and providing the least restrictive environment for students. The division's School Consultation Team (SCT) efficiently and effectively supports the special education program. According to their manual, the SCT:

- *serves as the division's Child Study Team for students who, after team review, are felt to display sufficient reason to suspect a disability;*

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[18] *Regulations Governing Special Education Programs for Children with Disabilities in Virginia.* Virginia Department of Education Division of Special Education and Student Services. Retrieved from http://www.doe.virginia.gov/special_ed/regulations/state/regs_speced_disability_va.pdf

- *is a resource designed to generate successful resolution to teacher concerns and student needs;*

- *works from the premise that success, in most cases, can be achieved in the regular classroom settings with targeted intervention plans and regular progress monitoring. Differentiated instruction is a general teaching practice and ALL students have the expectation to have individualized learning plans in the classroom;*

- *is the school's resource for identifying appropriate and effective research-based interventions for individual students. There is no set intervention plan for students and programs and services may vary among schools;*

- *understands that each child brings a unique history to his or her classroom and learning experience;*

- *can generate a variety of strategies to explore available resources in the school as a part of regular education services. The fidelity of implementation is a critical component to the success of the SCT. Recommendations provided by the team must have routine progress monitoring to serve the recipients of SCT services;*

- *can recommend a variety of instructional accommodations but understands that the supporting evidence required for a special education evaluation should include data documenting the student's response to research-based interventions; and*

- *reminds staff that it is imperative for all students to have the benefit and opportunity to establish successful learning experiences prior to a referral for consideration of special education services.*

The SCT manual further describes the use of RTI as a major tool for managing special education service. In virtually all interviews and focus group discussions, participants were aware of the RTI process and could speak to the implemented tiered interventions. Across the division, the review team found staff and administrators aware and knowledgeable regarding the importance of the RTI framework. BCPS staff recognized the impact RTI has on the academic and behavioral issues of both special education and general education students.

COMMENDATION

The division has done a commendable job of implementing Response to Intervention (RTI) and interfacing it with the School Consultation Team (SCT) program to serve special education students.

The implementation of Response to Intervention (RTI) has provided both academic and behavioral interventions for at-risk students. The program is implemented across all school sites and was reported as effective for serving at-risk students.

E.   Gifted and Talented Education

Commonwealth regulations require school divisions to identify gifted students and provide instructional services to meet their needs. Each school board must approve a comprehensive plan for the education of gifted students. According to Virginia regulation, school divisions must provide an "appropriately differentiated curriculum and instruction." The curriculum and instructional strategies should provide accelerated and enrichment opportunities that recognize gifted students' needs:

- accelerated and advanced content and pacing of instruction;
- original research or production;
- problem finding and solving;
- higher-level thinking that leads to the generation of products; and
- a focus on issues, themes, and ideas within and across areas of study.

Gifted curriculum and instruction should be offered continuously and sequentially to support the achievement of student outcomes, and provide support necessary for these students to work at increasing levels of complexity that differ significantly from those of their age-level peers.

FINDING 3.11

BCPS elementary schools implement a variety of gifted learning opportunities for its elementary students. The division requires elementary gifted teachers to have competency in teaching gifted students. As noted in BCPS documents, all elementary gifted teachers will "complete gifted education course offerings for licensure renewal. Any elementary gifted teacher not holding a gifted endorsement when hired will have a set amount of time to obtain that endorsement."

The program identification process begins at second grade. After student placement, the educational enrichment and acceleration opportunities across the elementary schools have varying formats and venues for identified students. Even though there is limited participation of special education and ESL students in the gifted program, focus group dialog indicated these students have the same consideration for placement.

All elementary gifted teachers are itinerant and travel to several different schools. Due to distance and travel time between schools, the amount of instructional time spent in each school varies from campus to campus. Schools implement a variety of models, including pull out, push in, flipping, co-teaching, and self-contained classrooms.

The program offers and encourages STEM (Science, Technology, Engineering, and Math) activities. The division's parent advisory committee provides input for the gifted and talented program. Currently the group is assisting the division supervisor in a review and evaluation of the program. The focus of the group is to examine the need for program revisions, future planning, and overall program improvement.

COMMENDATION

There are exceptional efforts in BCPS to offer multiple learning opportunities for gifted students in the elementary grade levels.

FINDING 3.12

The gifted program is inconsistently implemented in middle and high schools. The consulting team found limited enhanced instructional learning opportunities or pull out efforts for gifted middle and high school students. Virginia regulations require that students be identified and served through 12th grade.[19]

Advance placement classes serve as the primary vehicles for providing gifted instruction in BCPS. The general classroom teacher provides enhanced learning opportunities. The expectations varied across the division regarding the monitoring, frequency, and quality of targeted instruction for gifted students. No consistent monitoring of teacher lesson plans or targeted instructional delivery takes place for the sole purpose of enhanced and enriched learning opportunities for identified students.

The consulting team found limited involvement of special education and ESL students. The division provides minimal resources for procuring instructional materials, training, and support for engaging teachers in enriching instruction to gifted students in secondary grades.

RECOMMENDATION 3.12

Monitor the implementation of appropriately enhanced educational learning opportunities for all gifted and talented BCPS students.

The division leadership should guide middle and high school classroom teachers in planning and delivering accelerated, enriched learning opportunities. Division staff, principals, and general classroom teachers should work collaboratively to implement VDOE requirements such as original research projects leading to a product; problem finding and solving; higher order thinking that leads to the generation of products; and focusing on issues, themes, and ideas within and across areas of study.

The National Association for Gifted Children (NAGC)[20] outlines a continuum of educational services, classroom resources, and options appropriate to supporting the differences and learning needs of gifted students. The NAGC Programming Standards provide a framework that division leaders can use in looking at student services and current practices implemented at both the high school and middle school level. These resources connect seamlessly to both Commonwealth and local requirements and initiatives for gifted education.

FISCAL IMPACT

The instruction department has the capacity to monitor implementation of this recommendation on an ongoing basis. School staffs can implement this recommendation as part of their regular workload.

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[19]*Regulations Governing Educational Services for Gifted Students.* Virginia Department of Education. Retrieved from http://www.doe.virginia.gov/instruction/gifted_ed/gifted_regulations.pdf
[20] www.nagc.org

Human Resources

This chapter reviews the findings and recommendations related to the human resource functions of Bedford County Public Schools (BCPS). The five areas of review were:

A. Organization and Management
B. Policies and Procedures
C. Recruitment, Hiring, and Retention
D. Staff Development
E. Compensation and Classification Systems

Human Resources (HR) management and operations is an important operation to examine in any organizational review. As the availability of funding or resources for school divisions becomes both less and more restrictive, HR management often becomes a focal area, as most division dollars are spent on personnel. The efficiency and effectiveness of HR management and operation is dependent on the organizational structure and strategic leadership. Since HR has a customer service effort, the staff must concern itself with internal and external job applicants, current employees, and even the employees who have left the division.

Employee-related costs represent the majority of BCPS expenditures, and teachers represent the largest employee group. BCPS uses staffing standards and formulas to allocate teaching positions to schools. **Exhibit 4.1** shows BCPS 2011-12 teacher staffing levels and ratios of students to school-based teachers compared to the six peer school divisions. The number of teaching positions reflects "teacher-scale" positions (e.g., paid on the salary schedule for teachers), which include other types of classroom teachers as well as non-classroom positions with teacher certifications.

When compared to the peer divisions, BCPS had the highest number of students per classroom teacher in grades K-7, and ranked third from the bottom in grades 8-12. When compared with the staffing standards recently instituted by BCPS, the results are reasonably similar.

Exhibit 4.1
2011-12 teacher staffing levels

School Division	Elementary Teaching Positions	Secondary Teaching Positions	Students per Classroom Teacher	
			Grades K-7	Grades 8-12
Augusta County	475.1	317.8	13.2	11.5
Franklin County	345.5	214.9	12.7	12.4
Frederick County	543.1	423.6	14.7	11.5
Montgomery County	355.8	422.1	16.3	8.5
Rockingham County	451.8	422.7	15.5	8.6
Washington County	369.8	192.5	11.9	14.0
Peer Division Average	**423.5**	**332.3**	**14.0**	**11.1**
Bedford County	**352.7**	**417.9**	**17.3**	**9.8**

Source: 2010-11 VDOE Superintendent's Annual Report.

Exhibit 4.2 compares the number of school-based administrators, teachers, teacher aides, and others per 1,000 students for BCPS and the peer divisions. The number of BCPS principals and assistant principals per 1,000 was second to the lowest in the peer comparison, while the

number of teachers is the lowest. These data suggest that on average, staffing for school-based positions is below the peer median, not including teacher aides.

Exhibit 4.2
School-based staff per 1,000 students

| School Division | Staff per 1,000 Students | | | |
	Principals and Assistant Principals	Teachers	Teacher Aides	Others
Augusta County	4.1	78.2	14.0	9.0
Franklin County	4.2	75.9	16.9	8.9
Frederick County	3.8	74.5	14.6	6.6
Montgomery County	3.7	81.2	20.9	8.3
Rockingham County	4.2	79.5	14.5	7.7
Washington County	3.4	77.0	7.3	8.6
Peer Division Average	**3.9**	**77.7**	**14.7**	**8.2**
Bedford County	**3.4**	**73.9**	**14.8**	**7.5**

Source: 2011-12 VDOE Superintendent's Annual Report.

Further assessment of data in regard to division-wide administrative staffing, including administrators assigned to schools, showed a lower than average disbursement per pupil. In addition, **Exhibit 4.3** shows that instructional spending in BCPS per pupil was lowest compared to peer divisions, as well as administrative spending per pupil.

Exhibit 4.3
Disbursements per pupil

School Division	Instruction Spending per Pupil	Administration Spending per Pupil
Augusta County	$ 6,759	$ 183
Franklin County	$ 7,427	$ 177
Frederick County	$ 7,618	$ 359
Montgomery County	$ 7,623	$ 199
Rockingham County	$ 7,319	$ 216
Washington County	$ 6,844	$ 224
Peer Division Average	**$ 7,265**	**$ 226**
Bedford County	**$ 6,398**	**$ 142**

Source: 2011-12 VDOE Superintendent's Annual Report.

In total, the consulting team gave three commendations in this chapter:

- The BCPS HR department has performed exemplary work in the areas of personnel, as measured by established HR metrics for performance and effectiveness.
- The division is implementing a comprehensive staffing standards plan that equalizes the staffing of schools and departments according to specific standards.
- HR has collected and filed performance evaluations on virtually all BCPS employees.

The consulting team also made 10 recommendations in this chapter:

- Increase the clerical staff of HR by one.
- Develop and implement a customer feedback system that produces information in two regards: evaluating the nature and quality of HR services, and assessing an employee job satisfaction survey.
- Update systematically all job descriptions to ensure that they accurately reflect job functions and comply with applicable FLSA laws.
- Implement a document imaging system for record maintenance.
- Place all personnel file folders in fire- and waterproof cabinets which can be locked when not in use. These will eventually be eliminated through the document imaging system for records storage.
- Provide incentives for teachers to achieve a demonstrable level of impact on student achievement and mastery of teaching, possibly through the BPCS teacher career ladder and/or through National Board certification.
- Develop a comprehensive division-wide professional development master plan.
- Involve central office instructional personnel in the development of individual campus CSIPs especially in regard to needed teacher training.
- Resume monitoring compliance with FLSA rules in regard to both accurate job classifications and compensation for overtime and compensatory time.
- Ensure that provisions of FLSA rules and school board policies in regard to awarding overtime pay and compensatory time are implemented and followed.

The estimated fiscal impacts of those recommendations for which the consulting team could reasonably quantify into dollars are shown below. Some recommendations will have fiscal impacts that depend on the specific implementation path chosen by the division while others will only require staff time; fiscal impacts for those recommendations are not shown here.

Recommendation		2014-15	2015-16	2016-17	2017-18	2018-19	Total
4.2	Increase the clerical staff by one.	($33,600)	($33,600)	($33,600)	($33,600)	($33,600)	($168,000)
4.3	Develop customer feedback system.	($10,000)	$0	$0	($10,000)	$0	($20,000)
4.5	Implement document imaging system.	($10,000)	($5,000)	($5,000)	($5,000)	($5,000)	($30,000)
4.6	File folders in locked fire- and waterproof cabinets.	($16,000)	$0	$0	$0	$0	($16,000)

A. Organization and Management

The HR function for BCPS is managed by four employees: one director and three secretaries (**Exhibit 4.4**). Despite its small size, the four employees are responsible for supporting the traditional human resources function, from processing job applications to overseeing the retirement process. Primary duties and responsibilities include:

- conducting recruitment, receiving applications, and initial screening of applicants;
- maintaining the online job applicant tracking, as well as a minimum number of paper applications;
- monitoring licensure for certified positions;
- ensuring compliance with federal, state, and local guidelines;
- updating school board policies when necessary;
- creating electronic records of employment and keeping paper personnel files for new and returning employees;
- supporting payroll and benefits functions;
- ensuring that performance evaluations are conducted; and
- monitoring the outsourced employee assistance program (EPA) and handling employee relations.

The chief financial officer, aside from overseeing the business and financial operations of the division, coordinates payroll and benefits.

Exhibit 4.4
Human resources organizational structure

Source: Created by Prismatic, December 2013.

In the division's strategic plan, the goals identified for the HR department are to employ highly effective teachers and support staff and to prepare students to be successful in college and future career fields. The strategies for meeting these goals include the enhancement of hiring practices to improve quality and support staff and to develop a comprehensive employee wellness program.

FINDING 4.1

There are four full-time employees in the HR department and turnover is low. The average time of service of the four staff is 14 years. Other employees interviewed individually or in focus groups lauded HR employees for their loyalty, efficiency, and customer service.

The three secretarial positions share clerical duties in addition to other specific office functions. The responsibilities of all three include:

- responding to employment verifications;
- preparing tax documents;
- arranging for division-sponsored job fairs;
- conducting new-teacher orientation;
- reconciling the eFinance database;
- responding to court subpoenas regarding employment documents;
- maintaining confidential employee information files;
- updating the staff directory; and
- working with customers via email, telephone, or in person.

The varying tasks include performing criminal background checks, acting as a notary for the division, and processing *Family and Medical Leave Act (FMLA)* forms.

Leading HR and organizational metrics from the Society of Human Resource Management (SHRM) provide formulas for benchmarking the efficiency and effectiveness of an HR operation, using a database of more than 1,500 organizations that includes some public school systems. In its 2012 Human Capital Benchmarks Report, SHRM has provided details of measurements and results.[21] The consulting team used data provided by BCPS staff and the application of the SHRM metrics to calculate the total amount of HR expenses as a percentage of the total BCPS operating expenses. Although SHRM does not suggest a specific percentage of the budget to spend on HR functions, **Exhibit 4.5** shows that BCPS' spending on HR is low.[22]

Exhibit 4.5 presents actual expenditures for the department of HR from 2009 to 2011 along with HR budgeted data for 2012 and 2013. Total expenditures and the amount budgeted for the two years, for which actual expenditures have not yet been reported, have not varied to any great extent over the five years shown. In 2009, HR had a director and an assistant director, a position that was not funded for subsequent years. There was a reduction in the HR office, accounting for a decrease in salary expenses in following years. The budgeted expenditures for

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[21] Human Capital Benchmarks Report. (2012). *Society of Human Resource Management.* Retrieved from http://www.shrm.org
[22] Human Capital Benchmarks Report. (2012). *Society of Human Resource Management.* Retrieved from http://www.shrm.org

2013-14 increased because of an increase in the salaries of HR personnel, as well as all other employees in the division. The average actual and expected (budgeted) expenditures in the operation of the HR office for the past five years are $318,380. This average amount represents only 0.003 percent of the expected 2013-14 total expenditures for the division, a figure that is far below what generally is expected.

Exhibit 4.5
Human resources expenditures (2009 to 2011)

Description	2009 Actual	2010 Actual	2011 Actual	2012 Budgeted	2013 Adopted
Director Salaries	$ 159,376	$ 87,061	$ 87,714	$ 90,872	$ 95,779
Clerical Salaries	$ 91,855	$ 94,763	$ 93,459	$ 97,605	$ 102,052
FICA	$ 18,541	$ 13,444	$ 13,538	$ 14,418	$ 15,134
Virginia Retirement	$ 28,275	$ 16,058	$ 20,527	$ 25,748	$ 23,067
H/D	$ 26,566	$ 24,309	$ 23,917	$ 21,310	$ 24,454
GLI	$ 1,423	$ 503	$ 507	$ 2,243	$ 2,354
Fingerprinting	$ 12,851	$ 12,746	$ 16,785	$ 14,000	$ 14,000
Employee Photo IDs	$ 107	$ 403	$ 1,074	$ 1,350	$ 1,350
Employee Assistance Prg	$ 31,856	$ 31,875	$ 32,224	$ 31,000	$ 31,000
Online License	$ 575	$ (275)	$ 3,550	$	$
Administrative Travel	$ 1,072	$	$ 132	$ 1,200	$ 1,200
Recruitment	$	$	$	$	$
Advertising	$ 5,798	$ 1,630	$ 4,485	$ 959	$ 959
Office Supplies	$ 2,577	$ 3,860	$ 5,471	$ 3,500	$ 3,500
Total per year	**$ 380,872**	**$ 286,377**	**$ 303,383**	**$ 304,205**	**$ 314,848**
				Average per five years	**$ 317,937**

Source: BCPS, December 2013.

It should be noted that BCPS expenditures for staff development or professional development do not show in this chart since training is not considered a function of human resources in BCPS. The functions of benefits and payroll are housed in the finance department.

The HR expense per FTE metric shows the amount of HR dollars spent per FTE in BCPS in any given year. Using the amount budgeted for 2013-14 and the actual December 2013 employee count, the projected cost will be $194 in BCPS. The 2012 SHRM benchmarking study reports that the HR expense per FTE rate remained relatively stable at a median of $1,174.[23] A separate study from The Hackett Group, reported in September 2013 that companies it defined as "world class" – the top 25 percent of companies among the thousands that Hackett studies – spent $1,390 HR dollars per employee annually. The Hackett study found that these top companies spent 27 percent less than median companies on HR.[24]

The annual metric shows the rate at which employees enter and leave a company or organization in a given fiscal year. The average rate for Bedford for the past three years is about 10 percent. SHRM has not established a figure that should be considered best practice, and instead recommends that businesses and school divisions structure their HR functions and employee

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[23] Human Capital Benchmarks Report. (2012). *Society of Human Resource Management.* Retrieved from http://www.shrm.org

[24] Bression, Nathalie and Schneider, Lynne. How leading human resources organizations outperform their peers. The Hackett Group: September, 2013

engagement programs to achieve the lowest annual rate possible. In comparison to other school divisions that the consulting team reviewed, Bedford's 10 percent is low.

Exhibit 4.6 shows the turnover rate for BCPS support positions.

Exhibit 4.6
BCPS support position turnover rate

	Aides	Bus Aides/ Bus Drivers	Custodian	Nutrition	Clerical	Maintenance	Technology
2010-11							
Turnover	19	36	19	18	5	1	1
Number of Employees	173	213	84	127	67	12	12
Percent Turnover	11%	17%	23%	14%	7%	8%	8%
2011-12							
Turnover	17	7	5	15	6	0	1
Number of Employees	176	198	79	127	67	12	12
Percent Turnover	10%	4%	6%	12%	9%	0%	8%
2012-13							
Turnover	30	28	10	18	7	1	0
Number of Employees	176	195	78	127	67	12	13
Percent Turnover	17%	14%	13%	14%	10%	8%	0%

Source: BCPS Director of Human Resources, December 2013.

According to information provided to the consulting team by the BCPS chief financial officer, salaries paid to all employees by BCPS in 2010-11 totaled $54,393,634. In 2011-12, payroll was $52,536,257 because of a reduction in employees. In 2012-13, the total payroll increased to $54,039,573. This overall increase in division compensation was driven by state-mandated retirement systems salary increases, bonuses paid to bus drivers to assist with health benefit reductions, and the addition of 11 elementary teacher positions.

COMMENDATION

The BCPS HR department has performed exemplary work in the areas of personnel, as measured by established HR metrics for performance and effectiveness.

In all areas of its responsibilities as measured by SHRM and other professional HR metrics, the staff assigned to the HR office of BCPS score satisfactorily, especially when the sheer volume of work, functions, and operations of HR are considered.

FINDING 4.2

The HR department is understaffed. The volume of work that the director and each of the three secretarial staff is assigned requires far greater amounts of time to complete than the staff has during a regular work week. Therefore, by necessity, the critical daily tasks that should be

finished are put off and the security of confidential files is compromised because the staff cannot file them in a timely manner.

Despite the immediacy of daily tasks, HR secretaries are interrupted by telephone calls from employees and state officials, as well as people who walk in seeking assistance and information. The secretary whose work station is nearest to the door to the HR office must serve as the office receptionist.

Volumes of confidential paper documents waiting to be filed currently reside in stacks on the desks of the current HR staff until time is found to complete the required task of filing into personnel folders or other historic business files. Filing as a task has the least priority in the work-a-day routines of the personnel clerks. There are many files in the same stack that theoretically may never get filed and the security of private correspondence will continue to be compromised.

Interruptions during the normal work day from telephone calls, email inquiries, and walk-in clients already interfere with any attempt to budget time during the duty day for filing. Providing the information that an employee or client is seeking often results in an extensive, personal, face-to-face conversation at the expense of planned time. These conferences themselves are subject to further delays because of similar interruptions.

When compared to that of peer Virginia school divisions (**Exhibit 4.7**), the ratio of all staff in the BCPS HR office to the number of employees they serve is considerably higher than any of their peers.

Exhibit 4.7
Comparison of HR department staffing

Division	Total Employees (FTE)	Employees Assigned to HR[25]	Ratio HR:Employees
Augusta County	1,298		
Franklin County	961		
Frederick County	1,623	8	0.49 or 203
Montgomery County	1,324	6	0.50 or 221
Rockingham County	1,449	7	0.48 or 207
Washington County	857	5	0.58 or 171
Peer Division Average	**1,252**		
Bedford County	**1,611**	**4**	**0.25 or 403**

Source: 2011-12 VDOE Superintendent's Annual Report.

In 2011 the Institute for Corporate Productivity released a set of findings from recent research containing both statistical and analytical methods for determining the conditions and effectiveness of an organization's HR operations. To an extent, these findings used the SHRM standards and recommendations. By analyzing data from over 850 organizations, including some public school systems with both large and small student enrollments, the Institute for Corporate Productivity devised a model determining the normative ratios of HR FTEs to

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[25] HR Employee counts as per HR staff listing on division website. The number does not include benefit, payroll, or mailroom clerks.

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number of workers based on organization size for high versus low performing companies and public organizations.[26]

Using this model for an organization of similar size and functioning at a high level of performance, the BCPS ratio of HR staff to the number of employees should be 0.70, or one HR FTE for every 142.7 employees. With 1,611 employees in BCPS, this would result in an HR staff of 11 FTE. On the other hand, the SHRM benchmark for HR-to-employee ratio is 0.79 for an organization of BCPS' size. The SHRM benchmark would assign one HR person for each 127 BCPS employees, or a total of 13 HR FTEs. By either measure, the BCPS HR office is understaffed.[27]

RECOMMENDATION 4.2

Increase the clerical staff of HR by one.

Having an additional clerk who could serve both as an HR office receptionist and a chief filing clerk would relieve the more experienced personnel clerks from many of the interruptions as well as assist in providing confidentiality of personnel files. Ultimately, this additional clerk can be assigned scanning responsibilities for an electronic filing system.

Although the need for increasing the staff assigned to HR is greater than the recommendation of adding only one new employee, adding one will markedly enhance the efficiency and effectiveness of the office and greatly reduce the stress of all those assigned. The division should also consider hiring a part-time hourly helper during times of great need.

FISCAL IMPACT

The new staff member would be hired in at a grade 8, step 1, with a salary of $22,136. With benefits, the position would cost $33,600.

Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19
Increase HR staff by one secretary.	($33,600)	($33,600)	($33,600)	($33,600)	($33,600)

FINDING 4.3

The BCPS division does not have a process to survey staff regarding the quality of HR services provided to the division, nor does the HR department conduct job satisfaction surveys. There is no formal feedback system for managers or employees to offer suggestions for how HR services could be improved. The department has no way of ascertaining how satisfied its employees are in their BCPS employment.

Employee satisfaction surveys help employers and school divisions measure and understand their employees' attitude, opinions, motivation, and satisfaction. The leadership of HR and the HR staff should design an internal, online staff survey that would include a series of questions designed to elicit feedback on HR issues, such as:

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[26] Human Capital Analytics Knowledge Center. Retrieved from http://www.i4cp.com/hcm-base/human-capital-analytics
[27] Human Capital Benchmarks Report. (2012). *Society of Human Resource Management.* Retrieved from http://www.shrm.org

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- What went well in the previous year regarding staffing, employee relations, leadership development, the employee assistance program (EAP), and/or professional development?

- What services should be improved, changed, or deleted?

- As an employee, what are your expectations for support, employee relations, leadership development, employee assistance, and/or professional development?

- What suggestions do you have for improving HR services to BCPS employees?

- What are some ideas for improving recruitment and retention of quality personnel?

- What can HR do to provide better services?

Employee satisfaction is often measured by anonymous surveys administered periodically that gauge employees' opinions. Employee satisfaction is a factor in employee motivation, goal achievement, and positive morale in the workplace. Factors contributing to employee satisfaction include the following:

- the respectful treatment of employees;

- regular employee recognition;

- the offer of above-industry-average benefits and compensation;

- employee perks and company activities; and

- positive management within a successful framework of goals, measurements, and expectations.

Conducting job satisfaction surveys is important to major companies and public entities, as well. For example, to keep up with industry standards and best practices, SHRM released its findings on the results of a nationwide job satisfaction survey that included questions and samples of employees and HR professionals in January 2010. The objective of this annual survey series is to identify and understand the contributing factors to employee job satisfaction. This knowledge helps HR professionals better understand and appreciate employee preferences when developing programs and policies designated to influence employee satisfaction.

The survey explored 25 aspects of job satisfaction, divided into four topic areas: career development, relationship with management, compensation and benefits, and work environment. One major focus was management and employee communication. Although organizations may be communicating with their employees, there could be a disconnect between the message from management and employee interpretation, especially during times of economic and organizational uncertainty. SHRM suggests effective communication can provide the workforce with direction, dispel rumors, and promote trust.[28]

RECOMMENDATION 4.3

Develop and implement a customer feedback system that produces information in two regards: evaluating the nature and quality of HR services, and assessing an employee job satisfaction survey.

The consulting team suggests that an outside agency with expertise in the use and interpretation of employee surveys be contracted to conduct the survey online. These agencies have statistical

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[28] *Employee Job Satisfaction: Investigating What Matters Most to Employees.* (2010). Society for Human Resource Management.

tools to better interpret and provide direction to BCPS, rather than what could be obtained by an in-house survey. Participation would likely be higher as well, since employees would have greater assurance of anonymity.

FISCAL IMPACT

The cost of instituting the recommendation assumes that the HR office will conduct in-house the survey intended to evaluate the nature and quality of HR services, but HR will outsource the job satisfaction survey at least once every three years.

Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19
Conduct job satisfaction survey.	($10,000)	$0	$0	($10,000)	$0

B. Policies and Procedures

Guided by school board policies and administrative rules and regulations, the BCPS HR department operates smoothly, despite the absence of specific, written work flow processes. Required jobs and tasks are completed from staff memory and experiences over several years, rather than from written procedures.

Though the work of the HR staff meets deadlines and provides services as expected, HR operations are largely paper-driven and manual. Manual processes are inefficient, often causing duplicative data entry and parallel paperwork processing.

The HR staff has minimal formalized workflow processes defined between themselves and payroll/benefits functions in different offices. Even though automation is in progress with applications for vacancies and new jobs through AppliTrack, processing of employment changes, salary transactions, terminations, benefits enrollment, and time and attendance reporting are completely manual, often with multiple or duplicative forms that travel among individual staff members. Attendance and time reporting are especially burdensome and open to unnecessary errors because of the various forms and different staff involved in the process and paper flow.

FINDING 4.4

Job descriptions housed in the HR office are not kept up-to-date. Those presented to the consulting team contained some that were not active positions, some whose job titles had no match for the compensation schedules and some that were missing accurate Fair Labor Standards Act (*FLSA*) classifications of "exempt" or "nonexempt." The last attempt at updating all job descriptions occurred in 2008. Those job descriptions updated in that effort used a standard template that included *FLSA* classification, but older job descriptions largely did not include this information.

Ongoing reductions in staff has eliminated some positions, or merged others into one position, yet the job description was never deleted or amended. Of the 58 job descriptions sampled from the nearly 200 job descriptions provided during fieldwork, not all of them appear to have been active positions. On the other hand, there were current division positions that lacked job descriptions.

Job descriptions serve an important function in any organization. Not only are they used during the hiring process to identify the appropriate knowledge, skills, and abilities of candidates for employment, but also an accurate job description can serve as a valuable resource for performance management by establishing an agreement between the employer and employee about what an acceptable job performance looks like. Moreover, they can be extremely helpful in identifying the necessary training and development to bring an employee to an acceptable performance level.

When compared with best practices and the SHRM recommendations for components to be included in job descriptions, those in BCPS meet all the standards in format, appearance, and presentation. Some jobs are dynamic, changing rapidly and extensively because of technological or organizational considerations. The descriptions for these types of jobs should be reviewed at least annually. Other jobs change little over long periods of time, and their job descriptions require less review.

Job descriptions set the expectations for all employees in their positions and alleviate any ambiguities that may be unclear within each work assignment. Inaccurate, outdated, or incomplete job descriptions can lead to confusion about responsibilities and potential legal trouble. This can affect the organization's structure by creating disorganization, potentially leading to high turnover rates and the loss of superior employees.
Potential legal trouble caused by inaccurate or outdated job descriptions can also lead to possible financial loss (from lawsuits) within the organization. The responsibility for reviewing and updating job descriptions on a regular basis (every three years is recommended for the totality of jobs described in BCPS) has to be assigned to the HR director.

RECOMMENDATION 4.4

Update systematically all job descriptions to ensure that they accurately reflect job functions and comply with applicable *FLSA* laws.

Keeping job descriptions current should be an ongoing effort. Because of the current age of the job descriptions at the BCPS HR office, the department should initiate a project to update all job descriptions. The first step is to perform a structured job analysis to determine what competencies and skills the incumbent in each position must possess, as well as the current job responsibilities and duties of the position. This analysis can be accomplished using observations or interviews with selected incumbents in addition to job-specific questionnaires that can be provided to all incumbents and their supervisors to efficiently gather information about job types.

Exhibit 4.8 provides a useful checklist for supervisors to use as they perform the reviews and update the descriptions of the jobs assigned to the various departments.

Exhibit 4.8
10-point checklist for reviewing and updating job descriptions

1. Does a job description exist for every position that you supervise?
2. Do you regularly review job descriptions and update them to reflect changes in employee responsibility?
3. Do you provide employees with written copies of their job descriptions?

For each position, ask the following questions about the job description:

4. Is the job title accurate?
5. Does the job title still reflect the position's responsibilities?
6. Are job titles consistent throughout the organization?
7. Does the job description include appropriate qualifications for the position?
8. Does the job description accurately reflect the requirements of the job?
9. Are job functions and performance standards presented in clear, easily-understood terms?
10. Are job descriptions free of reference to age, race, gender, religion, disability, or any other "protected" characteristic?

Source: "HR Specialist: HR Answers You Can Trust."

As part of the job description review, the BCPS should verify the *FLSA* statuses and Equal Employment Opportunity classifications for each position and reclassify them if necessary.

FISCAL IMPACT

The division can implement this recommendation with current and recommended HR staffing. The initial update will likely take less than 80 hours.

FINDING 4.5

Paper personnel files present BCPS with a multitude of challenges. These files take up huge volumes of physical space and are subject to damage by natural disasters or building failures, thereby affecting its personnel files. The consulting team found that there were also minor inconsistencies in the files.

Paper-based processes can be reduced in virtually all of the HR functions, allowing personnel to rely on electronic data filing. Many school divisions are moving away from physical personnel files and adopting electronic record-keeping systems to ensure security, accuracy, and consistency while also saving storage space.

The reasons and benefits to transform piles of paper documents into digital files are numerous. They include:

- the reduction of paper documents to search and manage;
- easier organization and management of digital files;
- substantial reduction of physical storage requirements for paper documents;
- the ease of sharing and archiving PDF files;
- multiple users can simultaneously access and collaborate using the same files;

- digital files, when properly backed-up, cannot be misplaced, misfiled, or lost;

- reduction of labor and material costs associated with paper-based records;

- security that prevents information breach and security risks; and

- the ease of sending multiple digitized files to any number of other files or locations.

The American Productivity & Quality Center (APQC), a member-based nonprofit and one of the world's leading proponents of business benchmarking, recommends that data should be collected and filed through an automated system. As a result of a 2010 study, APQC recommends that the collection, filing, and reporting of all office documents be integrated electronically into all facets of an effective and efficient organizational structure, using technology that already supports other initiatives and process management activities.[29]

RECOMMENDATION 4.5

Implement a document imaging system for record maintenance.

The consulting team's review of process management and work flow in the BCPS HR office noted immediately that an electronic document imaging system was lacking. HR offices in business and school divisions around the country are able to reduce paperwork and record-keeping errors, as well as improve efficiency by adopting and installing digital document management systems or solutions. In some of the most advanced examples, these HR offices have become paperless. All personnel records and supporting documentation are available electronically, thus eliminating the need for warehousing operations and voluminous paper records.

In addition, the records, even of the employees who have left the company or school division, are available instantaneously, eliminating the time spent sorting through hard copy files. Accuracy and completeness are greatly improved because digital images make it easier to determine when documentation is missing or when information is lacking to complete a personnel file.

The three secretaries in HR spend a great deal of time in the early spring of each year when they produce hard copies of annual contracts for all 1,611 employees to sign and return to the HR office. It would be more beneficial if a digital copy of the contract was emailed to each employee for an electronic signature and returned electronically. If a document imaging system were to be combined with fillable electronic form replacements for the most commonly use HR forms, there would be significant decreases in processing time.

FISCAL IMPACT

Implementation costs can vary between $20,000 and $30,000, depending on the scale of existing document transfer to electronic images that the division wishes. A five-year contract with a document imaging company or document conversion service would defray the cost. The cost would also be reduced if BCPS HR staff participates in the scanning process, assuming that present technology resources (multi-function scanners/printers) within the division are already available. If they opt to make the conversion themselves, some divisions lease scanning

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[29] Quality Digest. Retrieved from www.qualitydigest.com/read/content_by_author/26216#

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equipment that is capable of producing digital images by the thousands each work day, typically from 2,000 to 10,000 pages per day.

Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19
Implement a document imaging system for record storage and maintenance.	($10,000)	($5,000)	($5,000)	($5,000)	($5,000)

FINDING 4.6

Storage of employees' personnel records within the HR office does not consistently meet industry standards for storage and security. In BCPS, official personnel records of active employees are stored in 12 legal-sized file cabinets within the outer office where HR secretaries work at their desks and clients enter the office. These file cabinets are not locked individually until the end of the work day, and they are neither fire-rated nor waterproof. The Bedford school board policy GBL addresses the confidentiality of personnel records and their contents, but the policy is silent in regard to physically ensuring the security, safeguarding, and storage of these files to increase confidentiality.

Personnel records contain information that is highly sensitive and confidential. Access to the records, whether paper or electronic, must be strictly controlled and monitored. Strong and effective security measures are needed to protect the records against loss, damage, and unauthorized access or alteration while in storage and during their active use in the office. The location and use of paper records needs to be tracked.

There are neither federal regulations, specific Virginia laws, nor Bedford board policy regarding the manner and security of how HR personnel files or folders are stored. However, there are some best practices in the industry.

Personnel files should be kept in file cabinets that are individually or gang-locked, preferably at all times. These cabinets should be placed in an office or a room that is locked when not in use. Employees should be careful not to leave files unsecured. For example, a personnel file should be locked inside a desk or cabinet, rather than left on the desk, when a staff member goes to lunch.

RECOMMENDATION 4.6

Place all personnel file folders in fire- and waterproof cabinets which can be locked when not in use. These will eventually be eliminated through the document imaging system for records storage.

In the current location of the HR office, there is no other space available that can be used for a lockable office or room to be designated as the personnel file storage room. The current lack of space is a breach of security and confidentiality.

FISCAL IMPACT

The 12 file cabinets currently being used will need to be replaced. The Commonwealth bid list includes options for appropriate cabinets. Newer models are fire- and waterproof. The cabinets should be Underwriters Laboratories (UL) Classified Fire Endurance (1 hour at 1,700 degrees F),

as well as UL Classified explosion-hazard resistant in case of sudden exposure to damaging winds or other natural disasters. For water protection, the cabinets should be Edison Testing Laboratory (ET) Verified water protection against sprinkler and water spray exposure. A privacy key lock for each cabinet is also necessary.

Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19
Place all personnel file folders in fire- and waterproof cabinets which can be locked when not in use.	($16,000)	$0	$0	$0	$0

FINDING 4.7

Starting in 2010-11, BCPS developed and implemented comprehensive staffing standards and a plan that equalizes the number of employees assigned to the various schools and departments based on those standards. Although some adjustments and corrections in the standards will still be necessary, the division is setting a good example for its peer divisions.

Unless the plan is modified or other provisions are made to lessen current rigidity in the compliance, the following scenarios are examples that might need resolution:

- *A middle school with an actual student enrollment of 802 would be entitled to an additional assistant principal because of the two students more than 800, the staffing standards number that allows the addition. Is an additional allocation made or should it wait until the number approaches 805 or 810? Could a .05 FTE be assigned?*

- *Because enrollment in the previous school year at a high school exceeded 1,200 students, a third assistant principal was assigned according to staffing standards. Because of the same enrollment number, a third school secretary was allocated. In the current year, however, the enrollment at the same high school dropped to 1,195. Should the assistant principal position remain until the enrollment drops to 1,175? Or, can a 0.5 FTE assistant principal be assigned? Does the school lose its third secretary? Can the position be downgraded to a 0.5 FTE?*

- *An elementary school loses its only assistant principal because student enrollment dropped two students below the 400 necessary for the position to be allocated in accordance with the staffing standards. What allowances are possible?*

The decision to make staffing changes to resolve these kinds of issues would be easier if the staffing standards were modified to be less rigid or included explicit methodology for addressing issues right at the line. The consulting team learned during the review that the informal practice has been an allowance of three to five students above or below the line. However, this is not currently explicit in the plan. Having these "add or delete allowances" written into the current plan would help prevent claims of unequal treatment. The staffing guidelines ideally would also include how the division will address staffing when student enrollment decreases at a school during the budget year.

COMMENDATION

The division is implementing a comprehensive staffing standards plan that equalizes the staffing of schools and departments according to specific standards.

C. Recruitment, Hiring, and Retention

One of the most critical functions performed by a human resources department is the recruitment, employment, support, and retention of a stable, high quality workforce that can support the division in meeting its varied and unique challenges in educating students. Whether or not the division is successful in meeting its goals and objectives is dependent upon the workforce being able to implement initiatives and accomplish results. The recruitment and retention of a high-quality workforce requires a commitment by all departments and supervisors in a partnership with the HR department. Another benefit of an effective recruitment process is that, over time, it will improve the quality of candidates hired, and lead to longer tenure, reducing turnover.

BCPS has no formal program currently in place to recruit or retain employees. For the past several years, Bedford has not needed to concentrate much effort in a recruitment program. Because of a low turnover rate and reductions in staff due to decreasing student enrollment, enough candidates have applied to fill any vacancies. All vacancies are posted on the division's website. HR's use of Applitrack, an online applicant tracking system, has created sufficient pools of candidates. As well, Bedford utilizes its most effective student teacher placement (internships) to identify teacher candidates for hire. Most recently-graduated, new teachers in Bedford did their student teaching in Bedford County.

According to information provided the consulting team, usually recruiting trips outside the division are made in conjunction with job fairs at Liberty University, Lynchburg College, Hollins College, and Virginia Tech. The HR department also plans to host its own teacher job fair in Bedford County in March 2014. Budgetary constraints caused in-division job fairs to be suspended until the current budget year.

In 2012-13 the division began participating and continues to be a part of a Virginia DOE initiative to retain math, science, and technical education teachers. This program is geared toward teachers with three years or less of teaching experience. The program pays a stipend of $5,000 for the first year of successful teaching, and $1,000 per year for the next three years, for a total of $8,000.

In regard to employee recognition, as a practice, any time one of the BCPS employees achieves a milestone or performs noteworthy acts, HR seeks local, state, and national media exposure. The relationship that HR shares with the division's public information coordinator fosters employee recognition by the media.

Major accomplishments of employees are recognized at school board meetings and the honorees receive certificates documenting their achievement or accomplishment along with a small gift or token of acknowledgement. The Teacher of the Year program is facilities by the BPCS coordinator of public relations and community outreach. Each school selects its teacher of the year, and from that group comes the teacher designated as Bedford County Teacher of the Year. All nominees are treated to an awards dinner, awards, and gifts. Annually in May, the division treats its retiring employees to a retirement dinner.

FINDING 4.8

The division's career ladder for teachers does not currently provide financial incentives for teaching excellence. The division has begun to lay the groundwork for a differentiated salary scale with its master teacher career ladder plans and pilot, which could be a

source for rewarding teaching excellence. Other potential resources could include supporting teachers who seek recognition as National Board Certified Teachers (NBCT).

The mission of the National Board for Professional Standards (NBPS) is to advance the quality of teaching and learning by creating a voluntary system to certify teachers beyond state-level certification who meet those standards, and to integrate Board-certified teachers into educational reform efforts. The website for the NBPS, the organization for NBCT, lists 2,627 Virginia teachers who hold NBCT credentials. Of that number only 11 are teachers in Bedford County.

National Board certification has a positive impact on student achievement and is a widely accepted form of performance-based pay. For example, the first year a Virginia teacher becomes a NBCT, he or she receives a first year stipend of $5,000. Continuing awards of $2,500 are issued annually for the life of the active certificate. Recertification is required every ten years. Bedford supplements its NBCTs with an annual award of $1,000 from year one until the teacher leaves employment through retirement or resignation. The national program is administered in Virginia by the Department of Education.

NBCTs are highly accomplished educators who meet rigorous standards through intensive study, expert ongoing evaluations, self-assessment, and peer review. The national program offers 35 certificates that cover a variety of subject areas and student development levels. Recertification is required every ten years.

In a congressionally-mandated study, the NBCT program was recognized in June 2008 by the National Research Council as having a positive impact on student achievement, teacher retention, and professional development. Students taught by teachers with NBCT credentials make larger gains on achievement tests than those taught by teachers who do not have them, the report says. "The evidence is clear that National Board Certification distinguishes more effective teachers ... with respect to student achievement," the Research Council report concludes.[30]

RECOMMENDATION 4.8

Provide incentives for teachers to achieve a demonstrable level of impact on student achievement and mastery of teaching, possibly through the BPCS teacher career ladder and/or through National Board certification.

While some groundwork has been laid in this area, BCPS has not yet put plans into action. It is clear from the strategic and other plans that rewarding teaching excellence is an important component of the division's vision for the future.

FISCAL IMPACT

The exact fiscal impact will depend on the specific incentives selected by the division. Encouraging National Board certification could be done at no cost to the division. Completing the requirements for National Board certification comes with a moderate cost to the teacher candidate. However, scholarships for fee support are available. Some school divisions in Virginia pay for the costs of their teachers pursuing certification. The Virginia Education Association (VEA) and other professional organizations often assist their members with scholarships.

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[30] Hakel, M. D., Koenig, A. K., & Elliott , S. W. (2008). *Accessing Accomplished Teaching*. National Academy of Sciences. Retrieved from http://www.nap.edu/catalog.php?record_id=12224

Through the generosity of philanthropic donors, several scholarships are available through the NBPTS to help offset the cost of the National Board programs.[31]

D. Staff Development

Over the last 15 years, the concept of staff or professional development for teachers and administrators has undergone a significant shift in paradigm. The old model of expert-driven, off-site workshops, attended by teachers and administrators according to their interests or mandated for all of the division, has been replaced by a model of collaborative, constructivist learning focused on supporting improved teaching and learning, and delivered at the school site as part of teachers' regular routines. This job-embedded, research-based learning community approach requires teachers to reflect on student achievement levels as a function of their practice, and collaboratively address ways to enhance instruction to promote higher levels of student achievement.

The broad descriptor for this process is the "Inquiry Model of Professional Development," and it is through this inquiry process that school communities can create short-term, continuous improvement cycles that, when connected and focused on instructional practice and student learning, lead to whole school improvement. In keeping with this revitalized approach to staff development, each of the Continuous School Improvement Plans (CSIP) of all of the schools in BCPS shows evidence that school leaders in Bedford recognize that teacher capacity is built within learning communities committed to improving teacher skills and knowledge toward the end of increased student achievement.

The HR department of BCPS is not assigned the responsibility for professional development, nor is there another department that assumes the sole responsibility (the instruction department provides training, but does oversee all training). There is no administrative staff position for staff or professional development in any of the various organization charts in BCPS. Other than the hours documented by individual teachers to be used for licensure renewal, there are no other records kept for tracking any required or optional staff development hours. There is no formal training plan provided for other non-instructional employee groups that focus on division-wide goals. Currently, performance improvement areas that are assigned to non-instructional employees during their evaluations are not documented or linked to staff development.

In each of the past five years, the BCPS budget for staff development has been less than one percent of the division's total operating budget (**Exhibit 4.9**). However, there are no industry best practices or standards to guide budgeting for staff development because it is so varied and can be provided in so many models. The division already recognizes that staff development provided internally or through such models as professional learning communities often can be provided at no cost other than staff time.

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[31] National Board for Professional Teaching Standards. Retrieved from http://www.nbpts.org/

Exhibit 4.9
Professional development expenditures, 2008-09 through 2013-14

	2008-09 Actual	2009-10 Actual	2010-11 Actual	2011-12 Actual	2012-13 Actual	2013-14 Budget
Total Operating Budget	$ 100,477,082	$ 97,071,701	$ 92,275,592	$ 91,636,814	$ 95,178,311	$ 97,565,274
Professional Development	$ 415,874	$ 515,779	$ 688,119	$ 782,762	$ 672,899	$ 687,786
% of Budget	.04%	.05%	.07%	0.9%	0.7%	0.7%

Source: BCPS chief financial officer, December 2013.

The limited amount of money spent on staff training or professional development for BCPS non-instruction staff, such as transportation, is provided by the instructional professional development budget for training. Non-teaching certified staff, such as social workers, guidance counselors, and psychologists, also have little opportunity for training specific to their area of expertise.

In each of the division's instructional calendars for the past five years, at least 12 in-service days have been scheduled. In the 2012-13 calendar, 13 days were set aside as in-service or professional training days. **Exhibit 4.10** shows the number of days a substitute teacher or employee was used for in-service training in the last four years. No data or records are kept on the total number of class hours attended each year.

Exhibit 4.10
Substitute days used for in-service training

	2009-10	2010-11	2011-12	2012-13
Substitute Days	1,770	2,403	2,203	2,222

Source: BCPS chief financial officer, December, 2013.

FINDING 4.9

BCPS has not established a centralized plan for training or professional development. The consulting team found that training, as it relates to preparing teachers to address the academic and achievement needs of students, was cited as being inconsistent among schools. Outside of references to teacher training planned in CSIPs, there are no records showing that training has occurred. For professional staff, there is no over-arching plan that is based on division-wide data, student achievement, requirements of the division's strategic plan, or the identified needs of teachers for professional growth. For support staff, some training is occurring for various staff types, but it is not part of an overall plan.

Currently, many tasks related to improving curriculum and instructional delivery and professional development are overseen through informal conversations and monthly meetings. Interviews with division staff did not reveal that data, student or teacher needs, and the strategic plan were *systematically* the basis of decisions about professional development provided the division staff. Likewise, staff input showed that any training for support personnel was limited. Examples of this training are brief orientations on how to input data into a new software program, how to use a new piece of equipment, and mandatory training in harassment and security and safety issues.

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When asked why staff development in BCPS would be considered inconsistent among schools, teachers, principals, and other instructional staff, the reasons identified included:

- The secondary schools' teaching schedules provide extensive planning time for teachers instead of direct instructional time for students, in contrast to elementary teachers' limited number of minutes of planning time a day. Secondary teachers have more time for planning instruction, meeting collaboratively, and functioning within a learning community.

- There is currently no quality control oversight to ensure that the training at the school site will be meaningful for teachers attending. Some schools have better trainers than others.

- Even though there are research-based standards on what constitutes effective teacher training, no one seems to be familiar with them.

- Central office instructional staff frequently has to design training, sometimes at the last minute when attendance warrants additional options.

- Instructional coaches, specialists, and principals who deliver training themselves do not have time later to drop in to view other training taking place so that they know what teachers are exposed to, in implementing new strategies.

- Having a multitude of offerings on the same campus dilutes division focus.

- When teachers from one school attend various trainings, administrators and resource staff are not in the position of being able to follow up the training to ensure that the learning results in changed practice.

- The design of the training that individual schools provide as per their CSIP is either "hit or miss" or lacking in any semblance of well-thought-out design.

- Some support supervisors insist that training is provided by the employees they supervise; others consider training to be a waste of work time.

RECOMMENDATION 4.9

Develop a comprehensive division-wide professional development master plan.

A division-wide plan would not weaken or lessen the responsibility of school administrators and other supervisors to plan, design or develop, and to deliver training as required in their CSIPs. Instead, having a focus for training that is powered with calendars and time schedules, a roster of trained presenters or trainers of other trainers, research on best practices for teaching and learning, and resources for scheduling expert trainers for sessions that can be shared among schools would enhance all local school efforts to provide better teacher preparation. Another component of the plan would address the universal needs of the support groups. An organizational structure would be in place to document the training that an individual employee receives.

Having a division-wide plan would strengthen the division's ability to apply for and win staff training grants from federal and state agencies as well as philanthropic organizations which generally are not available to individual schools within a division. For example, 229 Jefferson City, Missouri, K-12 teachers in 2012 participated in a federal and state funded grant program, *Improving Teacher Quality*, and gained significant improvement in teaching math and science as a result of the grant. More than 14,000 of the students assigned to these teachers showed

significant gain in their achievement scores when compared with a control group that was assigned to teachers without the quality training.[32]

Currently, the effectiveness of teacher training when measured in terms of student achievement is difficult to calculate, since generally there is no ongoing or follow-up evaluative process in place. Whether or not the commitment of time that teachers spend in training produces results cannot be calculated or reported. Whether the teachers are attempting to implement the strategies presented in the training or not is seldom monitored.

FISCAL IMPACT

While the plan can be developed by current and recommended HR staff in a matter of hours, the results of that plan may have a fiscal impact. The exact fiscal impact will depend on the details of the plan developed.

FINDING 4.10

The BCPS instruction department is not involved in planning training sessions when schools develop their CSIPs. Therefore, teacher training expertise available through instructional personnel in specific content areas is neither accessed nor valued.

In BCPS the responsibility for developing a school's CSIP belongs to the principals and their leadership building teams. However, there is no input in the training aspect of the school plan from the instructional leaders in the central office, not even in the review process to determine the quality and quantity of planned staff development before it is formally presented to the superintendent for approval.

Currently, the ability to group teachers from different schools for the same training to be provided by the best trainers is difficult. For example, the CSIPs of many schools list as needed training research-based instructional delivery strategies such as Thinking Maps and modelling strategies of Project CRISS (Creating Independence through Student-owned Strategies). Teachers who are well trained in using Thinking Maps are able to show students how to produce a concrete image of their abstract thoughts by using eight familiar visual patterns. On the other hand, Project CRISS is a professional development program based on the premise that teachers can be trained to help all students read, write, and learn more effectively in all content areas. Project CRISS trainers model for teachers how they can incorporate the CRISS learning principles and strategies into their regular classroom instruction with the ultimate goal of creating students who are independent thinkers. The success of the implementation of either of these models is entirely dependent on how well the teachers were trained in the strategies.

Each school that has targeted these strategies must find its own trainers or use its own trained teachers rather than grouping teachers from several schools together to share this training. The expertise from certified trainers of trainers in both of these instructional models in the department of instruction could conceivably be overlooked. Also, some schools may simply fail to list training needed because the availability of trainers might be missing.

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[32] (2012). *Grants for teacher training show significant impact.* Missouri Department of Higher Education. Retrieved from http://dhe.mo.gov/news/show.php?u=Grants_for_Teacher_Training_Show_Significant_Impact&yr=2012

RECOMMENDATION 4.10

Involve central office instructional personnel in the development of individual campus CSIPs especially in regard to needed teacher training.

The assumption is that central office instructional leadership and supporting instructional staff are current in their own knowledge and practice about the disaggregation of student achievement data and its implication for planning teacher training and designing its delivery. Currently, because these capabilities are rarely, if ever, accessed by local school teams during the planning and writing of the CSIP, the potential for clearly focusing on the most effective training needed to impact better student achievement might be missing through oversight or unawareness. Also, having a perspective on the most expeditious methodology for bringing about positive results sooner may be lacking.

Instructional staff members are aware of action steps identified in the division's strategic plan that need to be included in the CSIP. They know specifically what training is available in content areas that should be included. One such action in the plan assigned to the department of instruction reads, "Conduct training for staff involved in planning process to include understanding of middle and high school curriculum and program pathways." Another speaks to specific kinds of training for teachers of preschoolers and kindergartners.

FISCAL IMPACT

The instruction department currently has the capacity to implement this recommendation. Minimally, the central office instructional team should be involved in the review process of each school plan before it is submitted to the superintendent for approval. This will require only several hours per school plan.

E. Compensation and Classification Systems

Exhibit 4.11 shows how the average budgeted salaries of teachers and school administrators in 2012 in BCPS compare to school divisions that geographically surround Bedford County. **Exhibit 4.12** shows the same comparison with school divisions that were selected as peer divisions for this review. In virtually every professional pay category, BCPS paid less than any other school division. No compensation and classification study for BCPS has been conducted since the fall of 2002.

Exhibit 4.11
2012 average budgeted salary positions

School Division	Teachers	Principals	Assistant Principals
Botetourt County	$ 48,174	$ 91,157	$ 76,217
Rockbridge County	$ 47,814	$ 77,782	$ 65,750
Amherst County	$ 43,470	$ 74,278	$ 62,545
Lynchburg City	$ 46,671	$ 93,750	$ 63,342
Campbell County	$ 42,302	$ 88,262	$ 66,515
Pittsylvania County	$ 41,754	$ 75,638	$ 59,539
Franklin County	$ 43,266	$ 75,582	$ 71,482
Roanoke County	$ 47,647	$ 86,289	$ 67,989
Area Division Average	**$ 45,137**	**$ 82,842**	**$ 66,672**
Virginia Average	**$ 52,003**	**$ 91,952**	**$ 76,338**
Bedford County	**$ 40,562**	**$ 70,046**	**$ 62,120**

Source: 2010-11 VDOE FY2012 Salary Survey.

Exhibit 4.12
2012 average budgeted salary position

School Division	Teachers	Principals	Assistant Principals
Augusta County	$ 43,238	$ 75,803	$ 63,273
Franklin County	$ 43,266	$ 78,582	$ 71,482
Frederick County	$ 47,719	$ 93,547	$ 74,874
Montgomery County	$ 46,045	$ 75,480	$ 61,519
Rockingham County	$ 44,580	$ 80,338	$ 69,130
Washington County	$ 44,548	$ 71,125	$ 66,969
Peer Division Average	**$ 44,899**	**$ 79,146**	**$ 67,875**
Virginia Average	**$ 52,003**	**$ 91,952**	**$ 76,338**
Bedford County	**$ 40,562**	**$ 70,046**	**$ 62,120**

Source: 2010-11 VDOE FY2012 Salary Survey.

After applying the salary increases budged for 2013-14, the average salary for BCPS teachers rose to $40,842; for principals, $83,673; and for assistant principals, $63,935. Data for the current budget year for the surrounding divisions and the peer divisions were not available. However, even with the salary increase for teachers, BCPS pay is below the area and peer averages of two years ago.

Exhibit 4.13 compares the BCPS starting salaries for teachers with bachelors, masters, and doctorate degrees with the peer divisions. Again, Bedford's starting salary schedule was below the peer average.

Exhibit 4.13
2012-13 starting teacher salaries

School Division	Bachelor's	Master's	Doctorate
Augusta County	$ 36,300	$ 38,686	$ 41,072
Franklin County	$ 34,500	$ 37,000	$ 37,000
Frederick County	$ 37,000	$ 40,800	$ 42,875
Montgomery County	$ 34,570	$ 36,570	$ 37,570
Rockingham County	$ 38,000	$ 40,350	$ 41,790
Washington County	$ 33,670	$ 35,640	$ 37,545
Peer Average	**$ 35,673**	**$ 38,174**	**$ 39,642**
Bedford County	**$ 34,458**	**$ 36,181**	**$ 37,904**

Source: 2010-11 VDOE FY2012 Salary Survey.

In regard to overtime and compensatory time records, there are no data for the latter. **Exhibit 4.14** charts the amount of overtime the division paid the last three years. As shown, the division spends little on overtime pay each year and has spent less each year for the past three years. Most of the overtime is paid to bus drivers and custodians.

Exhibit 4.14
BCPS overtime paid

Budget Year	Total Salary Cost	Overtime Paid	% of Total Payroll	% of Total Overtime Paid Bus Drivers	% of Total Overtime Paid Custodians
2010-11	$ 54,393,634	$ 50,809	>1%	39%	26%
2011-12	$ 52,536,257	$ 38,216	>1%	42%	35%
2012-13	$ 54,039,573	$ 30,507	>1%	40%	28%

Source: BCPS chief financial officer, December 2013.

FINDING 4.11

At one time BCPS had a half-time position known as "Compliance Officer" whose responsibility was to review all timesheets of nonexempt employees as well as to determine if a position should be classified as exempt or nonexempt. The other half-time responsibility for the compliance officer was "Benefits Administrator," a position that has now become a full-time function that reports to the BCPS chief financial officer. Now the classification of positions has become the responsibility of a secretary in HR. As a result of weakening the importance of compliance, some jobs that clearly should be paid as nonexempt have arbitrarily been assigned exempt status. No BCPS staff member is currently monitoring compliance with *FLSA* rules in regard to compensatory time.

RECOMMENDATION 4.11

Resume monitoring compliance with *FLSA* rules in regard to both accurate job classifications and compensation for overtime and compensatory time.

The recommendation is not made to imply that either of the two clerical positions that now oversee both components of *FLSA* compliance – currently the payroll supervisor in finance who manually looks over each time card to determine if overtime is to be paid and a secretary in HR

who uses a simple list of positions already determined to be exempt – are not performing capably. Instead it is suggesting that the majority of the other work load of these two positions is already laden to the extent that they have not be able to invest time in critical areas of *FLSA* requirements:

- ♦ monitoring the volume of overtime obligations and ensuring that records exist whenever an employee is compensated with time off rather than money; and

- ♦ using the specific rubric(s), guidelines, and tests provided by the Wage and Hour Division of the U.S. Department of Labor in regard to *FLSA* to ensure that classifications are accurately determined when a position is new and an ongoing plan to re-evaluate the classification of existing positions.

Job titles, job descriptions, or directions from a superordinate do not determine the exempt or nonexempt status of an employee. Whether any particular employee is exempt is based on whether the annual amount of the employee's compensation and specific job duties meet all the requirements of the regulations for the particular exemption claimed. The decision must pass all the components of the test. There can be no substitute for sound analytical judgment when evaluating whether a particular employee's job duties meet all the requirements for exemption.[33]

FISCAL IMPACT

Current and recommended HR staff can implement this recommendation. The consulting team estimates it will require no more than a few hours per month.

FINDING 4.12

The consulting team found that some administrators had strongly encouraged supervisors to report overtime of nonexempt or hourly employees as overtime pay rather than compensatory time. The chief financial officer affirmed this encouragement, despite BCPS school board policy, *FLSA* rules, the increase in salary above the budgeted costs, and the desires of some employees who would prefer compensatory time rather than overtime pay. Even though the amount of overtime paid by BCPS is minimal overall, the amount could be reduced further by allowing compensatory time.

BCPS board policy *GAA – Staff Time Schedules* provides,

> *In lieu of overtime compensation, non-exempt employees may receive compensatory time off at a rate of not less than one and on-half (1.5) hours for each one hour of overtime worked, if such compensatory time (1) is pursuant to an agreement between the employer and employee reached before overtime work is performed, and (2) is authorized by the immediate supervisor.*

The rules for *FLSA* compensatory time for public employees who work in excess of the applicable overtime standard are found at 29 CFR Sections 553.20-28. Section 7(o) and those regulations authorize the employees to be granted compensatory time off in lieu of cash wages for overtime work. The same sections speak to the time frame in which compensatory time must be taken after it is earned by the employee. Accurate records of compensatory time taken by an employee must also be kept.

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[33] U. S. Department of Labor. Retrieved from: http://www.dol.gov/elaws/esa/flsa/overtime/jobs.htm

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RECOMMENDATION 4.12

Ensure that provisions of *FLSA* rules and school board policies in regard to awarding overtime pay and compensatory time are implemented and followed.

The consulting team learned that some employees would prefer compensatory time rather than the extra money they would receive in overtime pay. The consulting team asked, "If the division is looking for ways to save money, what can you suggest?" Often, the response was allowing compensatory time when the employee chooses it instead of overtime pay. School board policy will have to be changed to remove language pertaining to compensatory time if the division continues to disallow it.

FISCAL IMPACT

The superintendent can initially implement this recommendation with a memo to all administrators. HR staff will likely need to spend only a few hours each month verifying compliance.

FINDING 4.13

Executive leadership among the BCPS administrative team recognizes the value of a periodic performance evaluation or appraisal system that assesses an individual employee's job performance and productivity in relation to specific criteria or organizational objectives, shared by all employees in the division. These administrators have made a special effort to document through the evaluation process the job performance of all its employees.

Traditionally, school divisions, because of state education regulations, place more emphasis on completeness of the process used for evaluating the performance of instructional staff and therefore are less conscientious about ensuring that all employees are evaluated.

COMMENDATION

HR has collected and filed performance evaluations on virtually all BCPS employees.

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Facilities Use and Management

This chapter addresses the facilities use and management of Bedford County Public Schools (BCPS) in the following sections:

A. Organization and Management
B. Plans, Policies, and Procedures
C. Maintenance Operations
D. Custodial Operations
E. Energy Management
F. Security

Facilities use and management includes the planning, construction, maintenance, and cleaning of buildings, energy-efficient operations, the safety of students and staff using the buildings, and the security of all facilities when they are in use, both during and after school hours. More specifically, this area covers the following:

- planning and designing facilities based on educational specifications to meet specific standards and provide a physical framework that enhances learning conditions;

- properly maintaining and cleaning facilities so that teaching and learning can take place in a healthy and clean environment;

- managing energy consumption to save money and conserve resources;

- ensuring that the facilities are safe during the time students and teachers are in the schools;

- creating proper safeguards to ensure the security of students, faculty, staff, administrators, and visitors at the facilities during and after school hours; and

- obeying safety plans in the event of a crisis or natural disaster so that students and staff are protected.

BCPS operates the facilities listed in **Exhibit 5.1**. The exhibit also lists the gross square footage (GSF) and current insured value of each facility. Bedford Elementary School was recently purchased from the Town of Bedford, while Bedford Middle School is leased from the town in accordance with the reversion settlement agreement.

Exhibit 5.1
GSF floor area and insured value of BCPS buildings

Facility	Gross Square Feet	Insured Value
Jefferson Forest HS	257,848	$ 45,123,400
Liberty HS	155,671	$ 27,242,425
Staunton River HS	148,784	$ 26,037,200
Bedford Science and Technology Center	96,250	$ 16,843,750
BS&TC Mobile (GED Program)	1,440	$ 43,200
Forest MS	98,786	$ 16,793,620
Bedford MS	69,450	$ 11,806,500
Staunton River MS	101,194	$ 17,202,980
Bedford Primary School	38,597	$ 5,982,535
Bedford ES	66,740	$ 10,344,700
Big Island ES	39,050	$ 6,052,750
Body Camp ES	31,142	$ 4,827,010
Boonsboro ES	49,118	$ 7,613,290
Forest ES	45,850	$ 7,106,750
Goodview ES	82,060	$ 12,719,300
Huddleston ES	37,861	$ 5,868,455
Moneta ES	34,482	$ 5,344,710
Montvale ES	31,793	$ 4,927,915
New London Academy ES	52,023	$ 8,063,565
Otter River ES	33,747	$ 5,230,785
Stewartsville ES	70,022	$ 10,853,410
Thaxton ES	26,839	$ 4,160,045
Thomas Jefferson ES	82,060	$ 12,719,300
School Board Office	16,280	$ 1,628,000
Bus Shop	4,365	$ 650,000
Bridge School	5,800	$ 899,000
Totals	**1,677,252**	**$ 276,084,595**

Source: Insurance Bedford Property records, 2013.

In addition to the fixed facilities, the division has mobile classrooms (**Exhibit 5.2**). BCPS has 23 mobile classroom units that hold 43 classrooms in 11 schools. The division has recently turned back 14 mobile units that were under lease. This action reduced the classroom inventory by 27.

Exhibit 5.2
BCPS mobile unit and classroom totals

Mobile Unit Location	Number of Mobile Units	Number of Classrooms
Bedford Primary	1	2
Moneta ES	1	3
Thaxton ES	3	6
Forest ES	3	6
Otter River ES	2	4
New London Academy ES	1	2
Body Camp ES	1	2
Huddleston ES	1	2
Forest MS	8	13
Staunton River HS	1	2
Bedford Science and Technology Center*	1	2
Totals	**23**	**44**

*Also included in Exhibit 5.1. BCPS considers this unit "permanent."
Source: BCPS, 2013.

In total, the consulting team gave four commendations in this chapter:

- The division retains an expert, experienced, and collaborative team for the maintenance of its school facilities.

- The school division is commended for its painstaking attention to the safety, health, and welfare of its students, staff, and visitors, and for its innovative awards program.

- BCPS custodians are diligent, competent, and effective.

- The board of supervisors and the school board are commended for hiring an energy services company (ESCO) to help them finance needed energy improvements using the projected energy savings from these improvements.

The consulting team also made 23 recommendations in this chapter:

- Establish a succession plan and hire the successor to the current maintenance supervisor with a minimum three-month overlap.

- Prepare a permanent, ongoing facilities master plan and master planning process with a 10-year strategic horizon and a five-year working horizon that includes specific cost objectives.

- Close Bedford Primary and Moneta Elementary Schools.

- Remove 14 two-classroom units and three one-classroom units by the end of 2014-15.

- Approve and document all key policies, rules, and procedures for facilities use and management.

- Review the current community use of facilities policy and revise it as necessary.

- Issue work orders electronically on the previous afternoon for pick-up on tablets and/or smartphones issued to the maintenance staff.

- Provide access for skilled maintenance staff and zone technicians to all buildings.

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- Adopt a budget policy for facilities maintenance.

- Perform a building condition assessment every five years.

- Hire six additional skilled maintenance workers to form three teams of three, one for each high school zone.

- Establish a formal roster of substitute custodians.

- Organize circuit riding grounds crews for each high school service area and reduce custodial staffing.

- Explore and implement ways of reducing turnover among custodians.

- Buy new and up-to-date versions of the job training videos and discard outdated training materials.

- Accelerate implementation of the current BCPS plan that carpet will not be replaced with carpet.

- Purchase additional ec-H2O machines to equip all schools fully.

- Establish an energy management program.

- Perform an analysis using the energy management systems software to determine where the extra energy consumption occurs, and make adjustments as necessary.

- Improve security of school access.

- Develop a plan to equip all schools with state-of-the-art high resolution security cameras on the interiors and on school grounds.

- Switch the building inventory of the division to a card swipe or proximity door access system.

- Conduct an assessment of the adequacy and safety of the Thaxton Elementary School site.
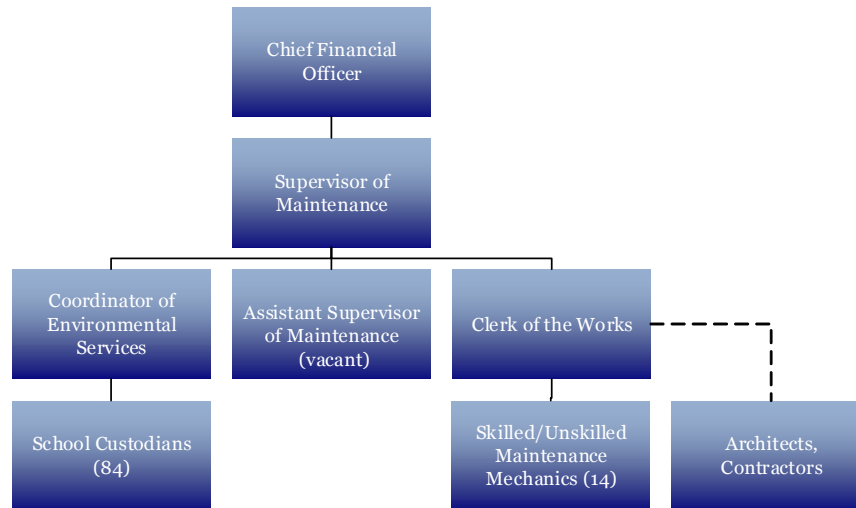
The estimated fiscal impacts of those recommendations for which the consulting team could reasonably quantify into dollars are shown below. Some recommendations will have fiscal impacts that depend on the specific implementation path chosen by the division while others will only require staff time; fiscal impacts for those recommendations are not shown here.

Recommendation		2014-15	2015-16	2016-17	2017-18	2018-19	Total
5.1	Establish succession plan and hire the successor with a three-month overlap.	($28,250)	$0	$0	$0	$0	($28,250)
5.2	Prepare a facilities master plan.	($140,000)	$0	$0	$0	$0	($140,000)
5.3	Close two elementary Schools.	$1,600,000	$1,600,000	$1,600,000	$1,600,000	$1,600,000	$8,000,000
5.4	Remove 14 two-classroom units and two one-classroom units.	$390,000	$90,000	$90,000	$90,000	$90,000	$750,000
5.6	Review and revise the community use of facilities policy.	$12,000	$14,200	$14,200	$14,200	$14,200	$68,800
5.8	Issue work orders electronically.	($17,050)	($13,200)	($13,200)	($13,200)	($13,200)	($69,850)
5.9	Provide access for skilled maintenance staff and zone technicians to all buildings.	($1,300)	$0	$0	$0	$0	($1,300)
5.13	Hire six additional maintenance workers.	($408,000)	($408,000)	($408,000)	($408,000)	($408,000)	($2,040,000)
5.15	Organize circuit riding grounds crews.	($421,350)	($271,350)	($271,350)	($271,350)	($271,350)	($1,506,750)
5.18	Buy updated versions of job training videos.	($3,000)	($200)	($200)	($200)	($200)	($3,800)

A. Organization and Management

Bedford County Public Schools houses its maintenance staff at the maintenance facility and its maintenance management staff at the central administration building. The current organizational structure is shown in **Exhibit 5.3**.

Exhibit 5.3
BCPS maintenance organization

```
                        Chief Financial
                            Officer
                               |
                         Supervisor of
                          Maintenance
                               |
        ┌──────────────────────┼──────────────────────┐
 Coordinator of        Assistant Supervisor    Clerk of the Works ┄┄┄┄┄┄┐
 Environmental           of Maintenance                            |
   Services                 (vacant)                               |
        |                                        |                 |
 School Custodians                      Skilled/Unskilled    Architects,
      (84)                                Maintenance        Contractors
                                         Mechanics (14)
```

Source: Created by Prismatic, December 2013.

The maintenance supervisor reports to the division's chief financial officer and has been at BCPS for 40 years, 30 years in his current position. The current reporting by the supervisor of maintenance to the chief financial officer is a strategic and functional improvement over the previous direct reporting to the current superintendent's predecessor.

The assistant supervisor position of maintenance is vacant due to retirement. At the time of this report, the division had not made a decision on whether to fill the position.

The clerk of the works position is unusual and rare in most school divisions the size of BCPS, but it is the source of commendable actions by the division. It requires service as the agency representative on all new construction projects, assuring that the architect, contractor, and subcontractors observe all requirements of the construction documents (drawings and specifications), and approving draw requests. The clerk of the works also supervises the contractors hired to write the educational specifications. The clerk of the works conducts pre-inspections at all schools to prepare for fire and other safety inspections conducted by the local building authorities. All skilled and unskilled mechanics also report to this position.

FINDING 5.1

The maintenance department lacks sufficient preparation for a smooth management transition. The current maintenance supervisor has been in his position for three decades and will be eligible for retirement within a short time. His procedures and rules for maintenance management are predominantly unwritten and cannot easily be transferred to a successor.

Overall, too many of the operational policies and procedures concerning facilities use and management are insufficiently documented, and some appear to exist only in the heads of the managers. Some policies with respect to facilities can be found in the division's policy manual, but many of them lack properly documented procedures. A lack of well-documented policies and procedures could result in a discontinuity and succession crisis in facilities management and operations.

RECOMMENDATION 5.1

Establish a succession plan and hire the successor to the current maintenance supervisor with a minimum three-month overlap.

This will permit a period of time when the incumbent supervisor can demonstrate his approaches to maintenance management to his successor. This approach is aimed at creating stability and continuity during the transition. During the transition, the incoming and retiring supervisor should work to document all operational policies and procedures concerning facilities use and management.

FISCAL IMPACT

The cost of overlapping the outgoing and incoming supervisors of maintenance is the three-month salary of the outgoing supervisor. This amounts to approximately $28,250, including benefits. Although the retirement year of the current maintenance supervisor has not been determined, this figure is shown for 2014-15. It may occur later.

Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19
Hire the successor to the current maintenance supervisor with a minimum three-month overlap.	($28,250)	$0	$0	$0	$0

B. Plans, Policies and Procedures

Well-planned facilities are based upon the educational program and on accurate student enrollment projections. The design process should have input from stakeholders including administrators, principals, teachers, security specialists, parents, students, and the maintenance and operations staff. The selection of building materials, interior finishes, hardware, mechanical, electrical, and plumbing systems, and of other major building components should be made according to life cycle cost analyses for an optimum total cost of construction, operations, and maintenance.

FINDING 5.2

The division does not have a current facilities master plan. While BCPS has created and partially implemented some facilities plans in the past, facilities planning has not yet become an ongoing activity in the division.

The most recently completed report is the 2008 study completed by an external consultant. This report provided a building condition assessment and individual recommendations for future actions concerning each building examined. Another study, completed in 2002 by a different external consultant, provides similar but older information. Neither of these reports appears to have been given complete follow-through consideration in subsequent years as part of any ongoing, concerted facilities planning effort.

As required by statute, the school division has engaged in the in-house development of a capital improvements plan. However, such an effort is typically only a portion of a true, enduring planning process.

This lack of a full and steady commitment to planning leaves the division at risk and can lead to poor decision-making, and possibly misguided funding and management decisions. These uncertainties include, but are not limited to, a lack of the following:

- optimum decision-making about new construction, renovations, and additions of school buildings and related facilities;
- optimum long-term financing for new construction, renovations, and additions of school buildings and related facilities;
- optimum funding for preventive and reactive facilities maintenance by the board of supervisors and the school board; and
- properly reasoned building closure, re-use, sale, or demolition decisions.

RECOMMENDATION 5.2

Prepare a permanent, ongoing facilities master plan and master planning process with a 10-year strategic horizon and a five-year working horizon that includes specific cost objectives.

The planning process must include school utilization figures based on enrollment projections, periodic building condition assessments, redistricting as necessary, reactive and preventive maintenance, capital improvements projects, additions, renovations, new buildings, school closures, adaptive reuse, mobile classroom management, other asset disposition, and any other appropriate and necessary actions related to school facilities.

A detailed description of a recommended and collaborative facilities master planning process for the school division and county government is located in **Appendix A**. Ongoing collaboration between BCPS and the county will help support effective, efficient, and prudent facilities decision-making and funds allocation.

FISCAL IMPACT

The initial structuring of a permanent facilities master planning process will probably require some outside assistance in the form of coaching. However, the bulk of the work will need to be accomplished by designated BCPS and county staff. The consulting team estimates a cost of $140,000 for contracting with an external firm to facilitate the master planning process and update the building condition assessments. The eventual savings from reduced overspending or misspending on facilities needs is not easy to quantify, but should eventually outweigh by large margins the cost of implementing and continuing the facilities master planning process.

Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19
Prepare a permanent, ongoing facilities master plan and master planning process.	($140,000)	$0	$0	$0	$0

FINDING 5.3

The division is currently, and based on enrollment projections, sufficiently under capacity to close two small elementary schools permanently. The need to make such a school closure decision has been expected for several years, but a decision has been deferred until now.

The 2002 facilities study proposed consideration of a new high school to replace Jefferson Forest High School and provides several scenarios and cost options. This recommended action was rejected by the division's leadership, and the existing Jefferson Forest High School was renovated and enlarged to its current size.

The subsequent 2008 facilities study noted:

> *Body Camp Elementary School and Moneta Elementary School are old, small schools that could be combined into a single, new school located near the existing middle school and high school. This consolidated facility could also serve to relieve enrollments in the Goodview-Stewartsville area. Consolidation could be considered for these facilities. Consolidating schools is a major undertaking. It is often a laborious and emotional task. Factors that must be considered with consolidation include political issues, financial issues, operational issues, and, most importantly, educational issues. Another major factor is that consolidation typically results in having one or more facilities that are abandoned and require "re-purposing."*[34]

To date, the study's suggested consolidation of Body Camp and Moneta Elementary Schools into a single, new school has not been undertaken.

However, five years after the 2008 study, new demographic projections indicate that two existing elementary schools could be closed soon without the need for a new or significantly expanded elementary school to receive the students (**Exhibit 5.4**). In the worst case scenario, one or two existing schools may need to be enlarged and renovated to accommodate the students from the closed schools. The net effect would be the removal of two schools.

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[34] Kahn Study. (2008). M. B. Kahn Construction Company.

Exhibit 5.4
BCPS actual and projected student membership
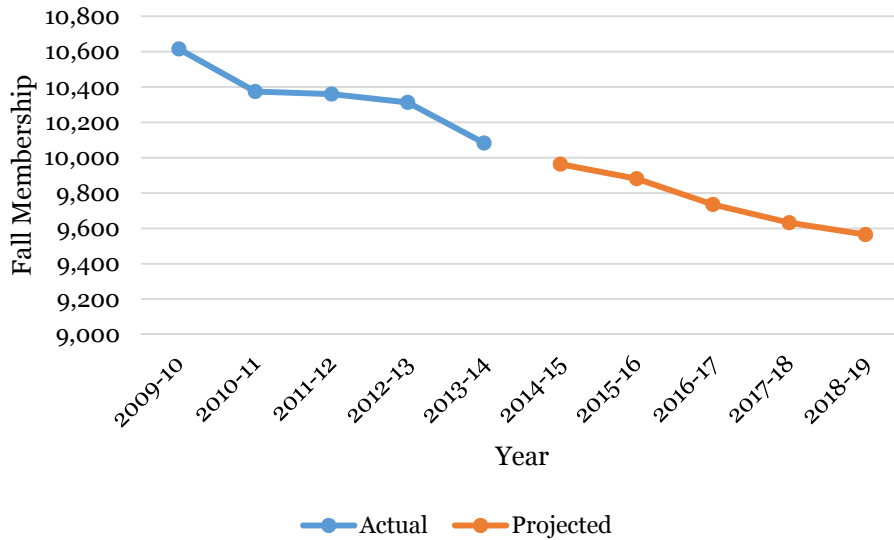
Source: BCPS, 2013.

Student membership data separated by grade level and by high school service zone are provided in **Exhibit 5.5**. As shown, BCPS student membership is expected to decline overall by approximately 1,000 students by 2018-19. The Jefferson Forest Zone has no projected decline in the elementary grades. The Liberty Zone is projected to decline in grades K-5 by 112 students. The Staunton River Zone is projected to decline in grades K-5 by 161.

Exhibit 5.5
Student membership projections by grade level
by the three high school zones (2013-14 through 2018-19)

Year	K	1	2	3	4	5	6	7	8	9	10	11	12	Total	K-5 Total
Jefferson Forest Zone															
2013-14	297	263	301	313	308	362	306	343	316	351	358	342	317	**4,177**	**1,844**
2014-15	298	304	272	309	313	316	349	315	345	321	341	351	341	**4,174**	**1,812**
2015-16	301	309	309	285	310	325	305	357	317	351	312	334	350	**4,163**	**1,839**
2016-17	297	308	315	317	285	318	314	313	358	322	340	306	333	**4,125**	**1,840**
2017-18	286	304	313	323	317	293	310	320	316	365	312	336	304	**4,100**	**1,836**
2018-19	286	293	309	321	323	325	283	316	322	321	355	307	335	**4,096**	**1,857**
Liberty Zone															
2013-14	186	204	205	187	198	194	194	214	215	223	247	217	233	**2,717**	**1,175**
2014-15	188	182	195	205	184	201	195	195	214	230	216	234	217	**2,655**	**1,155**
2015-16	186	186	174	195	203	189	202	197	196	225	222	204	218	**2,598**	**1,133**
2016-17	189	182	178	174	193	206	190	203	197	203	218	210	204	**2,547**	**1,122**
2017-18	180	185	175	178	171	196	207	191	203	203	198	208	210	**2,506**	**1,085**
2018-19	180	177	181	175	176	174	197	210	191	212	196	193	209	**2,471**	**1,063**
Staunton River Zone															
2013-14	206	267	253	213	235	240	233	239	253	273	283	239	263	**3,197**	**1,425**
2014-15	209	208	262	254	215	234	243	240	248	264	257	266	234	**3,134**	**1,382**
2015-16	214	213	206	264	257	215	238	250	250	260	249	241	263	**3,120**	**1,369**
2016-17	217	216	210	207	266	255	217	243	257	259	245	233	237	**3,063**	**1,371**
2017-18	206	220	212	211	209	265	258	222	250	266	247	232	229	**3,026**	**1,323**
2018-19	206	208	215	213	213	209	268	263	228	258	254	234	228	**2,998**	**1,264**

Source: BCPS with Prismatic additions, 2013.

Exhibit 5.6 compares the capacities in elementary schools in the Jefferson Forest, Liberty, and Staunton River Zones with their projected 2014-15 average daily membership. Divisions should not plan to fill each school to 100 percent capacity. However, unless two elementary schools are closed, BCPS will be operating its elementary schools at 76 percent of capacity next year and at just 72 percent of capacity by 2018-19.

Exhibit 5.6
Capacity and possible consolidation status of BCPS elementary schools

School and Zone (JF, L, SR)	Capacity 2002	Projected ADM 2014-15	Number Below Capacity	Age of School construction/ renovation	Possible Status in Consolidation
Bedford ES (L)	620	463	157	1989	receive students
Bedford Primary (L)	352	223	129	1964/1993	closure?
Big Island ES (L)	300	154	146	1988	receive students
Body Camp ES (SR)	250	168	82	1953/1992	closure?
Boonsboro ES (JF)	380	289	91	1932/1993	no change
Forest ES (JF)	390	391	-1	1989	no change
Goodview ES (SR)	656	465	191	1999	receive students
Huddleston ES (SR)	260	175	85	1926/1996	closure?
Moneta ES (SR)	300	215	85	1951/1992	closure?
Montvale ES(L)	330	235	95	1996	receive students
New London Acad. (JF)	316	310	6	1937/1991	no change
Otter River ES (JF)	260	205	55	1958/1992	closure?
Stewartsville ES (SR)	592	365	227	1912/1990	receive students
Thaxton ES(L)	210	166	44	1933/1992	closure?
T. Jefferson ES (JF)	626	599	27	1999	no change
Total	**5,842**	**4,423**	**1,419**		

Source: Prismatic, 2013.

School candidates for closure may have a variety of attributes. Typically, they are older facilities that operate below capacity and are significantly deficient in meeting state and federal standards for educational facilities, or have other noteworthy shortcomings. The following school buildings are likely candidates for closure:

- **Bedford Primary School** – This school, constructed 50 years ago, houses kindergarten and first grade with a capacity of 352, and a projected membership of 223 in 2014-15. If it were closed, the 223 students remaining could be accommodated chiefly at Bedford Elementary School, 1.6 miles distant (absorption capacity 157), and secondarily at Montvale Elementary School, 11.2 miles distant (absorption capacity 95). The total absorption capacity of Bedford Elementary School and Montvale Elementary School is 252, which will sufficiently support the consolidation.

- **Body Camp Elementary School** – This school was recommended as a candidate for closure along with Moneta Elementary School in the 2008 study. However, the closure of these schools was predicated on the construction of a new elementary school to absorb the remaining students. This would require the design and construction of a new elementary school with a minimum capacity of 400 students. Body Camp is projected to be only 82 students below capacity and Moneta 85 students below.

- **Huddleston Elementary School** – This school has not been previously recommended as a candidate for closure. Its attributes are similar to Body Camp and Moneta—constructed in 1926, 1953, and 1951 and most recently updated in the 1990s. Huddleston serves a large area in the southern part of Bedford County. If it were to be closed, Body Camp and Moneta would need to absorb the 175 displaced students. The two aforementioned schools would be able to absorb a maximum of 167 students, according to projections.

- **Moneta Elementary School** – This school could be closed and its 215 displaced students absorbed by three schools: Body Camp, Huddleston, and Goodview. They have absorption

capacities of 82, 85, and 191, respectively. Distances from the current location of Moneta could result in long bus commutes because Body Camp is 6.9 miles from the current Moneta location, with Huddleston at 13.6 miles and Goodview at 15.8 miles.

- **Otter River Elementary School** – If Otter River were closed, its nearby schools (Forest, New London Academy, and Thomas Jefferson) would be unable to absorb the added student load of 205 without major additions to one or more of these schools.

- **Thaxton Elementary School** – This school sits on a cramped site bordered on the back by an active railroad spur. Its historic portion dates to 1933. Thaxton would require 166 displaced students to be accommodated. Nearby Montvale and Bedford could only absorb these students if Bedford Primary does not close, or if a significant addition to Bedford Elementary were built.

The division has a number of schools that would be in a position to receive students from closed schools because they have significant amounts of extra capacity, and are located in reasonable proximity to the schools slated for closure: Bedford, Big Island, Goodview, Montvale, and Stewartsville Elementary Schools. Big Island and Stewartsville are located at extreme ends of the county and therefore may not serve this purpose as well as the remaining schools. Four options to reduce the unused elementary capacity are shown in **Exhibit 5.7**.

Exhibit 5.7
Four major options for elementary school closures

Option	Actions	Advantages	Disadvantages
1	Close Bedford Primary and Moneta Elementary Schools. Redistrict Bedford Elementary/Bedford Primary to Thaxton, and send some from Thaxton to Montvale. Other possibility is to have Bedford Primary students absorbed by Bedford and Montvale, and Moneta students absorbed by Body Camp, Huddleston, and Goodview.	No new construction, both schools could be repurposed, greatest savings short and long term; cost to renovate and upgrade Thaxton could be financed from initial savings	Redistricting needed; possibly some long bus commutes
2	Close Body Camp and Thaxton Elementary Schools. Huddleston and/or Moneta would need to be expanded to accommodate Body Camp's students, whereas Bedford and Montvale can accommodate the Thaxton students.	Thaxton closing would save money for now no longer needed renovations and upgrades; subpar Thaxton school site would be eliminated; both schools could be repurposed	Limited moderately expensive expansion at Moneta and/or Huddleston; redistricting needed; possibly some long bus commutes
3	Build an addition to Bedford ES, and close and consolidate Bedford Primary and Thaxton into Bedford ES and Montvale. This is the option contained in the most current Capital Improvement Plan (CIP) of BCPS.	Thaxton closing would save money for now no longer needed renovations and upgrades; subpar Thaxton school site would be eliminated; both schools could be repurposed	Costly expansion to Bedford Elementary; enlargement of Bedford Elementary creates an arguably larger than desired elementary school
4	Close Body Camp and Moneta Elementary Schools. Goodview and Huddleston could not absorb all Body Camp students. A new 400 student (minimum) elementary school would need to be constructed to replace the two schools.	Both closed schools could be repurposed, minimal disruption of school zones possible, use downsized Goodview/ Jefferson prototype for new school	Most expensive option, redistricting needed

Source: Prismatic, 2013.

RECOMMENDATION 5.3

Close Bedford Primary and Moneta Elementary Schools.

This option requires no appreciable new construction or renovations because all displaced students can be reassigned readily to nearby schools with sufficient absorption capacity. In addition, both closed schools are located such that they can be repurposed as community-oriented facilities. Bedford Primary's location might allow it to serve as some type of community or senior center, while another public purpose may be in evidence for Moneta, such as a

community center or branch library. If no other purpose can be found to keep the two closed facilities in use, they should be razed, and the land either kept in county government ownership, or sold to a private land developer.

The consulting team recommends that Option 1 be implemented in time for the start of the 2014-15 school year. Savings generated from this closure can be used to pay for needed renovations and upgrades to Thaxton Elementary School over the next two to three years.

An important issue may lead to the choice of options 2 or 3: if the Thaxton Elementary School's site is deemed too substandard and/or unsafe, then Thaxton must, by default, be one of the closed elementary schools. An assessment of the Thaxton site's adequacy and/or safety should be conducted immediately.

The consulting team does not recommend the selection of Option 4.

FISCAL IMPACT

The costs of closing the schools will include redistricting and reconfiguring bus routes. These actions can be completed by current leadership and will be made easier with the implementation of better automated bus routing (which would also support "what if" scenario analyses for redistricting). With automated tools, redistricting and reconfiguring will require approximately 100 hours. Additional external legal costs may be incurred in the property transfer to full county government ownership, but these should also be covered using already budgeted amounts for legal expenses of the division.

Long-term savings are expected to be significant, primarily from a reduced need for staff and reduced energy consumption. The consulting team estimates savings of $1.3 million per year by eliminating or transferring these positions to other schools:

- two principals;
- two secretaries;
- one bookkeeper;
- two school nurses;
- one library-media specialist;
- four custodians;
- six classroom teachers;
- six paraprofessionals/aides; and
- 10 cafeteria workers.

Reduced utilities consumption is estimated at $300,000 per year for both schools.

Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19
Close Bedford Primary and Moneta Elementary Schools.	$1,600,000	$1,600,000	$1,600,000	$1,600,000	$1,600,000

FINDING 5.4

With two possible exceptions, there is little reason for the division to keep its inventory of mobile classrooms. Mobile classroom units have serious drawbacks: they are energy-inefficient, are costly to maintain, tend to make a school less secure, inflate a school's capacity artificially, typically add at least one lunch period to an under-sized cafeteria, and are time-consuming and inefficient to clean. It is rarely possible to clean them to the same standards as permanent classrooms.

The division currently has 23 mobile units comprising 43 classrooms. Declining enrollment projections will soon require only one school at BCPS to have mobile classrooms because of a lack of available space. By 2014-15, no elementary schools will be above capacity. On the contrary, all will be below capacity, with the exception of Forest Elementary School, which will be at capacity. Among middle schools, only Forest Middle School will remain above capacity by 175 students. All other middle schools will be below capacity. No high schools will be above capacity by 2014-15.

Thus approximately nine or 10 mobile classrooms (five two-classroom units) must remain at Forest Middle School. In addition, one two-classroom unit will remain at the Bedford Science and Technology Center to house its GED program. The latter unit will remain there not because of a lack of space, but because the GED program prefers to be located in its own, separate structure. In total, 17 mobile units containing 31 classrooms can be removed after the 2014-15 school year.

RECOMMENDATION 5.4

Remove 14 two-classroom units and two one-classroom units by the end of 2014-15.

The total mobile units to be removed by the end of the 2014-15 school year are 14 two-classroom units, and two one-classroom units. The remaining units at Forest Middle School shall be removed by the 2018-19 school year or earlier once they are no longer needed to cover excess membership. If possible, the newest two-classroom units in the best condition should replace the unit now at BS&TC, and that old unit should be surplused. Also, if logistics permits, the units to remain at Forest Middle School should be the newest ones in best overall condition in the current BCPS inventory.

FISCAL IMPACT

The division should realize direct savings from the sale of the surplus units and the reduction in energy use. The removal of these mobile units will also allow some of the affected schools to reclaim land for other purposes, such as gardening, playgrounds, or athletic facilities. The minimum sale price for the units to be removed is $10,000 per classroom, or a one-time income of about $300,000. Energy savings are estimated conservatively at $3,000 per year per classroom, or $90,000 per year for the 30 classrooms removed.

Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19
Remove mobile classrooms.	$390,000	$90,000	$90,000	$90,000	$90,000

FINDING 5.5

The division lacks sufficient policies, rules, and procedures for facilities use and management. Much of the current operation runs on unwritten rules in the heads of supervisors.

BCPS currently has these policies related to facilities policies:

- Facilities Development: updated December 16, 2011, this policy states the following facilities development goals:
    - Detailed educational specifications
    - New buildings and renovations that will accommodate and facilitate new organizational and instructional patterns
    - Meeting all safety requirements through remodeling of older structures
    - Building renovations as needed to provide accessibility to disabled persons
    - Design and construction and renovation that will lend themselves to low maintenance costs and energy conservation
    - Teacher, student, and community inputs to the writing of educational specifications
    - Design and construction compliant with energy conservation requirements of the VDOE and approval by the school board
- Facilities Planning: updated March 1, 2011, this policy establishes a facility planning, design and construction program, including, but not limited to the following:
    - A five year capital improvement/capital maintenance program
    - Elementary, middle, and high school educational specifications
    - Engineering and architectural design standards
    - Long range facilities master plan
    - Facilities condition assessment program
    - Design and construction management capabilities
- Playground Equipment: updated January 12, 2012, this policy establishes the designation of a safety inspector who will inspect playground equipment on a periodic basis. This person will have the authority to remove, or bar from use, any equipment in need of repair. Principals are also authorized to restrict or deny use of the equipment.
- School Names: updated May 1, 2004, this policy outlines the process by which a name is given to a school. The school board is responsible for giving a name. Written naming suggestions can be made by persons, groups, or organizations that identify themselves. Living persons and persons deceased less than ten years are excluded from being subjects of naming.
- Retirement of Facilities: no date of approval or update is given, but this policy is listed as active. The policy sets guidelines for the disposition of school buildings that no longer fit the needs and requirements of BCPS. It encourages input from the public for possible reuse by the community, use of the building's site, historic significance, and cost of maintenance and upkeep, if not sold or demolished.

- Community Use of School Facilities: updated September 23, 2010, this policy establishes procedures and priorities for the types or organizations that may enter into rental agreements for the after-hours and weekend use of school facilities. It specifies who must pay fees and custodial costs, who will be allowed free use, and who is prohibited from use. The superintendent or designee must make the decisions on a case-by-case basis.[35]

RECOMMENDATION 5.5

Approve and document all key policies, rules, and procedures for facilities use and management.

All new policies should be subject to approval by the school board and entered into the division's policy manual. All current policies should be examined and updated if appropriate. A procedures manual for facilities should be completed once policies have been adopted, or in conjunction with this adoption.

In addition, policies already in the official record must all be implemented. Facilities master planning, and the ongoing conduct of facilities condition assessments, are examples of current policies lacking implementation. **Exhibit 5.8** describes areas in which BCPS policies and procedures are needed, based on discussions with BCPS staff.

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[35] BCPS. Retrieved from http://www.boarddocs.com/vsba/bcsbva/Board.nsf/Public

Exhibit 5.8
2013 recommended additional BCPS rules or procedures

Facilities Issue or Topic	Background	Recommended Action
Roof replacement	In some instances low slope roofs have been replaced with standing seam, sloped metal roofs. The attic space created has been used to shield mechanical equipment from the elements, and to permit service technicians to work without exposure to excessive heat or cold.	Codify this as a policy or rule when low slope roofs require replacement. Exceptions should be made only under circumstances where a low slope roof is required or a sloped roof cannot be made part of the existing design.
Carpet replacement	Over the past decade, permanently- installed carpeting in corridors and classrooms has proven to be difficult and costly to keep clean. In the past BCPS has replaced carpet with hard surface floor finishes when the carpet needed to be removed.	Codify as a policy or rule that wall-to-wall carpet installations and other adhered carpeting more than ten years old should be removed and replaced with hard surfaces, such as sealed concrete, terrazzo, VCT, or similar materials. Rugs should be permitted in elementary classrooms and other special locations.
Life safety pre-inspections	During the last five years, BCPS maintenance managers have conducted life safety pre-inspections of schools to assure little or no violation counts during the actual inspections by local authorities. An awards program recognizing the school with the lowest pre-inspection violations was implemented in conjunction. Walk-throughs by the consulting team noted a high degree of compliance with safety matters on an apparent day-to-day basis.	Codify as a policy or rule the conduct of pre-inspections and the attendant competition.
Fix cause and replace stained ceiling tile within 24 hours	BCPS maintenance and custodial staff have been dedicated to fixing the cause of stained ceiling tile and replacing the tile with an unblemished one within 24 hours. This effort falls within the category of the "Broken Windows Theory." This theory holds that a sign of neglect is an invitation to vandalism. The consulting team has not witnessed any broken windows, stained tile, or graffiti.	Make the instant removal of broken windows, stained tile, and graffiti a policy of the BCPS school board under the "Broken Windows Theory." Write proper accompanying rules and procedures for implementation.

Source: BCPS and Prismatic, 2013.

FISCAL IMPACT

The consulting team estimates the maintenance supervisor will need to spend approximately 40 hours developing policies, rules, and procedures. The policies would subsequently need school board approval.

FINDING 5.6

The community use of facilities policy is insufficiently administered by the division. According to information obtained from school division staff, the number of gratis

rentals has increased over time, and may have resulted in actual net costs to the division when renting some of the facilities.

However, the division was unable to provide sufficient data from which to assess the extent of this problem. All facility rentals in the school division are coordinated by the schools with no central office oversight. Consequently, data on division-wide income from this activity are not available. Due to the decentralized implementation of this policy, the division's CFO plans to implement a tracking system.

A potentially suitable tracking method might be software such as that available from SchoolDude.com and other providers. SchoolDude, for example, offers a facility scheduling and rental module which may provide greater control over the in-house scheduling application and may increase chargeback revenues. The software suggests profitable fee schedules and likely scenarios for income generation. It creates invoices automatically, and assigns custodial, security, and other staff as may be required. The software also suggests revenue goals based on school divisions of similar size and character.[36] Based on prior experience with school divisions of the size and nature of BCPS, the consulting team estimates the typical annual revenue from community use should be about $30,000 at the division. However, depending on the specific circumstances, such income may be considerably larger.

RECOMMENDATION 5.6

Review the current community use of facilities policy and revise it as necessary.

Facility rentals should create an income to the division when the renters are paying organizations and a net zero cost to the division in the case of "free" rentals to certain not-for-profit or school-affiliated organizations.

FISCAL IMPACT

Purchasing a tool similar to SchoolDude would have an initial cost of approximately $3,000 and annual updates of $800. Rental income is estimated conservatively at $15,000.

Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19
Improve oversight of community use of facilities.	$12,000	$14,200	$14,200	$14,200	$14,200

C. Maintenance Operations

The proper maintenance of facilities is critical to ensuring support for an effective instructional program. Research has shown that appropriate heating and cooling levels, building and room appearances, the condition of restrooms and other facilities, as well as occupant safety, all impact how students and staff are able to carry out their respective responsibilities.

Ineffective or inadequate maintenance provisions have proven to lead to increased costs of facility operations by shortening the useful life span of equipment and buildings.

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[36] SchoolDude. Retrieved from http://www. schooldude.com/Solutions/Products/CommunityUse

Proper maintenance is never an extravagance. It is deferred or cut at great risk, and with the certain consequence that much more must be spent later to correct such deferral. **Exhibit 5.9** provides a summary of the main responsibilities of the 14 BCPS maintenance employees.

Exhibit 5.9
2013 BCPS maintenance mechanics and helpers

Mechanic or Unskilled	FTE	Secondary Functions
HVAC Mechanics	3	Boilers, Electrician
Electricians	3	
Plumbers	2	
Carpenters	3	Locksmith, water testing, small engine repair
Unskilled	3	Wastewater treatment sampling

Source: Prismatic, 2013.

FINDING 5.7

Although the division is working with a minimal crew of experienced and long-time maintenance workers and helpers for its size, its facilities appear to be well-maintained overall. No outward maintenance neglect appeared evident during the consulting team's walk-through of the facilities. Worker turnover is low, and older retiring workers are replaced by younger staff. Several maintenance employees are multi-skilled.

COMMENDATION

The division retains an expert, experienced, and collaborative team for the maintenance of its school facilities.

FINDING 5.8

Maintenance workers currently drive to the administrative office each morning to pick up their work order assignments for the day. This can be inefficient, especially when the maintenance worker must drive long distances from home to the administrative office, and then again to the assigned school, which may be close to the worker's home. Other valuable time may be lost if needed parts must be picked up at local vendors or at the maintenance storage facility.

RECOMMENDATION 5.8

Issue work orders electronically on the previous afternoon for pick-up on tablets and/or smartphones issued to the maintenance staff.

This will allow workers to go to their assignments directly from home, without having to report to the administration building. In addition, they can purchase or pick up needed parts the previous afternoon if appropriate, or in the early morning before reporting to the work location. Alternatively, internal mail couriers who go out on their routes twice per week can deliver needed parts from the maintenance storage facility to the building location before the scheduled repair or maintenance service.

The issuance of tablets of smartphones allows not only the receipt and sending of email, but the built-in cameras permit maintenance mechanics and helpers to send each other pictures of trouble spots and problem areas for a faster diagnosis and response.

The consulting team believes that the issuance of smart phones or tablets will lead to an increase in work efficiency by maintenance workers. Ground rules should be prepared governing the use of the phones or tablets to make sure everyone understands how these phones may or may not be employed as part of a professional work performance.[37]

FISCAL IMPACT

Maintenance staff is currently issued basic mobile phones without email capability. The issuance of smartphones or tablets is therefore an initial cost. In addition, the monthly service cost for each device will most likely increase due to the addition of data transmission capability. The cost of phones or tablets is estimated at $350 each for the 11 maintenance mechanics. An additional $100 per month per maintenance mechanic is anticipated in service costs for the tablets or smart phones. These estimated costs are shown below. The consulting team believes this cost will more than offset in greater work efficiencies.

Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19
Issue work orders electronically.	($17,050)	($13,200)	($13,200)	($13,200)	($13,200)

FINDING 5.9

Maintenance workers are not issued keys to buildings, and must rely on custodians, administrators, or teachers to let them in after hours or on weekends, holidays, and other days when schools are closed. This has resulted in costly inefficiencies when long waits are involved before something can be repaired. It has also resulted in deeper damage beyond initial destruction. For example, a leak could not be stopped immediately after maintenance staff arrived simply because they were unable to enter the building. In the case of IT zone technicians not having keys and needing to troubleshoot system failures, a need for after-hours access also exists.

RECOMMENDATION 5.9

Provide access for skilled maintenance staff and zone technicians to all buildings.

Access should be given to all skilled maintenance employees to assure that any unexpected equipment failures can be contained or stopped in the shortest possible time. Zone technicians should also be given access. This may be accomplished in various ways, including:

- A lock box system whereby maintenance staff members and zone technicians have the combination codes to lock boxes at each school, and the lock boxes contain a school master key.
- Providing a master key to all selected maintenance workers and zone technicians.
- Changing from the present key system to an ID badge card swipe system, where access can be customized for each badge holder.

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[37] *Tablets and Smartphones: Business Tools or Toys?* Internet and Telephone. Retrieved from http://www.itllc.net/blog/ uncategorized/tablets-smartphones-business-tools-or-toys/

PRISMATIC
SERVICES, INC.

FISCAL IMPACT

By providing lock boxes at all of the school division's buildings, 26 lock boxes would need to be installed near the main entrances. At an approximate cost of $50 each, this would amount to an initial cost of $1,300. Issuance of master keys would cost less. Only 11 skilled maintenance employees and three zone technicians would be involved, at a cost of about $140. The higher cost is shown below.

Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19
Provide access for maintenance staff to all buildings.	($1,300)	$0	$0	$0	$0

FINDING 5.10

The maintenance department conducts pre-inspections before the fire inspector arrives, to minimize the number of violations during the actual inspection. An awards program for the school with the fewest violations during pre-inspection is administered regularly. Indoor air quality testing is conducted whenever it appears that indoor air quality has been compromised. During the consulting team's walk-through, all examined fire extinguishers and battery-powered exit signs and emergency lights were fully functional.

COMMENDATION

The school division is commended for its painstaking attention to the safety, health, and welfare of its students, staff, and visitors, and for its innovative awards program.

FINDING 5.11

The division does not adequately fund a balanced program for preventive and reactive maintenance activities. Custodians perform limited preventive maintenance tasks, such as filter and lamp replacement. According to BCPS staff, the county board has recently reduced its funding of maintenance, while at the same time maintenance funds from the Commonwealth have been essentially eliminated. In the long run, a chronic unaddressed accumulation of deferred maintenance will cost taxpayers an average of 15 to 40 times the original maintenance cost that has been deferred. In some cases, the cost of deferring maintenance can be the square of the original cost, and sometimes more.[38]

The full extent of deferred maintenance at the division is not known. The 2008 study noted:

> *With regard to the overall condition of the Division's facilities, the Facility Assessment Teams found that although many facility systems have exceeded their life expectancy, they have been well maintained. The Team noted a continuous process of improvements including lighting improvements, roof replacements, fire alarm upgrades, life safety improvements, and general cosmetic upkeep. Although this 'continuous process of improvements' has provided many upgrades on multiple campuses, some major improvements are still needed. The primary improvements*

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[38] Geaslin, D.T. *The disastrous effects of deferring maintenance.* Peterson Predictive Maintenance. Retrieved from http://www.petersonpredict.com/whatispm_deferredmaint.php

needed are HVAC replacements, electrical service upgrades, restroom renovations, bus/car traffic relief, and technology integration.

The division's recently formulated and statutorily required capital improvements plan addresses some of these needs, with the addition of roof replacements, but without attention to restroom renovations. An up-to-date building condition assessment is therefore needed as part of the master planning process previously recommended.

According to "*Managing for Results in America's Great City Schools*" by the Council of the Great City Schools (CGSC), October 2012, the median cost per square foot of maintenance among member schools is $1.98, with a range of $0.83 to $6.29. Commentary accompanying this measure states:

> *This measures the relative cost (which is influenced by regional material and labor cost differences) for a division to maintain its buildings. A high relative cost may indicate a large amount of deferred maintenance, while a low number would reflect newer buildings in a division. Influencing factors are age of buildings, amount of deferred maintenance, labor costs, material costs and purchasing practices, and layout of buildings.*

The total floor area of all BCPS buildings is 1,677,252 square feet. The 2013-14 maintenance budget of BCPS of $1,537,650 (**Exhibit 5.10**) results in maintenance expenditures of $0.92/square foot. This figure is less than half of the median amount reported by the Council of Great City Schools.

Exhibit 5.10
2013-14 BCPS building maintenance budget[39]

Building Maintenance Budget Item	Amount
Total management and direction	$ 139,770
Salaries – maintenance staff	$ 630,683
FICA, VRS, H/D, GLI, Benefits	$ 204,464
Contracted services	$ 526,733
Misc. – uniforms, other insurance	$ 36,000
Total	**$ 1,537,650**

Source: BCPS, December 2013.

Another measure often used to gauge spending on building maintenance is the "percentage of current replacement value (CRV)." The Building Research Board's report, *Committing to the Cost of Ownership,* recommends that, in the absence of other information, maintenance and repair budgets for facilities be set at between two and four percent of the aggregate current replacement value (CRV) of the facilities (i.e., the amount in current dollars it would cost to duplicate the facilities).

Spending of two to four percent of CRV as recommended by the Building Research Board (BRB) is considered to be the benchmark for full funding of preventive and remedial maintenance.[40]

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[39] Some items prorated 20/80 between maintenance and custodial based on staffing.
[40] *Budgeting for Facilities Maintenance and Repair Activities. (1996).* National Academy Press. Retrieved from http://www.nap.edu/catalog.php?record_id=9226

The total current replacement value of all BCPS facilities is $276 million, so two to four percent spending would be between $5.5 million and $11.0 million. This is clearly not the case at BCPS.

The BCPS capital improvements plan (CIP) calls for spending $73.54 million between 2014 and 2030 on important preventive projects as well as new construction. This includes $54 million for new construction, which cannot be applied to the 'two to four percent' benchmark. Consequently, the planned CIP expenditures counting toward preventive maintenance amount to just under $20 million over 17 years, or $1.2 million per year. Adding this to the current annual spending, the division plans to spend just $2.7 million per year on facilities maintenance.

RECOMMENDATION 5.11

Adopt a budget policy for facilities maintenance.

The division's current rate of spending can, and probably will, create a serious amount of deferred maintenance in five to ten years that will later return as a bill to the taxpayers of anywhere from 15 to 40 times the deferred amount, and perhaps on occasion of a much higher quantity.

One way to improve funding for facilities maintenance partly in the near term is to count the CIP spending on preventive and reactive maintenance in the years it is scheduled to occur, rather than over the longer financed term. This would create the calculations shown in **Exhibit 5.11**. Depending on the metric selected, the division could be adequately funding maintenance in some of the future years, but should assess the impact of devoting so many dollars in one year (2017-18) versus spreading them out more evenly.

Exhibit 5.11
CIP spending and maintenance expense shortfall

School Year	Applied from CIP	Past County Funds	Shortfall/ (Overage) at CGCS $1.98 Median	Shortfall at 2% of CRV
2013-14	$ 2,040,000	$ 1,537,650	$ (272,250)	$ 1,944,040
2014-15	$ 0	$ 1,537,650	$ 1,767,750	$ 3,984,040
2015-16	$ 2,625,000	$ 1,537,650	$ (857,250)	$ 1,359,040
2016-17	$ 1,475,000	$ 1,537,650	$ 292,750	$ 2,509,040
2017-18	$ 12,000,000	$ 1,537,650	$ (10,232,250)	$ 0
2018-19	$ 0	$ 1,537,650	$ 1,767,750	$ 3,984,040
2019-20	$ 0	$ 1,537,650	$ 1,767,750	$ 3,984,040
2020-21	$ 1,400,000	$ 1,537,650	$ 367,750	$ 2,584,040
Total	**$ 19,550,000**	**$ 12,301,200**	**$ (5,397,999)**	**$ 20,348,280**

Source: BCPS and Prismatic, 2013.

FISCAL IMPACT

Developing and adopting a policy on facility maintenance can be done with minimal time. The superintendent will need to spend no more than a few hours drafting the policy and adoption can occur as part of a regular school board meeting. The budget adopted in accordance with the new policy may require greater maintenance expenditures than BCPS is currently making.

FINDING 5.12

The division does not have up-to-date and fully documented information about the current condition of its facilities. As a result, the full extent of maintenance deferral is not presently known, nor is there sufficient information to inform the facilities master planning process.

A periodic building condition assessment is typically performed as part of the facilities master planning process so that the school division can be assured of the following:

- any deferred maintenance backlog is minimal and addressed in the next CIP or by the preventive maintenance staff; and
- any previously undiscovered deficiencies, or conditions that have reached a more serious stage, can be addressed in ample time to avoid major equipment, structural, or other failures.

RECOMMENDATION 5.12

Perform a building condition assessment every five years.

Once the five year rhythm has been established, the assessment process becomes merely an updating activity, and not a major 'from scratch' undertaking. The building condition assessment becomes an integral part of the facilities master planning process previously described.

FISCAL IMPACT

The cost of the next building condition assessment was included in the facility master planning recommendation.

FINDING 5.13

The division does not have a sufficient number of maintenance technicians to perform routine preventive maintenance on a steady basis across all of the schools and other buildings, in addition to the reactive maintenance already required. Additional skilled mechanics are needed to form preventive maintenance teams.

According to a 2001 study, *Management Program – Maintenance and Operations Administrative Guidelines for School Districts and Community Colleges,* for the Florida Department of Education by the Florida Center for Community Design and Research,[41] there is no direct agreement on industry standard maintenance staffing formulas. However, the study did recommend two reasonable staffing formulas. The simpler formula assumes a need for one maintenance person per 45,000 square feet of floor area. With 1,677,252 square feet to maintain in BCPS, this would translate into approximately 37.0 full-time maintenance employees. The division currently has 11 skilled and three unskilled workers in the maintenance department.

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[41]Available from http://www.fldoe.org/edfacil/manoguid.asp

RECOMMENDATION 5.13

Hire six additional skilled maintenance workers to form three teams of three, one for each high school zone.

Given the likely reduction in square footage of BCPS facilities, the division should hire six additional technicians at this time. The division should reevaluate its need for further additional maintenance staff after two years.

Each team of three should consist of an HVAC technician, an electrician, and a plumber. They should be assigned to daily preventive maintenance work in the buildings belonging to their zone. The remaining maintenance workers should be assigned predominantly to reactive service calls and repairs. Teamwork should be encouraged and all maintenance workers should be prepared to assist each other in case of unforeseen equipment failures.

FISCAL IMPACT

The estimated cost for six additional skilled maintenance workers is $408,000 per year, including benefits.

An alternative to incurring this cost would be to work with the county board to employ a joint force of technicians. These technicians could work in both county and school division schools to provide preventive maintenance.

Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19
Hire six additional skilled maintenance workers.	($408,000)	($408,000)	($408,000)	($408,000)	($408,000)

D. Custodial Operations

Safe, clean, and sanitary facilities are essential elements of the education environment. Custodians, if properly appreciated and valued, can serve as important early warning sentinels by being the eyes and ears of their building. Most often, they will be the first to hear or smell the signs of possible trouble — a squeaking belt, a burning armature, an electrical short, a ceiling or roof leak, a leaky faucet, and the like.

FINDING 5.14

BCPS has no formally-established means for temporarily replacing custodians who must miss work because of illness or other legitimate and approved reasons. Substitute custodians come informally from a small unofficial roster of retired custodians. If no substitutes are available, remaining custodians must pick up the additional workloads of absent colleagues. Typically, school divisions, as a matter of accepted practice, maintain and manage a substitute teacher roster. BCPS does not follow similar practices with its ongoing need for substitute custodians.

The first page of a sample substitute employment application from the Prince George County School Division is shown in **Exhibit 5.12**. It describes some of the key terms and conditions under which substitute employment is conducted under Virginia and federal laws.

Exhibit 5.12
Example substitute employment application information and procedure

Submission of a complete application packet is required to be placed on the listing to be a Substitute Custodian. Once all documentation has been received, your name will be put on a listing that is distributed to schools. By signing the application you acknowledge that you understand substitute custodian work is on a part-time, intermittent, on-call basis, and that there is no guarantee of consistent employment. Because of extended periods when no work is available, substituting is NOT suitable for one who is dependent on a steady income. The division wants this limitation of work clearly understood before one accepts substitute employment. Please note that according to Virginia Law § 60.2-615, substitutes are not entitled to unemployment benefits during the period between two successive academic years or terms if there is a reasonable assurance such individual will perform services in the second of such academic years or terms. Unemployment compensation claims by a substitute will be vigorously contested. The pay period for substitute custodian is from the 1st through the 31st of each month. Your check will be mailed to you on the last Friday of each month. Substitute employee's pay is one month "behind."

Source: http://pgs.k12.va.us/dmdocuments/subsupport FINAL.pdf

RECOMMENDATION 5.14

Establish a formal roster of substitute custodians.

This roster may consist of retired custodians, candidates for full-time custodial employment, and custodians with experience who wish occasional employment rather than a full-time commitment. Approximately 10 percent of the permanent custodial staff should be available on the substitute roster. Consequently, a roster of about eight to 10 persons should suffice. Persons on the substitute rolls should undergo the same personal background checks as permanent custodians.

Candidates for full-time employment on the roster could be observed and trained during substitute work. They could then be hired full-time with greater confidence because they will have proven their reliability, work performance, and skills.

FISCAL IMPACT

This recommendation can be implemented by the maintenance supervisor.

FINDING 5.15

Custodian staffing is adequate based on the division's staffing formulas. However, custodians also shoulder the responsibilities for groundskeeping throughout the school year.

The job description for custodians reads, in part, "Performs such yard keeping chores as grass cutting, and tree trimming, etc., as necessary to maintain the school grounds in a safe and attractive condition." The head custodian's job description specifies, "Generally supervises and maintains the school grounds."

Beyond the custodians, no in-house or outsourced groundskeepers are assigned. However, snow removal from approach roads and their maintenance throughout the year is the responsibility of the BCPS maintenance crew. In addition, athletic fields, especially football fields, are the responsibility of the coaches at their respective schools.

The environmental services coordinator is in charge of the custodial staff. He assigns the custodians to the schools, sets cleaning standards, performs training, and evaluates their performances with input from the principals. There are 82 FTE custodial positions. **Exhibit 5.13** shows the staffing formulas used by BCPS for custodians while **Exhibit 5.14** shows the actual custodial staffing at each BCPS school. The exhibit also shows the number of custodians that should be assigned to each school based on the division's staffing formula.

Exhibit 5.13
Custodial staffing formulas

School Type	Base Number of Custodians	Total Custodians Based on Floor Area
Elementary Schools	Two 12-month full-time	One 12-month FTE per 20,000 SF, rounded to nearest 0.5 FTE
Middle Schools	Two 12-month full-time	One 12-month FTE per 20,000 SF, rounded to nearest 0.5 FTE
High Schools	Two 12-month full-time	One 12-month FTE per 23,000 SF, rounded to nearest 0.5 FTE
Bedford Science and Technology Center	Two 12-month full-time	One 12-month FTE per 23,000 SF, rounded to nearest 0.5 FTE

Source: BCPS, 2013.

Exhibit 5.14
2013 custodial staff distribution at BCPS schools

School	Actual Number of Custodians Assigned	Number Needed Based on BCPS Staffing Formulas	Difference
Bedford Science and Technology Center	4	**4.5**	0.5
Jefferson Forest High	11	11	0
Liberty High	7	7	0
Staunton River High	7	**6.5**	(0.5)
Bedford Middle	4	**3.5**	(0.5)
Forest Middle	5	5	0
Staunton River Middle	5	5	0
Bedford Elementary	4	**3.5**	(0.5)
Bedford Primary	2	2	0
Big Island Elementary	2	2	0
Body Camp Elementary	2	2	0
Boonsboro Elementary	2 + 1(180 day)	2.5	0
Forest Elementary	2 + 1(180 day)	2.5	0
Goodview Elementary	4	4	0
Huddleston Elementary	2	2	0
Moneta Elementary	2	2	0
Montvale Elementary	2	2	0
New London Academy ES	2 + 1(180 day)	**3**	(0.5)
Otter River Elementary	2	2	0
Stewartsville Elementary	3 + 1(180 day)	**3.5**	0
Thaxton Elementary	2	2	0
Thomas Jefferson Elementary	4	4	0
Total	**80+4(180 day)**		
Total FTE	**82**	**81.5**	**(0.5)**

Bold numbers in this column are based on BCPS staffing formula and differ from actual numbers assigned to each school.
Source: Prismatic, 2013.

RECOMMENDATION 5.15

Organize circuit riding grounds crews for each high school service area.

The three grounds crews should consist of three FTE groundskeepers, each of whom will be responsible for all mowing and major trimming of trees, shrubs, and lawn edgings at all schools in their service areas. One of each crew should be a head groundskeeper responsible for creating a work calendar, and assigning crew members to specific tasks at certain schools.

Each school has its own equipment, such as power mowers, clippers, shears, lawn edgers, and more. This was a logical disposition when custodians at each school were responsible for groundskeeping. In the future, the crews will more logically ride in a truck/trailer combination, with the equipment carried to each job location. Over time, this should result in a reduced division cost for groundskeeping equipment, as fewer sets will be needed.

Thorough training of the grounds crews in the safe operation and use of all equipment and tools is mandatory. In addition, proper upkeep and maintenance of all equipment and tools is essential to efficient grounds maintenance.

Although custodians would be relieved of major groundskeeping tasks, it is expected that they will remain attentive to cleaning up the perimeter of their schools by picking up litter, removing graffiti, and repairing windows or other damage to the exterior. With groundskeeping eliminated as a task, the division can adhere to its own custodial staffing standards more easily.

FISCAL IMPACT

The costs associated with this recommendation are expected to be as follows:

- ($271,350) – 9.0 FTE groundskeepers at average of $20,100 annually, plus 50 percent benefits; and
- ($150,000) - First year new truck and trailer purchases ($50,000 each crew).

Equipment for the teams should be pulled from existing inventories at the schools.

As an alternative, BCPS could seek to outsource the groundskeeping function or to have the county assume this function with their existing crews.

Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19
Organize circuit riding grounds crews for each high school service area.	($421,350)	($271,350)	($271,350)	($271,350)	($271,350)

FINDING 5.16

The consulting team found BCPS to have an acceptable level of cleanliness. The consulting team performed walk-throughs of nearly all BCPS buildings during the onsite visit and found cleanliness to be at level 2 and 3 standards. Cleanliness levels are typically defined on a scale from 1 to 5:

- Level 1 cleaning results in a "spotless" building, as might normally be found in a hospital environment or corporate suite.

- Level 2 cleaning is the uppermost standard for most school cleaning, and is generally reserved for restrooms, special education areas, kindergarten areas, or food service areas.

- Level 3 cleaning is the norm for most school facilities. It is acceptable to most stakeholders and does not pose any health issues.

- Level 4 cleaning is not normally acceptable in a school environment. Classrooms would be cleaned every other day, carpets would be vacuumed every third day, and dusting would occur once a month.

- Level 5 cleaning can very rapidly lead to an unhealthy situation. Trash cans might be emptied and carpets vacuumed on a weekly basis.

BCPS restrooms and other parts visited were satisfactorily clean to level 2 standards in restrooms and level 3 standards elsewhere. Visits were conducted during all times of the school day, and occasionally after school hours. All custodial shifts appear to have been performing effectively and to requirements. **Exhibit 5.15** shows the number of BCPS assigned custodians, as well as the gross square footage of each school and the resulting square footage per custodian. While some of these figures for square footage per custodial FTE are low in comparison to industry standards, many of the schools are quite old which typically results in greater efforts being necessary to keep them clean.

Exhibit 5.15
Comparison of BCPS custodian cleaning responsibilities

School	Actual Number of Custodians Assigned	Gross Square Feet (GSF)	GSF per Custodian
Bedford Science and Technology Center	4	96,250	24,063
Jefferson Forest High	11	257,848	23,441
Liberty High	7	155,671	22,239
Staunton River High	7	148,784	21,255
Bedford Middle	4	69,450	17,363
Forest Middle	5	98,786	19,757
Staunton River Middle	5	101,194	20,239
Bedford Elementary	4	66,740	16,685
Bedford Primary	2	38,597	19,299
Big Island Elementary	2	39,050	19,525
Body Camp Elementary	2	31,142	15,571
Boonsboro Elementary	2 + 1(180 day)	49,118	16,373
Forest Elementary	2 + 1(180 day)	45,850	15,283
Goodview Elementary	4	82,060	20,515
Huddleston Elementary	2	37,861	18,931
Moneta Elementary	2	34,482	17,241
Montvale Elementary	2	31,793	15,897
New London Academy ES	2 + 1(180 day)	52,023	17,341
Otter River Elementary	2	33,747	16,874
Stewartsville Elementary	3 + 1(180 day)	70,022	17,506
Thaxton Elementary	2	26,839	13,420
Thomas Jefferson Elementary	4	82,060	20,515
Total	**80+4(180 day)**	**1,677,252**	**19,967**

Source: Insurance Bedford Property records and Prismatic, 2013.

In addition, unmaintained and broken items are a rare sight at BCPS buildings. The removal of all signs of neglect is a strong deterrent to vandalism.

COMMENDATION

BCPS custodians are diligent, competent, and effective.

FINDING 5.17

Turnover among rank-and-file custodians at the division is at times too high. Head custodians, on the other hand, are generally long-term employees. Several reasons have been cited by BCPS staff for this problem: uncompetitive compensation, pressure from dual role as interior custodians and exterior groundskeepers, and lack of respect.

Exhibit 5.16 shows turnover rates among selected service employees during the past three school years. Custodial staff ranks highest in 2010-11, third lowest in 2011-12, and fourth highest in 2012-13. Turnover among rank-and-file custodians can be problematic to achieving consistent quality cleaning levels; additional training is needed, and new team members must become adjusted and acclimated.

Exhibit 5.16
BCPS turnover rates for selected employee categories

	Aides	Bus Aides/ Bus Drivers	Custodian	Nutrition	Clerical	Maintenance	Technology
2010-11							
Turnover	19	36	19	18	5	1	1
Number of Employees	173	213	84	127	67	12	12
Percent Turnover	11%	17%	23%	14%	7%	8%	8%
2011-12							
Turnover	17	7	5	15	6	0	1
Number of Employees	176	198	79	127	67	12	12
Percent Turnover	10%	4%	6%	12%	9%	0%	8%
2012-13							
Turnover	30	28	10	18	7	1	0
Number of Employees	176	195	78	127	67	12	13
Percent Turnover	17%	14%	13%	14%	10%	8%	0%

Source: BCPS, December 2013.

RECOMMENDATION 5.17

Explore and implement ways of reducing turnover among custodians.

The consulting team anticipates that the elimination of major groundskeeper duties from custodians will relieve some of the pressure likely causing turnover. Another possible approach would be to develop and implement an awards program such as 'clean school of the month,' 'clean school of the year,' 'custodial team of the month,' or custodial team of the year.' Award winners would be noted in the local press, on the BCPS website, and in prominent displays at the winning school. A small cash award might be an added incentive. Such a competition would give publicity to the important and positive impact of custodial work on the teaching and learning environment.

FISCAL IMPACT

The exact fiscal impact of this recommendation will depend on the methods the maintenance supervisor finds to be most effective, but should be of minimal cost.

FINDING 5.18

BCPS's custodial training materials are old videos that reflect practices no longer necessarily valid, or that have been superseded by more contemporary measures. Consequently, long-term custodians have seen these videos many times and are no longer receiving any effective, current, or topical training. New and better training materials are needed for in-house job education.

RECOMMENDATION 5.18

Buy new and up-to-date versions of the job training videos and discard outdated training materials.

Custodial training programs are vitally important and available from a variety of private and public sources. The following sample from the Internet illustrates the many different types of training materials available:

- http://www.edfacilities.org/rl/custodial_staffing.cfm - The National Clearinghouse for Educational Facilities (NCEF) contains a resource list of links, books, and journal articles on custodial staffing guidelines, needs assessment, training, and procedures for school buildings and colleges.

- http://www.trainingservicesassoc.com/coursedesc.htm - The Training Services Association provides in-house training courses, including courses on custodial services.

- http://www.cleaningconsultants.com/ - This site contains an online store with books, videos, reports, and software titles specifically for the cleaning industry. These products contain information on subjects such as basic cleaning, housekeeping, window washing, janitorial services, custodial maintenance, bidding, and estimating costs.

For further information, forums, professional development opportunities, and conferences concerning professional school facility management, maintenance, and cleaning, refer to and consider membership in the National School Plant Management Association (NSPMA). [42]

FISCAL IMPACT

Government sponsored or manufacturer sponsored training programs are generally free of charge. Private companies typically offer 10 or more videos for a maximum of about $3,000 per year, with a minimal annual update fee of $200.

Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19
Buy new and up-to-date job training videos.	($3,000)	($200)	($200)	($200)	($200)

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[42] http://www.nspma.org/

FINDING 5.19

Carpeting more than 15 years old remains in several schools, including Bedford Elementary School, which was purchased recently from Bedford City. This flooring material is difficult if not impossible to keep clean, and may represent a health hazard, especially to students who sit or crawl on the floor.

RECOMMENDATION 5.19

Accelerate implementation of the current BCPS plan that carpet will not be replaced with carpet.

The division should set a goal to remove all permanently installed carpet by the end of calendar year 2015 and replace it with hard surface floors, such as VCT, stained/sealed concrete, tile, or other similar hard surface material. In addition, BCPS should codify in its educational specifications that future construction/renovations will not include carpet.

FISCAL IMPACT

This recommendation will have no net fiscal impact. The division will be making already planned expenditures earlier.

FINDING 5.20

The custodial staff in selected schools have been equipped with new floor cleaning machines that employ ec-H2O technology. These machines convert water to an effective cleaning agent. They have reduced the custodians' exposure to cleaning chemicals and have made cleaning operations more effective and efficient.[43] The machines are manufactured by Tennant and require no cleaning agents to be used.

RECOMMENDATION 5.20

Purchase additional ec-H2O machines to equip all schools fully.

Since Tennant machines have been purchased so far, it may be proper to proceed with purchasing the added machines of the same brand.[44] However, competing products are available, and the competition among manufacturers will likely increase.

FISCAL IMPACT

Additional maintenance funds previously recommended in this chapter will provide the needed resources to make these purchases. Although these machines will be operated by custodians and not building maintenance staff, their use will prolong the life of floors in the schools. Thus, this expense can be justified as a maintenance cost. Moreover, since no cleaning chemicals are used by these machines, savings will eventually help to pay for them.

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[43] Clemas and Company. Retrieved from http://www.clemas. co.uk/ec-h2o-technology
[44] Tennant. Retrieved from http://www.tennantco.com/amen/Pages/ Company/NewsArticle.aspx?itemid=we-stand-behind-ec-h2o

E. Energy Management

Reducing energy consumption, while at the same time providing thermal comfort during the heating and cooling seasons, has become an increasingly important task in school divisions. Some of the basic decisions made during school building design have a lasting influence on energy consumption. The seemingly innocent decision to orient a new school in a certain manner toward the sun can result in perpetual energy savings or energy waste, depending on the heat loss and cooling load such an orientation generates. The amount of daylight admitted is also a major influencing factor.

The vast majority of BCPS facilities were constructed before energy management was a serious consideration. As a consequence, BCPS has a relatively greater need for smart energy retrofit decisions.

FINDING 5.21

The board of supervisors and the school board entered into a performance contracting agreement with NORESCO in March of 2012, which should yield substantial savings. The 15-year agreement provides for energy conservation projects in the schools and county costing $7.9 million, with a projected energy savings over the same period of $11.1 million.

Major projects in the performance contract include lighting improvements, energy management systems improvements, retro commissioning, HVAC replacements, new windows, weather-stripping, and pipe insulation. Payback is estimated to be reached at 13.3 years. After the contract has been completed and the borrowed funds paid off, all of the energy savings accrue to the school board and the board of supervisors.

COMMENDATION

The board of supervisors and the school board are commended for hiring an energy services company (ESCO) to help them finance needed energy improvements using the projected energy savings from these improvements.

While larger school divisions and local governments have done the same without an ESCO, smaller entities without full-time staff for energy management have wisely chosen the performance contracting route.

FINDING 5.22

Although the NORESCO contract is effective, commendable, and far-reaching, other energy conservation steps can be taken. The division's energy use profile falls outside of expected dollar per square foot ratios for schools. In 2009, the "38th Annual Survey of Operations and Maintenance Costs in Schools" by *American School and University Magazine* listed the median cost per square foot of total energy as $1.43, and for energy alone as $1.19. The division's energy cost for 2010-11 through 2012-13 (electricity and fuel oil) is provided in **Exhibit 5.17**. As shown, total costs have risen by 6.3 percent and costs per square foot have risen by 6.5 percent.

Exhibit 5.17
Trend in BCPS energy costs

School Year	Total Amount	Cost per Square Foot
2010-11	$ 2,832,572	$ 1.69
2011-12	$ 2,843,086	$ 1.70
2012-13	$ 3,011,151	$ 1.80
Percent Change	6.3%	6.5%

Source: BCPS, December 2013.

Despite all of the efforts to date by the school division, its inventory of relatively old facilities and mobile classrooms is causing its energy costs per square foot to rise. In addition, the full impact of the NORESCO performance contract has yet to be felt.

Although the NORESCO performance contract is commendable, other energy conservation improvements can be made in BCPS facilities every day, week, and year. The U.S. Department of Energy has determined that at least 25 percent of all energy consumed in a school facility is due to energy inefficiency. This inefficiency can be caused by the following:

- dry transformers;
- poor location of light switches;
- continuously burning hallway lights;
- excessive plug loads and use of personal appliances; and
- phantom loads.[45]

The Association of School Business Officials (ASBO), in their publication *Planning Guide for Maintaining School Facilities*[46] suggests that these actions will help a school system accomplish more efficient energy management:

- Establish an energy policy with specific goals and objectives.
- Assign someone to be responsible for the division's energy management program and give this energy manager access to top-level administrators.
- Monitor each building's energy use.
- Conduct energy audits in all buildings to identify energy-inefficient units.
- Institute performance contracting (i.e., contracts requiring desired results rather than simply a list of needed products) when replacing older, energy-inefficient equipment.
- Reward employees of schools or buildings that decrease their energy use.

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[45] Phantom loads occur when certain electrical devices and appliances use electricity although they are not actively in use. Examples of such items are digital video recorders (DVRs), televisions, printers, low voltage converters, charging devices for mobile phones and similar appliances, dishwashers, and microwave ovens.

[46] Available at http://www.asbointl.org/Content/NavigationMenu/PublicationsResources/ToolsandResources/IndoorAirQualityResources/ArticlesandRelatedResources/PlanningGuideforMaintainingSchoolFacilities/Planning-Guide-for-Maintaining-School-Facilities-(NCES-2003-347).pdf

- Install-energy efficient equipment including power factor correction units, electronic ballasts, high-efficiency lamps, set-back thermostats, and variable-speed drives for large motors and pumps.
- Install motion detectors that turn lights on when a room is occupied and off when the room is unoccupied.

RECOMMENDATION 5.22

Establish an energy management program.

BCPS can use the superintendent's committee structure to establish a permanent energy management and savings focus for the division. By incorporating an energy savings and management committee within the division level committee structure or the superintendent's leadership team, a quarterly focus on potential energy savings initiatives could be created. Areas where such initiatives could be identified include the following:

- behavior-based energy savings: although much has been done in most work places to direct behavior toward energy conservation, an active effort to solicit suggestions for energy conservation actions from staff and students might be worthwhile, especially if an annual prize or similar incentive were offered;
- adoption of Leadership in Energy and Environmental Design (LEED) criteria for new construction and renovation: the VDOE advocates such action on the part of all school divisions;
- preparation of educational specifications with special emphasis on energy conservation actions based on LEED;
- holistic examination of all facilities decisions for optimal impact on energy savings; and
- new technology, such as the ecH2O Tennant floor cleaning machines.

Energy conservation initiatives typically have their best effect when they are allowed to be generated by all members of the division: faculty, students, staff, and administrators.

FISCAL IMPACT

This recommendation can be implemented by current staff as part of the recommended committee. The committee will likely meet for only several hours each quarter and its efforts result in decreased energy consumption. However, with the concurrent NORESCO contract it will be difficult to isolate the savings due only to this recommendation, so no specific savings are calculated.

FINDING 5.23

Thomas Jefferson Elementary School and Goodview Elementary School are of identical design. Yet, one school consumes approximately five percent more energy than the other. Both schools have the same solar orientation. It is unclear at this time why one school consumes more energy than the other.

There are many factors within schools that contribute to energy consumption and waste. This includes lighting, computer operations, maintenance equipment, personal appliances of faculty,

and building insulation. Two identical schools can have significantly different energy costs depending upon each school's energy management practices.

RECOMMENDATION 5.23

Perform an analysis using the energy management systems software to determine where the extra energy consumption occurs, and make adjustments as necessary.

An interested, talented and gifted high school student could perhaps take this assignment under the supervision of a science teacher. Alternatively, it could be a classroom science project.

FISCAL IMPACT

The recommendation can be implemented without a need for special funding. Assuming that the cause of the discrepancy can be determined, and appropriate adjustments made, energy savings of $1,000 to $2,000 per month could be realized.

F.   Security

Many schools already have security technology in place, such as surveillance cameras, perimeter control, and access control. However, no facility security measures make a school unassailable. Nevertheless, improved security, among other measures, has resulted in a decrease in school-based homicides and violent crimes over the past two decades.[47] Students, teachers, and other division employees deserve a safe school environment in which to work and learn.

FINDING 5.24

The offices of some of the schools visited by the consulting team have no direct line of sight to the main entrance, and anyone can easily enter without being noticed or stopped. Other school offices are more in line with the main entry, but there is still no deterrent to a person entering who does not intend to stop and be registered and badged.

Visitor management and access control are primary factors to insuring the safety of any school.[48] Access control comes in many forms, including physical, electronic control, and fundamental surveillance. Physical access control includes locked doors posted with signage. They not only define, but identify who should be using these entrances, such as students, teachers, and visitors. Electronic access control includes programs to check databases for criminal backgrounds. Fundamental surveillance includes closed-circuit television (CCTV) monitoring.

RECOMMENDATION 5.24

Improve security of school access.

As funds allow, the division should incorporate single-entry vestibules into new construction and renovation plans. These entrances should be monitored by cameras and require visitors to enter a secure area to be vetted with the screening devices currently in use at BCPS. Only after

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[47]Hutchinson, A. National School Shield Task Force, (2013). *Report of the national school shield task force.* Retrieved from website: www.nraschoolshield.com/NSS_Final_FULL.pdf
[48] (2013, October). *Campus Safety Magazine.*

visitors have been screened and cleared will they be allowed to enter via the second door of the vestibule.

High school campuses with multiple buildings like Jefferson Forest, Liberty, and Staunton River must also have a single secured visitor vestibule, while the remainder of the campus must be securely fenced and secondary entrances camera-monitored and accessible only by persons who are badged and have an access key.

FISCAL IMPACT

This recommendation should be implemented as part of new construction and renovation activities. Implemented in that manner, it will have minimal fiscal impact on general funds. Single entry vestibules may cost from approximately $50,000 to as much as $250,000 or more, depending on such factors as existing entrance design in the case of renovations, and the extent of security needs of school campuses with multiple buildings. In new construction, the inclusion of a single entry vestibule may only be marginally more expensive than an entry without this feature.

FINDING 5.25

Some of the BCPS schools have been equipped with security cameras, but the number of cameras varies widely from one school to the next. In addition, some cameras are state-of-the-art high resolution, while others are low resolution. Low resolution cameras do not allow for ready identification of persons, especially when required as evidence in a court proceeding.

Funds from PTAs, grants, and school budgets have been used to acquire a mixed inventory of cameras. The cameras currently in place do not offer parity across all schools.

A recent study of the National School Shield Task Force found that older schools constructed more than 10 years ago have greater security challenges than newer facilities. Newer schools have more architectural attention devoted to security features in contrast to the layout and design of older buildings.[49] Older schools typically require more camera resources to provide the same level of security.

RECOMMENDATION 5.25

Develop a plan to equip all schools with state-of-the-art high resolution security cameras on the interiors and on school grounds.

The styles and available camera technology today are endless. The purchase and placement should be a concerted effort among the facilities department and the principals. It would be preferable if the division could identify, and agree upon, one array of cameras from one manufacturer to simplify parts and change-out management over the long term.

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[49] Hutchinson, A. (2013, April). *The national school shield report*. Retrieved from http://www.nraschoolshield.com/

FISCAL IMPACT

This recommendation will have a fiscal impact, but the exact fiscal impact will depend on the extent to which existing cameras need to be replaced, and the number of additional cameras and monitoring equipment needed.

FINDING 5.26

The division currently secures its buildings using a conventional key system. Conventional keys are easily compromised and cannot be identified or monitored when they are used. Keys are often lost or misplaced. When this occurs, they cannot be deactivated instantly and can be used to gain access by anyone who has the key in his or her possession. With concerns about school building access security increasing, key systems that were devised decades ago may no longer be adequate to the security demands of today.

RECOMMENDATION 5.26

Switch the building inventory of the division to a card swipe or proximity door access system. Such a system would combine the identification badge system already in use by equipping each badge with information that would give the badge wearer access to all doors the wearer is authorized to enter. If a badge is misplaced or stolen, the access for the particular badge can be readily disallowed and a new badge issued to the owner. The access system would be able to monitor the date and time entry was sought at any location in the division.

Students could be given badges that do not permit access to building entrances except through a monitored vestibule. Student badges could also carry all of the information necessary to buy cafeteria food, check out library books, and be usable for any other similar purpose the division may designate.

A proximity system is recommended over a conventional card swipe technology, as card swipe readers can be easily vandalized and disabled. Disk readers that can read cards when they are placed in their proximity are less prone to abuse.

FISCAL IMPACT

This recommendation will have a fiscal impact, but the exact impact will depend on the specific system selected.

FINDING 5.27

The site of Thaxton Elementary School is substandard and may be unsafe. The site of this old school facility is small compared to current standards. Moreover, it is bordered at the rear of the school by an active railroad spur.

According to BCPS officials, the site cannot be expanded, nor can it be "child-proofed" against the railroad. Even if acceptable barriers or separators could be erected, safety practices advise against having an active railroad line in such close proximity to a school.

RECOMMENDATION 5.27

Conduct an assessment of the adequacy and safety of the Thaxton Elementary School site.

The consulting team recommends that BCPS contact the Virginia Department of Education for assistance with this assessment. While the site is clearly substandard according to current measures and values, it may be acceptable based on when it was placed into service. However, the presence of the railroad track may be another matter: The safety issues it represents must be carefully evaluated.

FISCAL IMPACT

The consulting team estimates that the maintenance supervisor can implement this recommendation in no more than 20 hours.

Financial Management

This chapter reviews the financial management of Bedford County Public Schools (BCPS) as follows:

A. Organization, Management, and Staffing
B. Financial Performance
C. Planning and Budgeting
D. Policies, Procedures, and Use of Administrative Technology

School divisions in the Commonwealth of Virginia are fiscally dependent upon the local governing body for all appropriations. All local, state, federal, and grant funds must be approved by the Bedford County Board of Supervisors before such funds are obligated by the school division. The school division is viewed as a component unit of the general government body.

State funds are allocated to each division based upon a funding formula that establishes the base cost for all standards of quality (SOQ) accounts. State funding is also provided for categorical and incentive programs. The SOQ formula incorporates a division's average daily membership (ADM), a per-pupil amount, and an equalizing factor (composite index). The per pupil amount for each of the SOQ accounts is re-benchmarked each biennium based upon statewide prevailing costs. The composite index incorporates a notion of a 55 percent state and 45 percent locality sharing of the SOQ costs and is equalized based upon a division's ability to pay. The composite index takes into account a locality's wealth in the form of property values, personal income, and local taxable retail sales. It attempts to balance (equalize) the financial burden of funding the state mandated SOQ among all school divisions.

Six other divisions were selected as peer divisions for comparison purposes during this efficiency review: Augusta, Franklin, Frederick, Montgomery, Rockingham, and Washington. **Exhibit 6.1** compares BCPS disbursements for 2011-12 to the average for the six peer divisions.

As the exhibit shows, BCPS's:

- total disbursements per pupil of $9,608 is 13.8 percent less than the peer average of $11,043;

- disbursements for administration of $142 is 37.5 percent less than the peer average of $226;

- disbursements for instruction of $6,398 is 13.6 percent less than the peer average of $7,265;

- disbursements for transportation of $607 is 7.9 percent less than the peer average of $658; and

- disbursements for debt service and transfers of $829 is 30.1 percent more than the peer average of $637.

Exhibit 6.1
2011-12 disbursements per pupil by category

Program	BCPS		Peer Division Averages		BCPS Per Pupil Costs Above (Below) Peer Average	
					Amount	Percent
Administration	$	1412	$	226	$ (85)	(37%)
Instruction	$	6,398	$	7,265	$ (867)	(12%)
Attendance and Health Services	$	187	$	160	$ 27	17%
Pupil Transportation Services	$	607	$	658	$ (51)	(8%)
Operations and Maintenance	$	841	$	1,027	$ (186)	(18%)
School Food Services	$	422	$	449	$ (27)	(6%)
Summer School	$	16	$	15	$ 1	5%
Adult Education	$	2	$	38	$ (36)	(96%)
Prekindergarten	$	74	$	140	$ (66)	(47%)
Other Educational Programs	$	39	$	60	$ (21)	(35%)
Facilities	$	54	$	370	$ (316)	(86%)
Debt Services and Transfers	$	829	$	637	$ 192	30%
Total Disbursements	**$**	**9,609**	**$**	**11,044**	**$ (1,435)**	**(13%)**

Source: 2011-12 VDOE Superintendent's Annual Report.

Exhibit 6.2 presents a comparison of receipts by funding source for BCPS and the peer divisions. As shown, BCPS funds 34.7 percent of costs for the division from state funds, while the peer average is 36.2 percent. BCPS receives 37.3 percent of its funds from local funds as compared to the peer average of 38.6 percent. Federal funds for BCPS accounts for 10.2 percent of its revenues while the peer average is 9.3 percent.

Exhibit 6.2
2011-12 comparison of receipts by fund source

School Division	Sales And Use Tax	State Funds	Federal Funds	Local Funds	Other Funds	Loans, Bonds, Etc.
Augusta	9.6%	35.9%	9.0%	35.6%	3.3%	6.7%
Franklin	9.4%	36.2%	11.7%	38.0%	4.6%	0.0%
Frederick	7.8%	29.8%	6.9%	43.6%	2.3%	9.7%
Montgomery	9.6%	34.2%	8.3%	45.3%	2.7%	0.0%
Rockingham	10.0%	37.5%	8.7%	39.9%	4.0%	0.0%
Washington	9.6%	43.7%	11.3%	29.2%	6.2%	0.1%
Peer Average	**9.3%**	**36.2%**	**9.3%**	**38.6%**	**3.8%**	**2.7%**
Bedford	**9.4%**	**34.7%**	**10.2%**	**37.3%**	**8.3%**	**0.0%**

Source: 2011-12 VDOE Superintendent's Annual Report.

Exhibit 6.3 compares the receipts by fund source for BCPS from 2009-10 through 2011-12. The percent of sales and use tax receipts increased from 7.8 percent in 2009-10 to 9.41 percent in 2011-12. State funding decreased from 36.2 percent to 34.7 percent, and local funds increased from 34.6 percent to 37.3 percent.

PRISMATIC
SERVICES, INC.

Exhibit 6.3
Comparison of receipts by fund source, 2009-10 through 2011-12

Revenue	2009-10	2010-11	2011-12
Sales and Use Tax	7.8%	8.4%	9.4%
State Funds	36.2%	36.7%	34.7%
Federal Funds	12.7%	11.3%	10.2%
Local Funds	34.6%	34.7%	37.3%
Other Funds	7.9%	8.1%	8.3%
Loans, Bonds, Etc.	0.7%	0.8%	0.02%

Source: 2011-12 VDOE Superintendent's Annual Report.

The Commonwealth of Virginia distributes state aid using a local composite index, which is an indicator of a locality's ability to pay for public education. The local composite index is derived from local true values of real estate and public service corporation property values, adjusted gross income, and local retail sales per local average daily membership and population. The index is then weighted against the same values on a statewide basis. The higher a locality's local composite index, the greater a locality's ability to fund public education is expected to be.

Exhibit 6.4 presents the BCPS and peer division local composite indexes for the 2012-14 and 2014-16 periods. Bedford had the highest composite index for 2012-14, and Fredrick had the lowest. In 2014-16 Franklin has the highest composite index while Bedford has the lowest. The Bedford composite index decreased 26.6 percent from 2012-14 to 2014-16.

Effective July 1, 2013, Bedford City reverted to town status within Bedford County, resulting in the dissolution of the Bedford City school division and the Bedford County school division becoming responsible for public education within the new town entity. The Virginia Board of Education in Agenda Item A in May 23, 2013 determined that under Chapter 806 of the appropriation act, the combined Bedford County school division is eligible to use the lower composite index value of Bedford City for a period of 15 years, unless a lower composite index value is calculated during the 15-year period. This required the establishment of a composite index for the combined division based on Bedford City's 2012-2014 composite index of 0.3132, in lieu of Bedford County's 2012-2014 index of 0.4268, effective with fiscal year 2014.

Exhibit 6.4
Comparison of local composite indexes

School Division	2012-14	2014-16	Percent Increase Or (Decrease)
Augusta	.3627	.3543	(-2.3%)
Franklin	.4181	.4136	(-1.1%)
Frederick	.3601	.3718	3.3%
Montgomery	.4053	.3864	(-4.7%)
Rockingham	.3675	.3700	0.7%
Peer Division Average	**.3827**	**.3792**	**(-0.8%)**
Bedford	**.4268**	**.3132**	**(26.6%)**

Source: VDOE website, 2013.

In total, the consulting team gave nine commendations in this chapter:

- BCPS has developed a good working relationship between the division's CFO and county officials.

- BCPS maintains a low administrative cost ratio, making additional funds available for instruction.

- BCPS has established an Employee Access Center that provides employees with a resource to easily obtain personal information and eliminated the need to print paper pay stubs.

- BCPS has a payroll checklist that helps ensure monthly payrolls are processed timely and all components of the process are completed when required.

- BCPS's payroll reconciliation process ensures contract employees are paid correctly after changes are made to their pay amounts.

- BCPS's payroll and vendor payment processes enable the county to process checks and direct deposit payments timely and accurately.

- The BCPS budget development process, documented in a budget planning calendar, provides participants with a scheduled time for input and a checklist of necessary actions to meet prescribed due dates.

- BCPS places its annual budget on the website to provide all readers with easy access to the data.

- BCPS's quarterly board reports present easily-understood data on the financial operations and conditions of funds that have been analyzed by the CFO.

The consulting team also made 13 recommendations in this chapter:

- Continue to analyze finance staff work assignments, make adjustments to fully utilize staff time, and relieve the CFO of duties performed to enable him time to perform other functions for the division.

- Develop formal workers compensation and safety policies and procedures, establish a safety committee, analyze accidents, and conduct safety training directed at reducing reoccurring accidents.

- Revise the payroll screen in the Employee Access Center to provide more information when employees perform duties in addition to their contract pay.

- Review year-end balances remaining in schools' allocated funds and return excess balances to the school board.

- Prepare routine financial reports for the nutrition program that show the results of operations.

- Acquire and implement an automated timekeeping system.

- Develop a board policy to help ensure the protection of the division's investment in its fixed assets.

- Require central office approval before deleting items from the fixed asset system.

- Develop processes to ensure that fixed asset items are added to the fixed asset system in a timely manner.

- Develop a procedures manual for activity funds and train staff on the standard approved processes for managing these activity funds.

- Develop a user manual for school and department staff to assist in completing finance and budget related duties and provide periodic training.

- Develop desk procedures for the important duties performed by each staff member in the finance department, and cross-train them in each other's duties.

- Identify all critical functions performed by finance staff, and document procedures in a comprehensive procedures manual.

The estimated fiscal impacts of those recommendations for which the consulting team could reasonably quantify into dollars are shown below. Some recommendations will have fiscal impacts that depend on the specific implementation path chosen by the division while others will only require staff time; fiscal impacts for those recommendations are not shown here.

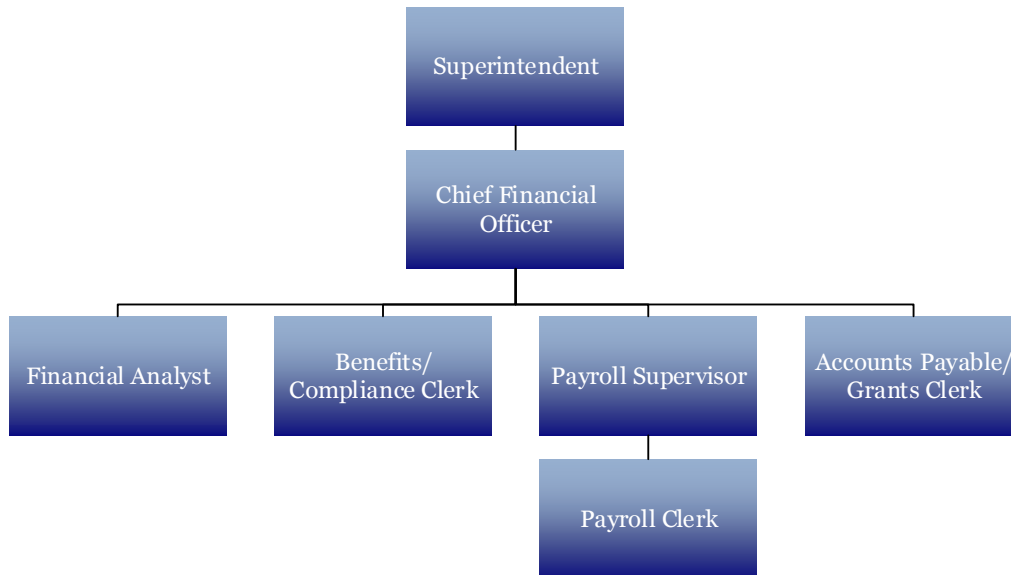| Recommendation		2014-15	2015-16	2016-17	2017-18	2018-19	Total
6.10	Return unexpended allocated funds to the school board.	$44,976	$0	$0	$0	$0	$44,976
6.15	Acquire and implement an automated timekeeping system.	($140,000)	$0	$0	$0	$0	($140,000)

A. Organization, Management, and Staffing

An effective fiscal operation provides accurate, complete and timely information to division management and board members. Financial management is most effective when a division properly aligns its business services functions, establishes strong systems of internal control, and properly allocates staff resources to achieve the best results. Payroll is a major part of any division, since it normally represents the bulk of the expenses.

The division's financial operations are under the direction of the chief finance officer (CFO), who reports directly to the superintendent. The finance department is responsible for the functions associated with accounting, reporting, accounts payable, payroll, fixed assets, purchasing, and budgeting functions. **Exhibit 6.5** presents the organization chart of the finance department.

The department has a small staff composed of only five employees, including a financial analyst (a new position as of the beginning of 2013-14), a payroll supervisor, a payroll clerk, an accounts payable/grant reimbursement clerk, and a benefits/compliance clerk. The financial analyst was hired to begin planning and compiling data associated with the requirements of the *Affordable Care Act of 2010*, the payroll supervisor and payroll clerk process monthly payrolls and manage employee time, and the payroll clerk processes vendor payments and handles employee insurance and workers compensation.

Exhibit 6.5
2013-14 BCPS finance organization

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                    ┌──────────────────┐
                    │  Superintendent  │
                    └────────┬─────────┘
                    ┌────────┴─────────┐
                    │ Chief Financial  │
                    │     Officer      │
                    └────────┬─────────┘
      ┌──────────────┬───────┴───────┬──────────────────┐
┌──────────┐  ┌──────────────┐  ┌──────────────┐  ┌───────────────┐
│ Financial│  │  Benefits/   │  │    Payroll   │  │Accounts Payable/│
│  Analyst │  │ Compliance   │  │  Supervisor  │  │  Grants Clerk  │
│          │  │    Clerk     │  │              │  │               │
└──────────┘  └──────────────┘  └──────┬───────┘  └───────────────┘
                                 ┌──────────────┐
                                 │ Payroll Clerk│
                                 └──────────────┘
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Source: BCPS Finance Department, 2013.

FINDING 6.1

The CFO has developed an exceptionally good working relationship with Bedford County officials. It was reported to the consulting team that this relationship has improved over time. Interviews indicated that Bedford County officials respect the division's CFO and trust the accuracy of information and data presented to the county. The CFO meets quarterly with the county's director of fiscal management to discuss the financial condition and operations of the division.

COMMENDATION

BCPS has developed a good working relationship between the division's CFO and county officials.

FINDING 6.2

Finance department workloads are not assigned equitably between staff. Although some assignments are being made to a new staff member and others are being planned, additional assignments and reassignments are needed to better distribute work duties.

In 2013-14, finance was provided an additional employee primarily to begin tracking employee time data in preparation for requirements of the *Affordable Care Act of 2010*. There has been progress made in monitoring employees' hours worked that may trigger requirements to provide health insurance for those that work in excess of 30 hours per week.

Since the requirement of the *Affordable Care Act of 2010* to begin providing health insurance to those employees working over 30 hours a week has been delayed, the new financial analyst has begun performing other duties. The financial analyst has begun assisting the CFO and

performing duties that he previously performed, including tracking revenues received by the division and adding and deleting fixed assets from the fixed asset listing. Interviews indicated that plans include assigning the monitoring of expenditures to the financial analyst, which the CFO is currently performing.

The benefits/compliance clerk position is currently underutilized. The position is currently responsible for the following:

- enrolling new employees in insurance programs;
- providing new teachers orientation;
- distributing cobra insurance packets;
- reconciling billings from benefit providers;
- managing workers compensation; and
- overseeing employee retirement.

The benefits/compliance clerk does not have a formal job description, but a document titled "Benefits Administrator Manual" lists duties that are assigned or have been assigned to the position. Duties in the manual that are no longer performed include:

- Compliance with *FLSA*: Duties include reviewing all time sheets of non-exempt employees and totaling for centime, providing a spreadsheet of overtime earned, rate of pay, and total paid, reviewing all dual-position time sheets, and providing overtime information benefits.
- Accounts payable assistant: Duties include assigning new vendor numbers and loading into computer system, changing addresses for vendors, adding 1099 information to vendors as needed, picking up checks from county as needed, recording all checks received, and adding to a spreadsheet for posting to the accounting system.
- Payroll assistant: Duties include providing documentation for enrollment/changes, enrolling employees in direct deposit, maintaining returned W-2s, and re-mailing when address is available.

Regarding the division's CFO, interviews with staff indicated that although the CFO is highly respected and his advice is valued, staff members sometimes hesitate to call him because of his busy schedule. Interviews also indicated that when the CFO is contacted for assistance, he is always timely in responding and spends the time necessary to thoroughly answer questions and provide information.

RECOMMENDATION 6.2

Continue to analyze finance staff work assignments, make adjustments to fully utilize staff time, and relieve the CFO of duties performed to enable him time to perform other functions for the division.

Reevaluating finance department staff workload assignments and redistributing duties will make better use of employees' time. Assigning duties currently performed by the CFO to others in the department will allow the CFO to spend time on issues of strategic importance to the division.

FISCAL IMPACT

This recommendation should result in more equitable workloads, which is likely to improve effectiveness.

FINDING 6.3

Although the division has a relatively stable accident rate, there is not a division-level safety advisory committee or a formally managed safety training program. In the absence of formal requirements for school and department safety committees, there is no assurance that safety is being addressed at every location. There are also no policies or procedures pertaining to workers compensation.

The benefits/compliance clerk administers the division's workers compensation program. The duties of the benefits/compliance clerk include tracking all incidents and reporting them to the workers compensation carrier. The duties also include meeting with the workers compensation carrier as needed to discuss insurance and injuries, completing annual OSHA forms, and tracking missed time by employees due to accidents. Duties are currently performed without formal policies and procedures.

It was reported to the consulting team that the division's third-party workers compensation administrator provides some safety training. Approximately three years ago, every employee was required to watch and sign off on a 30-minute workplace safety video. Departments provide some safety training for maintenance and custodial staff. It was also reported that the benefits/compliance clerk provided a small training session for new teachers and aides at the beginning of 2013-14.

Although injuries for the last five years have not materially changed, there has not been an initiative to reduce the number of injuries and the number of days that injured employees are away from work. **Exhibit 6.6** shows the number of injuries during the last five years, as well as the number of days that employees were away from work due to those injuries. While the number of injuries has remained relatively close over the last five years, the number of days away from work in 2012 was the highest of any of the years.

Exhibit 6.6
Injuries and days away from work

Calendar Year	Number of Injuries	Days Away from Work
2012	45	216
2011	37	140
2010	45	85
2009	35	85
2008	48	183

Source: Finance, U.S. Department of Labor, Form 300.

The division does not analyze injury claims to determine where and why accidents are occurring, or what situations exist that result in reoccurring injuries. Without an analysis to determine where and why accidents are happening, the division is unable to structure safety training specifically directed at reducing the number of accidents and injuries.

RECOMMENDATION 6.3

Develop formal workers compensation and safety policies and procedures, establish a safety committee, analyze accidents, and conduct safety training directed at reducing reoccurring accidents.

A safety committee, along with formal workers compensation and safety policies and procedures, will provide the division a means to better manage its workers compensation process. This will also help ensure safety training is provided to all employees, which should help reduce injuries and the number of days employees are away from work due to those injuries.

FISCAL IMPACT

The development of policies and procedures should require approximately 20 hours of staff time and some time for the school board to review and approve the policies. The safety committee could meet quarterly for a few hours. The amount of safety training needed will depend on the number of reoccurring accidents.

B.   Financial Performance

The most fundamental part of making a budget useful is monitoring the progress of actual receipts and disbursements against budgeted figures. By monitoring the progress of the budget throughout the year, the division and taxpayers are aware of how the division's financial plan is working. Reports that are timely, accurate, and easily understood are essential to adequately monitor the progress of a division's annual budget.

FINDING 6.4

BCPS consistently maintains a low administrative cost ratio. During the last three years, the division has expended a lower percentage on administration than any of the peers, except during 2010-11 when Franklin had the same 1.5 percent as did BCPS (**Exhibit 6.7**). The division's average ratio for the last three years of 1.5 percent was less than the peer division average of 2.0 percent. Maintaining a low administrative cost ratio is an indication that a division has diligently worked to develop ways to efficiently complete administrative functions and make additional funds available for instructional functions.

Exhibit 6.7
Comparison of administrative cost ratios

School Division	2009-10	2010-11	2011-12
Augusta	1.9%	1.8%	1.7%
Franklin	1.6%	1.5%	1.6%
Frederick	3.0%	3.1%	2.9%
Montgomery	1.7%	1.7%	1.7%
Rockingham	1.5%	1.9%	2.1%
Washington	1.9%	1.8%	2.2%
Peer School Division Average	**1.9%**	**1.9%**	**2.0%**
Bedford	**1.4%**	**1.5%**	**1.5%**

Source: 2011-12 VDOE Superintendent's Annual Report.

COMMENDATION

BCPS maintains a low administrative cost ratio, making additional funds available for instruction.

FINDING 6.5

The BCPS Employee Access Center provides employees with substantial information regarding payroll and human resources. It allows employees immediate access to personal data through a secure site, either from a division computer or from their home computer. The site includes:

- leave data including balances and year-to-date leave taken for sick, professional, and other;

- a payroll page that provides information including current month and year-to-date totals for total pay, deductions, and contributions provided by the division;

- degrees and certifications;

- ability to print W-2s;

- payroll changes; and

- other information for employees such as profile, deduction frequencies, and enrollment questions.

In addition to providing employees with timely and easily-accessible information, the Employee Access Center has enabled the division to eliminate the need to print and distribute paper pay stubs. The elimination of the paper pay stubs saves the division time and money.

COMMENDATION

BCPS has established an Employee Access Center that provides employees with a resource to easily obtain personal information and eliminated the need to print paper pay stubs.

FINDING 6.6

The division's payroll section developed and implemented a payroll checklist to help ensure that all steps are completed in the appropriate order when processing

monthly payrolls. The checklist includes 32 steps that must be performed during the processing of monthly payrolls. A payroll checklist form is completed for each payroll, with areas for each of the 32 steps that are initialed when the step is completed. Additional areas within the steps provide blanks to show information, such as the total amount of direct deposits, the deposit dates, and the actual date and time when the step was completed.

COMMENDATION

BCPS has a payroll checklist that helps ensure monthly payrolls are processed timely and all components of the process are completed when required.

FINDING 6.7

The division's payroll section performs a pay reconciliation process for each monthly payroll to help ensure all contract employees are paid accurately. The reconciliation includes a process that starts with the total amount paid to contract employees the previous month, and then all individual changes made to pay amounts during the month are either added or subtracted from the total resulting in the total amount that should be on the current payroll.

After running a trial payroll with all changes processed in the payroll system, the calculated amount is then compared to the total amount paid to contracted employees on the trial payroll. The reconciliation helps ensure that all approved changes to contract employees' pay has been entered correctly into the payroll system prior to completing the payroll for the month and issuing pay to employees.

COMMENDATION

BCPS's payroll reconciliation process ensures contract employees are paid correctly after changes are made to their pay amounts.

FINDING 6.8

The division has efficient payroll and vendor payment processes that are well-coordinated with the county. Bedford County prints checks to vendors and issues direct deposit pay to division employees. Employees are paid once a month on the last working day of the month. With the exception of the inefficient manual timekeeping system, payroll processing is efficient, well-managed, and coordinated with the division's human resources and Bedford County. Accounts payable processes are also efficient and well managed and ensure payments to vendors are made timely. Accurate payroll and account payable files are transmitted to the county, enabling checks and direct deposits to be prepared for payments to division employees and vendors in a timely and efficient manner.

COMMENDATION

BCPS's payroll and vendor payment processes enable the county to process checks and direct deposit timely and accurately.

FINDING 6.9

Although the Employee Access Center is extremely useful, the payroll screen does not provide sufficient data to enable employees who are paid for work in addition to their contract pay to understand what the pay is based on. Additional time worked, such as field trips by bus drivers, is shown on the payroll screen as one, two, or three trips, with a total amount paid for all trips.

The payroll screen has three columns where information regarding current pay is presented. The three columns are titled as follows:

- Earnings: Information in this column shows whether the pay on that line is for contract pay, or other additional earnings like substituting as a bus driver, bus driving for field trips, overtime worked by custodians, child nutrition, or other non-exempt employees.

- Hours: Information in this column could easily be misunderstood. The hours for contract pay is not the actual hours worked, but rather the number of hours in a day the employee is contracted to work. Substitute pay shows the number of times substituting, and not the actual hours. Bus driver field trips are not listed individually and the hours worked are not shown, instead the total number of field trips driven during the pay period is shown.

- Amount: The amount paid for each type of work performed such as contract pay, field trips, substitute pay and overtime worked is shown.

It is important to provide sufficient data for employees that enables them to easily understand what's included in their pay for the month. Employees who provide the division with additional services during a month are paid in a variety of ways, making it difficult to identify the amount being paid. It further complicates the ability to determine the individual pay amounts an employee is given when they perform a number of different duties in the same month. Employees need to be provided a resource showing them their pay information so they can determine what their pay is based on.

RECOMMENDATION 6.9

Revise the payroll screen in the Employee Access Center to provide more information when employees perform duties in addition to their contract pay.

A revision to the payroll screen to show more detail will enable employees to better understand the amounts being paid for additional work performed. Consideration should be given to showing each work assignment separately, such as each field trip driven by bus drivers. Consideration should also be given to better explain the amounts in the hour's column and possibly adding a column that show the hourly rates paid for each service.

FISCAL IMPACT

The consulting team estimates that this will require minimal resources to implement. Current finance staff have the skills and access to make this change and estimate that it will require less than 10 hours of work. It should result in improved employee understanding of pay stubs.

FINDING 6.10

Year-end balances remaining in funds allocated to schools is not returned to division funds in accordance with division policy. Board Policy DGB-funds for

instructional materials and office supplies indicates that at the close of the fiscal year, all funds remaining in the accounts shall be returned to the school board. Audit reports show that a number of school accounts had balances remaining at the end of the 2011-12 and 2012-13.

Allocations are made to schools each year to fund a variety of costs. In 2013-14, $1 million was transferred to the 22 division schools. **Exhibit 6.8** shows the amounts of the transferred funds.

Exhibit 6.8
School allocations, 2013-14

School	Allocations
Bedford Elementary	$ 42,106
Bedford Middle	$ 51,643
Bedford Primary	$ 24,320
Bedford Science and Technology Center	$ 67,400
Big Island Elementary	$ 18,265
Body Camp Elementary	$ 18,005
Boonsboro Elementary	$ 24,839
Forest Elementary	$ 42,452
Forest Middle	$ 88,547
Goodview Elementary	$ 45,220
Huddleston Elementary	$ 20,687
Jefferson Forest High	$ 155,742
Liberty High	$ 113,343
Moneta Elementary	$ 22,763
Montvale Elementary	$ 24,147
New London Academy	$ 32,364
Otter River Elementary	$ 20,600
Staunton River High	$ 127,147
Stauton River Middle	$ 70,417
Stewartsville Elementary	$ 36,516
Thaxton Elementary	$ 20,687
Thomas Jefferson Elementary	$ 50,810
Totals	**$ 1,118,020**

Source: BCPS Finance, December 2013.

Allocations to the schools come from the division's general fund and are deposited in schools' bank accounts. Allocations to the schools include funds for the following:

- administration travel;
- secondary athletics;
- field maintenance;
- band;
- tech supplies;
- instructional materials;
- instructional travel;
- library;

- art;
- paper supplies;
- postage;
- handbooks;
- Title VI-B; and
- professional improvement.

Interviews with principals and school bookkeepers indicated that the central office has given verbal approval for schools to keep up to $500 in their allotment accounts at the end of the year. In addition, interviews indicated that permission was given to keep funds for the items that had been ordered but not paid for at the end of the year. **Exhibit 6.9** shows the balances that remained in the 22 schools allocated funds at the end of 2011-12 and 2012-13.

In June 30, 2012, the total funds in allocated accounts totaled $66,267 and one year later the total was $44,976. Taking into consideration the verbal direction allowing schools to keep up to $500, the amounts for June 30, 2012 would be $57,502, and for June 30, 2013 the total would be $37,269.

Exhibit 6.9
Activity fund balances

	Balances June 30, 2012	Balances June 30, 2013	Balances Exceeding $500	
			June 30, 2012	June 30, 2013
Bedford Elementary	$ 2,060	$ 500	$ 1,560	$ 0
Bedford Middle	$ 327	$ 281	$ 0	$ 0
Bedford Primary	$ 17,179	$ 9,984	$ 16,679	$ 9,484
Bedford Science and Tech Center	$ 5,611	$ 1,582	$ 5,111	$ 1,082
Big Island Elementary	$ 659	$ 704	$ 159	$ 204
Body Camp Elementary	$ 3,317	$ 579	$ 2,817	$ 79
Boonsboro Elementary	$ 1,083	$ 260	$ 583	$ 0
Forest Elementary	$ 1,556	$ 430	$ 1,056	$ 0
Forest Middle	$ 13,261	$ 18,615	$ 12,761	$ 18,115
Goodview Elementary	$ 502	$ 828	$ 2	$ 328
Huddleston Elementary	$ 546	$ 489	$ 46	$ 0
Jefferson Forest High	$ 0	$ 0	$ 0	$ 0
Liberty High	$ 461	$ 0	$ 0	$ 0
Moneta Elementary	$ 2,066	$ 0	$ 1,566	$ 0
Montvale Elementary	$ 1,961	$ 6,156	$ 1,461	$ 5,656
New London Academy	$ 8,437	$ 578	$ 7,937	$ 78
Otter River Elementary	$ 30	$ 468	$ 0	$ 0
Staunton River High	$ 0	$ 140	$ 0	$ 0
Staunton River Middle	$ 27	$ 1	$ 0	$ 0
Stewartsville Elementary	$ 420	$ 136	$ 0	$ 0
Thaxton Elementary	$ 3,694	$ 2,062	$ 3,194	$ 1,562
Thomas Jefferson Elementary	$ 3,070	$ 1,181	$ 2,570	$ 681
Totals	**$ 66,267**	**$ 44,976**	**$ 57,502**	**$ 37,269**

Source: BCPS Activity Funds Audit, June 2013.

There is not a procedure in place to transfer balances in the allocated funds that exceed authorized amounts at the end of the year back to the school board. Allocating funds to schools

is an efficient process which allows the schools to expend the funds for normally low-cost items without having to process purchase orders and payments through the central office. However, the funds should be used in the time frame allowed, and if not needed or used, should be returned to the division's operating fund as per board policy.

RECOMMENDATION 6.10

Review year-end balances remaining in schools' allocated funds and return excess balances to the school board.

A procedure to review funds allocated to schools for materials and office supplies will identify balances that should be transferred back to the school board in compliance with board policy. Provide clarification to schools pertaining to the acceptable amount of funds that can remain in their allocated funds at the end of the year, and correlate compliance with board policy.

FISCAL IMPACT

The estimated fiscal impact of this recommendation is based on a one-time return of the cash balances in school allocated funds on hand at June 30, 2013, as per school board policy. The exact fiscal impact in 2014-15 and future years will be dependent on the amount, if any, of balances remaining in the accounts at the end of the years.

Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19
Return unexpended allocated funds to the school board.	$44,976	$0	$0	$0	$0

C. Planning and Budgeting

Budget preparation and administration are important aspects of overall division operations. Providing adequate resources for programs within the restraints of available funding sources presents administrators with a significant challenge. Sound fiscal management entails forecasting a reasonable but conservative revenue number, as well as reasonable but aggressive expenditures, to ensure that adequate funds are available.

A school division's budget is a critical tool that enables a division to adequately maintain and control its financial resources. School administrators, department heads, teachers, and community members should be involved in the budgeting process, as well as the central administration and school board.

FINDING 6.11

The division has an efficient and detailed budget development process. The budget calendar (**Exhibit 6.10**) communicates to the public the steps that are necessary to develop, present, and adopt an appropriate operating budget. The calendar sets forth major milestones for the process, including opportunities for staff and public input. The establishment of a budget calendar signifies to the public that there is a specific process for the development of the division's budget. It conveys that there is a rational process to be followed, and that all major components of the process have been identified and given recognition.

Exhibit 6.10
2014-15 budget planning calendar

Dates	Actions
October 17, 2013	Strategic Plan Changes Adopted
November 7, 2013	Regular School Board Meeting • Adopt 2014-15 Budget Calendar • Facilities Membership Information Updated • 1st Quarter 2013-14 budget forecast • Local Composite Index 2014-15 (If available from state)
November 4, 2013 – December 20, 2013	Collect Individual School Budget Input
November 11, 2013 – December 20, 2013	Meetings w/individual School Board members for budget input
November 12, 2013	Principal's Meeting – Collect Principal Budget Input
November 26, 2013	PTA Council – Collect Parent/PTS Budget Input
December 4, 2013	Superintendent's Advisory Meeting – Collect Employee Budget Input
December 20, 2013	Department Budget Input due to Chief Financial Officer
January 16, 2014	Regular School Board Meeting – Brief/Summarize Governor's Budget Request
February 6, 2014	Regular School Board Meeting • Public Budget Hearing – Citizen/community budget input • Update on state budget/revenue
February 27, 2014	Regular Budget Meeting – Superintendent's Proposed Budget (Based on the less favorable of Senate/House adopted budget)
March 6, 2014, 6:00p.m.	School Board Budget Meeting/Work Session
March 13, 2014, 6:00 p.m.	School Board Budget Meeting/Work Session
March 18, 2014, 6:00 p.m.	School Board Budget Meeting/Work Session
March 20, 2014	Regular School Board Meeting • Adopt Preliminary Budget • Transmit budget request estimate to Bedford County
April/May (TBO)	School Board Special Called Meeting/Budget Work Session – Amend Budget

Source: BCPS Finance, December 2013.

COMMENDATION

The BCPS budget development process, documented in a budget planning calendar, provides participants with a scheduled time for input and a checklist of necessary actions to meet prescribed due dates.

FINDING 6.12

BCPS's annual budget is placed on the division's website so that all interested parties have access to the information. The 2013-14 budget contains summary and detailed data, along with charts, graphs, and explanatory narrative, to help readers understand what is included in the numbers. The division's budget process normally begins in October when the school board approves the budget calendar and ends six months later in March with the board's approval of the final budget.

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The budget data presented on the website is well-organized and contains a table of contents to assist readers with data they are interested in viewing. The website begins with summary data for revenues and expenditures for all funds along with bar and pie charts to further explain the data. A section for operating fund expenditures presents a summary and detail of expenditures and a narrative background for seven categories of expenditures that include instruction, administration, transportation, maintenance, facilities, debt service, and technology. The website also includes sections that present data for operating fund revenues, a nutrition fund, a textbook fund, a school maintenance projects fund, and the CIP plan.

Placing summary and detailed budget data on the website helps to make the division's financial plan transparent to the public, and provides interested parties with easily accessible data.

COMMENDATION

BCPS places its annual budget on the website to provide all readers with easy access to the data.

FINDING 6.13

The CFO prepares easily-understood reports for the board on a quarterly basis. The reports include projections for revenues and expenditures to the end of the year so that an expected surplus or deficit can be identified early on. Five reports are prepared, including one on budgeted revenues, three on budgeted expenditures, and one that summarizes three special funds. The reports are as follows:

- A revenue report that shows five types of revenues with columns that present 2012-13 actual, 2013-14 budgeted, 2013-14 projections, 2013-14 projected vs. budgeted, and 2013-14 projected vs. budgeted as percentages.

- An expenditure summary report that shows total expenditures for instruction, administration, transportation, maintenance, debt service, and technology. Six columns include amounts for 2012-13 actual, 2013-14 budgeted, 2013-14 actual, 2013-14 projected, 2013-14 projected vs. budgeted, and 2013-14 projected vs. budgeted as percentages.

- An expenditure report for instruction that presents amounts for classroom instruction, special education, guidance, homebound/alternative education, federal grants, improvement of instruction, policy and activity, media services, and office of principal. The same six columns are shown as with the previous expenditure report.

- An expenditure report that provides a further breakdown of administration, transportation, operation and maintenance, debt service, and technology. There is a breakdown for administration and executive administration, personnel, fiscal services, attendance, health services, and psychological services. The same six columns are shown as with the previous expenditure report.

- The fifth report shows beginning balances, revenues, expenditures, and ending balances for the textbook fund, school maintenance project fund, and self-insured health fund.

These reports enable board members to easily obtain an understanding of the status of division funds without having to review lengthy documents. Not only do the reports show actual revenues received and expenditures made thus far, but they also show projections made by the CFO after analyzing revenue and expenditure trends.

COMMENDATION

BCPS's quarterly board reports present easily-understood data on the financial operations and conditions of funds that have been analyzed by the CFO.

FINDING 6.14

Financial reports presented to the board do not include reports for the food services fund. Although the aforementioned reports include data for the general operating fund, textbook fund, school maintenance project fund, and self-insured health fund, there is no financial data pertaining to the food services program.

The food services program is maintained in a fund separate from the general fund. Financial information for division funds is presented as a component in the county's comprehensive annual financial report. Basic financial data for the nutrition fund is shown in county's report. Revenues, expenditures, and changes in the balance for the 2012-13 fund, as shown in the county's report, is presented in **Exhibit 6.11**.

Exhibit 6.11
Food services fund overview, 2012-13

Activity	Amount
Revenues	
Revenue from use of money and property	$ 8,312
Charges for services	$ 2,032,927
Intergovernmental	
Commonwealth of Virginia	$ 65,051
Federal Government	$ 2,182,271
Total Revenues	$ 4,288,561
Expenditures	
Nutrition Services	$ 4,150,289
Total expenditures	$ 4,150,289
Excess (deficit) of revenues over expenditures	$ 138,272
Fund balance, beginning	**$ 1,649,765**
Fund balance, ending	**$ 1,788,037**

Source: *Bedford County Comprehensive Annual Financial Report, 2012-13.*

Without reports, the superintendent and board members do not have financial data available that show if the food services is operating in a financially prudent manner.

RECOMMENDATION 6.14

Prepare routine financial reports for the nutrition program that show the results of operations.

Summary reports prepared either monthly or quarterly that show a limited number of revenue and expense categories would provide staff, management, and board members with easily-understood financial information for the nutrition program. **Exhibit 6.12** provides an example of a format that the superintendent and treasurer could use for monthly or quarterly reports.

Including financial data for the child nutrition fund will provide the board with oversight to the program's financial position and operations.

Exhibit 6.12
Example of school food program report

	Current Period	Year-To-Date	Previous Year Totals
Beginning Balance	$x,xxx	$x,xxx	$x,xxx
Current Revenue			
Federal	$x,xxx	$xx,xxx	$xx,xxx
State	$xx	$xx	$xx
Local	$xx	$xx	$xx
Total Current Revenue	$x,xxx	$xx,xxx	$xx,xxx
Current Expenses			
Salaries	$xx	$xx	$xx
Benefits	$xx	$xx	$xx
Food Products	$xx	$xx	$xx
Supplies	$xx	$xx	$xx
Other	$xx	$xx	$xx
Total Current Expenses	$x,xxx	$xx,xxx	$xx,xxx
Revenue Over/(Under) Expenses	$x,xxx	$x,xxx	$x,xxx
Revenues Over (Under) Expenses and Adjustments	$x,xxx	$x,xxx	$x,xxx
Ending Balance	**$x,xxx**	**$x, xxx**	**$x,xxx**

Source: Prepared by Prismatic, December 2013.

FISCAL IMPACT

The consulting team estimates that developing the report format will require no more than a few hours of finance staff time. Then, generation of the report should be routine with the existing BCPS systems.

D. Policies, Procedures, and Use of Administrative Technology

Written policies and procedures serve various functions. It is generally understood that policies communicate what should be done and why; procedures communicate how things should be done. They provide written notice to all employees of an organization's expectations and practices; provide direction in the correct way of processing transactions; serve as reference material; and provide a training tool for new employees. Additionally, written policies and procedures provide a source of continuity and a basis for uniformity.

Without clear, written and current policies and procedures, a division's internal control structure is weaker because practices, controls, guidelines and processes may not be applied

consistently, correctly and uniformly throughout the division. An effective fiscal operation implements detailed policies and internal controls to process the division's daily business transactions efficiently.

Appropriate administrative technology systems support effective financial management by automating routine tasks and reducing reliance on manual paper processing. Administrative technology also typically reduces error rates and speeds processing time.

FINDING 6.15

Time sheets for non-exempt employees and leave taken by all employees are documented using manual forms. This is inefficient, labor intensive, and subject to human errors.

Every non-exempt employee is required to complete a manual time sheet every two weeks recording the hours worked each day. The form is approved by the supervisor and, except for transportation and school nutrition staff, is forwarded to the finance department. Payroll staff reviews each time sheet, checking the math for the number of hours worked each day and verifying the hours shown as overtime are correct. Individual time sheets are kept in both the transportation and school nutrition departments, with only spreadsheets sent to the finance department for payment of overtime and additional work.

All employees are required to complete a manual absence certificate when they are on leave. The form indicates the number of days the employee is not present, along with the type of leave they are taking. Eight types of leave are accounted for on the form, including:

- personal or family illness/death;
- workers compensation;
- personal leave;
- professional leave;
- vacation;
- absence without pay;
- jury duty; or
- other.

Leave information shown on the absence certificate is keyed by the finance department into the leave system, tracking employee leave balances. The bottom portion of the absence certificate provides an area to show information in case a substitute teacher is called in. The substitute information is used by finance to pay the substitute.

Automated timekeeping systems normally track employee attendance by capturing leave through magnetically-encoded identification badges that are scanned into timekeeping machines or when employees log into their computers. Systems calculate the number of hours worked each day, reducing the time payroll staff spends to processing these hours. Other benefits of the timekeeping system include:

- recording time and attendance immediately and accurately;
- allowing staff real-time access to leave balances;

- reducing the amount of paper processed;
- reducing the errors of recording and calculating employee time and leave;
- applying pay rules and policies consistently to all employees; and
- providing audit trails for any adjustments or changes made to employee records.

RECOMMENDATION 6.15

Acquire and implement an automated timekeeping system.

The division should implement a selected timekeeping system. This will allow the division to issue employees magnetically-encoded identification cards that can be used to swipe a time clock located at schools and division offices.

The division may want to consider selecting a timekeeping system that allows employees to clock in by logging into it through their personal computers or a system that includes magnetically-encoded identification cards that can be used for timekeeping and as building keys. The timekeeping system should have the capability to interface with the payroll system.

An automated timekeeping system would enable the division to eliminate many of the manual, paper-intensive procedures. It would allow time worked by non-exempt employees to be entered into the automated system, and it would assist in monitoring the provisions of the affordable care act. This would also provide an efficient manner for overtime work to be identified and monitored. Staff in the finance department would not have to manually check math calculation and key leave time taken.

FISCAL IMPACT

The CFO has researched the cost of an appropriate system for the division and found that the estimated costs would be around $140,000 for the division's size.

Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19
Acquire and implement an automated timekeeping system.	($140,000)	$0	$0	$0	$0

FINDING 6.16

Although the division has a fixed asset system, it does not have formal policies to adequately protect its investment in fixed assets. There are no formal requirements for annual physical inventories to be conducted, approvals before items can be deleted from the asset inventory, guidelines that require reimbursement for items lost due to negligence, or for a police report or employee affidavit for lost or stolen items.

The division's fixed asset system is maintained in the finance department. Processing of transactions in the system was recently assigned to the new financial analyst. The financial analyst is responsible for entering items purchased into the fixed asset system and for deleting items when requested.

A report provided, with a run date of October 31 2013, indicated that the division had $2167 million invested in fixed assets and recorded in the system. A breakout of the items between the operating fund and the nutrition fund was not readily available.

The fixed asset procedures document provides guidance on what items should be classified as fixed assets, the depreciation methods to be used, and provides guidance on items purchased. The document does not provide any direction on how to handle donated property. In interviews with school bookkeepers it was noted that one school had received a drum set valued at $4,000 which was not added to the fixed asset system as staff understood that the item belonged to the school and not the division.

Although the division does not have a specific requirement for a physical inventory to be conducted annually, interviews indicated that inventories are routinely performed at the request of the CFO. The physical inventories are used to add items to the inventory that are not added at the time they are acquired, and to delete items that cannot be located.

Division practice allows items that cannot be found to be deleted from the inventory listing without any approvals being obtained. Principals and department heads can request items to be deleted from their inventory listings without providing justifications or acquiring further approvals. The procedure for lost or destroyed property does not hold site administrators responsible for lost or destroyed items.

Fixed asset policies normally address many issues that pertain to an entity's investment in fixed assets. Policies include guidelines for all fixed assets and regularly address the following:

- who is responsible for accounting for the division's investment in fixed assets and the system that is to be used for the accounting;
- responsibility and accountability for the property and equipment owned;
- requiring annual physical inventories and approvals that must be obtained before items can be deleted from asset records;
- capitalization thresholds for property, equipment, land, and infrastructure;
- depreciation methods, salvage value, and a schedule of estimated useful lives;
- determining capitalized improvements versus maintenance expenses;
- reporting junked, stolen, or missing property and what approvals are required to delete from the inventory;
- receiving donated property; and
- transferring assets between schools and departments.

To protect its investment in fixed assets, divisions must track their assets and have policies that provide direction on how the assets are to be managed. As items are acquired, they should be immediately added to the listing, and when the division disposes of an item through normal processes, they are taken off the listing. When an item cannot be found, the situation is examined and proper approvals are required before the item can be taken from the asset inventory.

Best practice examples have shown that divisions that have control over fixed assets are those that assign responsibility to specific individuals and then hold those individuals accountable for any missing assets or other discrepancies. In addition, board members review and approve

reports that show a detailed listing of any missing or stolen assets and who was responsible for the custody of those assets.

RECOMMENDATION 6.16

Develop a board policy to help ensure the protection of the division's investment in its fixed assets.

Developing policies for the division's fixed assets will help ensure that the investment in fixed assets is properly managed and protected.

FISCAL IMPACT

It should require minimal finance staff time to develop a fixed asset policy for board review and approval.

FINDING 6.17

No approvals are required for deleting items from the fixed asset listing, other than from a principal or department head. Allowing principals and department heads who have custody of fixed asset items to delete items from the inventory listing without other management approvals is an internal control weakness.

RECOMMENDATION 6.17

Require central office approval before deleting items from the fixed asset system.

Requiring central office approval before deleting items from the fixed asset listing will improve internal controls. Before items are deleted from the inventory listing, the staff member responsible for providing oversight of the items should provide sufficient explanation why the item should be removed from the listing.

FISCAL IMPACT

Developing and communicating an appropriate process should require only a few hours of finance staff time.

FINDING 6.18

The division's process for fixed assets does not ensure that all are timely added to the fixed asset inventory. There is little assurance that forms are always prepared when items are purchased. A process is not in place that requires a routine review of purchase orders to ensure an equipment purchase form has been completed. There is also no process to ensure that fixed asset items acquired by schools using allocated funds or from student activity funds are added to the fixed asset inventory.

Fixed assets are not added to the inventory listing until finance gets information from schools or departments notifying them that items have been acquired. Conflicting information was provided regarding when items are tagged and added to the fixed asset listing. The fixed asset procedures document states:

Upon receipt, the department responsible for the purchase will notify the Finance department of the new asset. The asset will be identified, tagged, and entered into the Fixed Asset module. Movable fixed assets are physically tagged, and the asset tag will be delivered to the location to be affixed to the property. Non-movable, capitalized assets are not physically tagged, but the asset number is recorded in the Fixed Assets module. A file for all untagged capital assets will be maintained by the Financial Analyst.

However, interviews indicate that schools and departments are not provided individual numbers and tags when an item is acquired, but are provided a set of numbers and tags from which they use when needed, notifying the finance department about what item the tag was placed on.

To ensure that all items are properly accounted for and controlled, they must be added to a division's fixed asset inventory in a timely manner. When processes are not in place, there is no way to ensure that items are added to an inventory system in a timely manner, and there is no assurance that the items are ever accounted for. Items acquired but not added to an inventory are susceptible to misuse or misplacement.

RECOMMENDATION 6.18

Develop processes to ensure that fixed asset items are added to the fixed asset system in a timely manner.

Developing processes that ensure fixed assets are added to the division's inventory system will provide better control of items acquired. When items are not added to the inventory, there is no tracking of the items and no one is formally made responsible for the items.

A written procedure that adequately explains the process needs to be added to the inventory listing, documenting the process in detail to help ensure a standard method. This will also help ensure that all fixed asset items acquired by the division, both purchased and donated, are added to the listing in a timely manner.

FISCAL IMPACT

Developing and communicating an appropriate process should require only a few hours of finance staff time.

FINDING 6.19

Schools have not been provided with standard, up-to-date written guidelines for the management of activity funds. Each school manages a bank account where funds are received from general fund allocations and student activity monies. Funds are deposited into the bank accounts and principals disburse these funds for needed items. All schools use the same automated financial system, which provides for the recording of revenues and disbursements by account title and provides a monthly report that shows the beginning balance for each account, monthly revenues and expenditures, and the ending balance.

A considerable amount of funds are received and disbursed by schools through the activity funds maintained in local bank accounts. During 2012-13, $4.0 million was disbursed through the local bank accounts. Jefferson Forest High School received and disbursed over $1.0 million during the year, the highest of all division schools. **Exhibit 6.13** shows the funds received and

disbursed for each of the schools during 2012-13. This includes both the funds allocated to the schools by the central office along with the monies received for student activities.

Exhibit 6.13
Activity Fund Transactions

School	Cash Balances June 30, 2012	Cash Receipts	Cash Disbursements	Cash Balances June 30, 2013
Bedford Elementary	$ 19,220	$ 65,350	$ 73,288	$ 11,282
Bedford Middle	$ 21,166	$ 90,826	$ 95,421	$ 16,571
Bedford Primary	$ 754	$ 76,746	$ 49,630	$ 27,870
Bedford Science and Tech Center	$ 104,369	$ 219,659	$ 238,702	$ 85,326
Big Island Elementary	$ 6,257	$ 35,389	$ 35,897	$ 5,749
Body Camp Elementary	$ 6,549	$ 36,310	$ 37,607	$ 5,251
Boonsboro Elementary	$ 8,363	$ 54,719	$ 61,013	$ 2,069
Forest Elementary	$ 11,468	$ 78,676	$ 82,588	$ 7,555
Forest Middle	$ 57,511	$ 190,524	$ 180,431	$ 67,605
Goodview Elementary	$ 53,047	$ 82,009	$ 82,904	$ 52,152
Huddleston Elementary	$ 12,955	$ 51,597	$ 58,821	$ 5,731
Jefferson Forest High	$ 258,046	$ 1,077,576	$ 1,088,282	$ 247,341
Liberty High	$ 86,869	$ 569,722	$ 553,150	$ 103,441
Moneta Elementary	$ 16,230	$ 60,790	$ 68,076	$ 8,944
Montvale Elementary	$ 21,251	$ 58,009	$ 56,495	$ 22,765
New London Academy	$ 33,767	$ 97,279	$ 99,594	$ 31,451
Otter River Elementary	$ 4,746	$ 47,717	$ 48,192	$ 4,271
Staunton River High	$ 140,441	$ 664,416	$ 641,111	$ 163,747
Stauton River Middle	$ 35,984	$ 128,510	$ 130,801	$ 33,692
Stewartsville Elementary	$ 35,087	$ 90,865	$ 98,508	$ 27,444
Thaxton Elementary	$ 14,408	$ 46,879	$ 49,517	$ 11,770
Thomas Jefferson Elementary	$ 56,850	$ 150,522	$ 153,851	$ 53,521
Totals	**$ 1,005,340**	**$ 3,974,090**	**$ 3,983,881**	**$ 995,549**

Source: BCPS Activity Funds Audit, June 2013.

BCPS's activity funds are audited each year by an outside auditing firm contracted by the division. Audit reports did not indicate that there were any significant operational issues associated with the management of activity funds.

There is not a standard procedures manual that provides formal guidance to principals, teacher/sponsors, or secretary/bookkeepers on the proper process to follow in order to adequately document transactions, or about what is acceptable for the funds to be expended on. Without an activity fund manual that establishes policy and provides guidance on how to manage the funds, the division is at risk of not fulfilling its responsibility to properly administer student activity funds. Manuals normally include guidance on what is acceptable for the funds on which to be expended and how transactions are to be documented.

RECOMMENDATION 6.19

Develop a procedures manual for activity funds and train staff on the standard approved processes for managing these activity funds.

Developing an operations manual for schools to use that clearly states how activity funds are to be administered will assist principals, secretary/bookkeepers, and sponsors to fulfill their

responsibilities. The manual also will assist a staff person who is asked to fill in when a secretary/bookkeeper or sponsor is absent for an extended period of time.

FISCAL IMPACT

The consulting team estimates that no more than 15 hours of finance staff time will be required to develop a suitable manual. Training can be included at the beginning of each school year during scheduled in-service days.

FINDING 6.20

Departments and schools are not provided with detailed user manuals to guide them in completing duties related to finance and budget responsibilities. In addition, staff in schools and departments are provided little training on how to complete their duties pertaining to financial operations. The division does have a purchasing procedures document that provides guidance on purchasing functions.

School and department staff must follow specific processes and complete a variety of finance-related documents accurately and timely. A variety of processes must occur in order to help ensure employees are paid timely and accurately, materials and services are ordered and received when needed, vendors are paid timely and accurately, and reimbursements are completed.

Processes related to financial activities are often difficult for staff who do not perform those functions on a continuous basis, and who are also required to perform a variety of other duties. An easily-understood reference manual for financial duties and processes greatly reduces errors and the amount of time required by business office staff to repeatedly explain these processes.

Many school divisions provide school and department staff with a user manual to provide policy and direction on completing financial and operational duties. These manuals routinely include guidance for the following:

- purchasing policy and procedures;
- vendor payments;
- student activity funds;
- payroll activities;
- leave reporting;
- fixed asset inventory processes;
- mail delivery;
- travel;
- workers' compensation; and
- other topics that impact division employees and administrative staff duties.

The manuals are discussed at orientation for new employees, and discussed each year in work sessions prior to school beginning. Administrative staff understands the processes and requirements for various finance-related topics that impact their responsibilities when they have manuals available for reference. Errors occur less often and administrative staff spends less time

asking how to perform a process. Manuals also provide a means of documenting acceptable processes that enable accountability to be enforced.

RECOMMENDATION 6.20

Develop a user manual for school and department staff to assist them in completing finance and budget related duties and provide periodic training.

Written guidelines will help ensure schools and departments are performing financial processes in a standard and efficient manner. Written guidelines will provide new staff with readily available data to assist them in learning the appropriate way to perform important functions. Useful manuals not only provide detailed steps on how to complete a particular form, but also include policies such as delegated purchasing and the associated penalties for not following the policies. Manuals should also be made available on the website, and training sessions should be routinely offered where processes covered in the manual are discussed and questions answered. Manuals should be continually updated to be more useful and informative.

FISCAL IMPACT

This recommendation can be implemented by current finance staff. Developing the manual will require approximately 20 finance staff hours. Training can be included at the beginning of each school year during scheduled in-service days. Finance staff should devote several hours a year to reviewing and updating manual contents.

FINDING 6.21

Finance staff members do not have written desk procedures that document their important daily duties. In addition, staff is not cross-trained. Should a staff member be absent from work for an extended period of time, it would be difficult for BCPS to complete its responsibilities.

For internal controls to operate effectively, all employees need a documented reference source detailing how they perform their assigned duties. Detailed desk procedures facilitate cross-training of employees and training of new employees, since they provide the step-by-step instruction needed to perform tasks. A desk procedures manual covers the activity steps in sufficient degree of detail that enables an individual who uses it for the first time to perform the steps with little, if any, additional instruction. It is important to list specific forms used, computer screens accessed, and fields on the screen in which information is entered, as well as identifying other positions that supply information for the procedure or to which it sends information.

Without written directions, employees complete their duties based on verbal directions that were often received long ago, and have since likely become stale. Additionally, without a written reference, employees often improvise and develop their own ways to complete tasks. Processing transactions in an unapproved manner often leads to errors.

RECOMMENDATION 6.21

Develop desk procedures for the important duties performed by each staff member in the finance department, and cross-train them in each other's duties.

Each staff member should develop desk procedures for their duties. Once they have developed the desk procedures, the CFO should determine which staff members should be cross-trained on what duties. Staff being cross-trained should review the procedures to help ensure they are easily understandable, and can provide sufficient guidance to whoever performs the duties.

Desk procedures should contain sufficient detail to enable an individual who uses it for the first time to perform the duties with little, if any, additional instruction. It is important to list specific forms used, computer screens accessed, and fields on the screen in which information is entered, as well as identifying other positions that supply information for the procedure or to where information must be sent. Many times, employees find the process is more understandable when a flowchart is included.

FISCAL IMPACT

The consulting team estimates that it will require approximately 80 hours of finance staff time to develop and test the desk procedures. However, it can be completed procedure by procedure, so these hours do not have to be continuous.

FINDING 6.22

The division does not have procedures for the critical financial processes that must be performed. Documented procedures are necessary for proper internal controls, and to help ensure that financial transactions are completed in a manner approved by management.

Division financial procedures are normally compiled in a comprehensive division-wide document. At a minimum, the manual usually includes the following:

- budget policies and procedures;
- payroll policies and procedures;
- division accounts payable processing;
- activity fund policies and procedures;
- division procedures governing approvals for checks and journal vouchers;
- procedures for travel reimbursements;
- grants management;
- textbook management;
- division purchasing processes; and
- division procedures governing distribution of financial reports.

Divisions with effective, comprehensive procedure manuals update them regularly to ensure that staff have accurate information. They clearly convey acceptable and unacceptable practices, as well as the consequences of violating the provisions. To ensure its availability to staff, many divisions also put the manual on their website. The manual identifies roles, responsibilities, and controls to be observed, and identifies areas for secondary review and approval.

RECOMMENDATION 6.22

Identify all critical functions performed by finance staff, and document procedures in a comprehensive procedures manual.

A comprehensive finance procedures manual will assist staff in their duties, and help ensure that the processes are being performed in the approved manner. When staff perform their duties without the benefit of up-to-date written procedures, they many times fail to perform those functions in a manner that complies with office policies due to being uninformed or misinformed of what the appropriate process actually is.

FISCAL IMPACT

The consulting team estimates that it will require approximately 40 hours of finance staff time to develop the manual. However, it can be completed in pieces, so these hours do not have to be continuous.

Transportation

This chapter reviews the findings and recommendations related to transportation in Bedford County Public Schools (BCPS) in these areas:

    A. Organization and Staffing
    B. Planning, Policies, and Procedures
    C. Routing and Scheduling
    D. State Reporting
    E. Training and Safety
    F. Vehicle Maintenance and Bus Replacement Schedules

The primary objective of school transportation is to provide safe, timely, and efficient transportation services to students. The School Code of Virginia states, in part, "County school boards may provide transportation of pupils, but nothing herein contained shall be construed as requiring such transportation." The federal Individuals with Disabilities Education Act (IDEA) requires a school division to provide transportation for students with disabilities if the school division also provides transportation for students in the general population, or if students with disabilities require transportation to receive special education services. Virginia's 15,000 school buses transport nearly one million students daily. School divisions collectively operate the safest form of transportation in the country; school buses are safer than any other form of public or private mode of transportation.

The Commonwealth does not provide explicit funding for transportation. Thus, every dollar saved in providing student transportation can be redirected to the classroom.

In 2012-13, BCPS had 7,779 regular bus riders and 119 exclusive riders. The division operated 154 regular and 24 exclusive buses that travelled more than 2.2 million miles for regular routes, exclusive routes, special trips, and summer school routes.

In total, the consulting team gave four commendations in this chapter:

- BCPS requires bus drivers to leave K-3 students with an authorized adult.

- BCPS bus drivers and school staff members maintain organized and orderly bus dismissal practices.

- The division has implemented tiered school start times, which saved approximately $500,000 in 2011-12 over 2010-11, despite an increase in student ridership.

- BCPS bus drivers and mechanics operate and maintain a low bus accident record.

The consulting team also made 16 recommendations in this chapter:

- Hire one additional secretarial support person so that the coordinator and assistant coordinator can be freed from some of their routine tasks to focus on more strategic areas, including automated routing, driver training, and special needs transportation.

- Offer more opportunities for drivers to obtain full-time employment.

- Develop one additional full-time substitute driver position per zone (total of three).

- Develop an annual assessment of Head Start transportation costs and request reimbursement to cover all relevant costs.

- Change department procedure so that if aides report to work in good faith, they are paid for that shift even if their services are not needed.

- Use the division's SubFinder system, currently used to fill teacher absences, with the division's drivers.

- Adopt a board policy on school walk zones and an acceptable distance for students to walk to a bus stop, with consideration for hazardous areas in which students should not be expected to walk.

- Work with the county to develop fully automated routing.

- Using automated routing capabilities, investigate a staggered elementary bell schedule that makes greater use of a smaller fleet and provides more opportunities for drivers to work more hours.

- Include the transportation supervisor or assistant coordinator in IEP meetings where transportation alternatives are discussed.

- Adopt an off-the-shelf field trip software package.

- Use the data in the state reports as a starting point to compile annual comparisons of the BCPS transportation operation.

- Provide annual training for bus mechanics.

- Develop a joint garage with the county, relocating all school division maintenance services to the new facility.

- Adopt a bus replacement policy and budget accordingly.

- Phase out all but a few staff cars in order to save parking space, as well as maintenance, registration, and insurance costs.

The estimated fiscal impacts of those recommendations for which the consulting team could reasonably quantify into dollars are shown below. Some recommendations will have fiscal impacts that depend on the specific implementation path chosen by the division while others will only require staff time; fiscal impacts for those recommendations are not shown here.
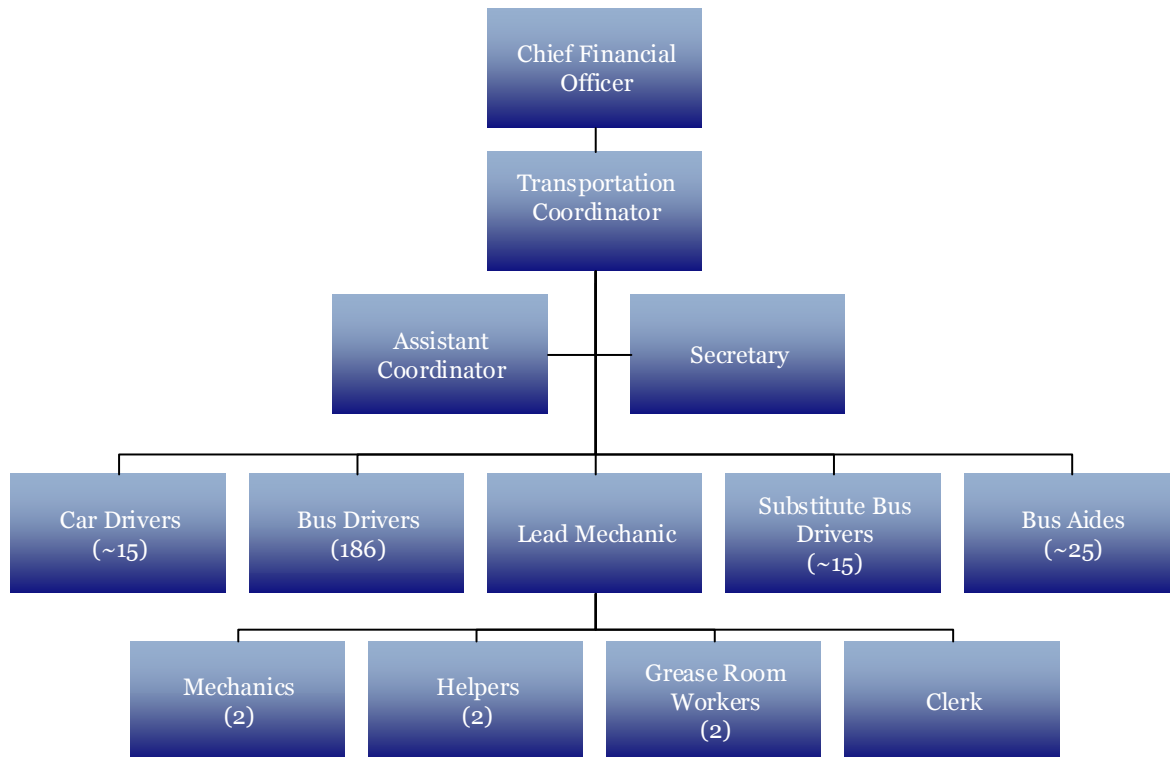
	Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19	Total
7.1	Hire a secretarial support person.	($29,830)	($29,830)	($29,830)	($29,830)	($29,830)	($145,150)
7.3	Develop one full-time bus driver substitute position per zone (3).	($52,000)	($52,000)	($52,000)	($52,000)	($52,000)	($260,000)
7.5	Request reimbursement for Head Start costs.	$35,000	$35,000	$35,000	$35,000	$35,000	$175,000
7.10	Adopt policies on walk zones and seek to reduce route mileage on unimproved roads.	$34,000	$34,000	$34,000	$34,000	$34,000	$170,000
7.11	Work with the county to implement automated routing.	$145,000	$170,000	$170,000	$170,000	$170,000	$825,000
7.14	Adopt an off-the-shelf field trip software package.	($10,000)	($1,000)	($1,000)	($1,000)	($1,000)	($14,000)
7.17	Provide annual training for bus mechanics.	($2,000)	($2,000)	($2,000)	($2,000)	($2,000)	($10,000)
7.20	Save parking space by phasing out some staff cars.	$16,000	$15,000	$15,000	$15,000	$15,000	$76,000

A. Organization and Staffing

The management of student transportation does not differ from any other department in that it is incumbent upon management to select, organize, maintain, and adjust staff to meet demands. Establishing and reviewing action plans, training employees, and adopting new methods and technologies are part of the ongoing efforts required for a transportation department to be efficient and successful.

The current organization of the BCPS transportation department is shown in **Exhibit 7.1**.

Exhibit 7.1
BCPS transportation organization

```
                    ┌─────────────────┐
                    │ Chief Financial │
                    │     Officer     │
                    └────────┬────────┘
                    ┌────────┴────────┐
                    │ Transportation  │
                    │   Coordinator   │
                    └────────┬────────┘
          ┌──────────────────┴──────────────────┐
   ┌──────┴───────┐                       ┌──────┴──────┐
   │  Assistant   │                       │  Secretary  │
   │ Coordinator  │                       │             │
   └──────────────┘                       └─────────────┘
```

| Car Drivers (~15) | Bus Drivers (186) | Lead Mechanic | Substitute Bus Drivers (~15) | Bus Aides (~25) |

| Mechanics (2) | Helpers (2) | Grease Room Workers (2) | Clerk |

Source: BCPS, December 2013.

FINDING 7.1

The central office staffing of the transportation department is extremely thin in comparison to typical industry standards and the peers. When the previous transportation supervisor retired, the previous assistant assumed the position, but her assistant position was not immediately backfilled. For the past year, there have been three positions in the transportation department: a supervisor, an assistant coordinator, and a secretary. A new clerical assistant just began work in the bus garage and reports to both the transportation supervisor and the lead mechanic.

As shown in **Exhibit 7.2**, the BCPS transportation department has historically been understaffed in comparison to its peers. The division has far less transportation staffing than any of the peers.

Exhibit 7.2
Comparison of transportation personnel

School Division	Administrative	Technical and Clerical	Other Professional
Augusta County	0.0	8.0	4.0
Franklin County	3.5	17.2	0.0
Frederick County	1.0	27.4	2.0
Montgomery County	1.0	19.0	1.0
Rockingham County	1.0	4.0	0.0
Washington County	1.0	1.1	0.0
Peer Division Average	**1.2**	**12.8**	**1.2**
Bedford County	**0.0**	**0.0**	**2.0**

Source: 2011-12 VDOE Superintendent's Annual Report.

In interviews, all central transportation staff noted difficulty in completing more strategic tasks. Due to the lack of clerical assistance, the transportation supervisor is also absorbed in a variety of clerical-type tasks, reducing the time she has available for strategic planning.

While there are no industry standards for staffing in this area, the consulting team over the years has found the rules of thumb shown in **Exhibit 7.3**. BCPS is currently well below these marks.

Exhibit 7.3
Transportation staffing rules of thumb

Position	Staffing per route bus
Transportation Director	N/A
Terminal Manager	1:150
Dispatcher	1:50
Clerk/Secretary	1:50 − 1:150
Extra Trip Clerk	1:50 − 1:150
Safety/Training/Recruiting Manager	1:100 − 1:500
Regular Routing/Planning	1:50 − 1:150
Special Education Routing/Planning	1:25 − 1:100

Source: Prismatic, December 2013.

RECOMMENDATION 7.1

Hire one additional secretarial support person so that the supervisor and assistant coordinator can be freed from some of their routine tasks to focus on more strategic areas, including automated routing, driver training, and special needs transportation.

While this one position will not bring the division to parity with the peer average for central office transportation staffing, it will provide some relief and begin to address the issue. This new position would be housed in the transportation central office. The clerk would be assigned tasks related to dispatch, payroll processing, and handling public inquiries.

FISCAL IMPACT

Based on BCPS data, a clerk position paying approximately $19,122 plus benefits of 56 percent will be needed.

Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19
Hire a secretarial support person.	($29,830)	($29,830)	($29,830)	($29,830)	($29,830)

FINDING 7.2

Regular route bus drivers are paid on a contract basis, with one figure paid for those who work less than 20 hours and one for those who work 20+ hours per week. In the past year, the division has reduced the benefits associated with a bus driver position; this was done as a cost-saving measure and to reflect the fact that most of the driver positions are part-time.

Drivers have the opportunity to earn additional wages from volunteering to drive field trips or work as substitute drivers, provided it does not interfere with their regular route duties. Because of the route scheduling, some drivers have more opportunities than others to earn additional wages.

The driver pool is generally older. Many work as drivers solely to obtain health care benefits and hold other part-time jobs in order to cobble together full-time employment. A few drivers have dual employment with the division. Apparently, all of those with dual employment work in the cafeterias as their second position. This provides full-time employment within BCPS and justification for full health care benefits, as other full-time employees earn. The implementation of the *Affordable Care Act* raises concerns regarding employees who work 30+ hours per week and the need to provide them with health care benefits.

RECOMMENDATION 7.2

Offer more opportunities for drivers to obtain full-time employment.

This can be done in a number of ways:

- employing several drivers full-time to drive a regular route, then to drive vocational routes, special education routes, substitute routes, and field trip routes. This would reduce management time spent on filling some of these "non-regular" routes;

- employing several drivers to drive three-tiered routes. Currently some routes are double-tiered. Implementing some triple-tiering could lead to a full work day; and

- expanding the number of drivers in dual employment within the division cafeterias typically have a need for a few cashier or line positions only during breakfast and lunch serving times.

FISCAL IMPACT

This recommendation should result in a more stable driver pool (reducing hiring and training expenses) but may result in increased healthcare costs.

FINDING 7.3

The department has a limited and dwindling substitute driver pool. Although three sub driver positions are full-time, with benefits, the department still struggles to find sufficient additional substitute drivers on a daily basis. At the time of the onsite visit, BCPS had just five drivers on its substitute list who were not already driving a regular route.

Regular route drivers are expected to first attempt to find their own substitute driver. By procedure, if they contact three candidates and still cannot find coverage, they pass along the need to the assistant transportation coordinator. The assistant coordinator then fills the substitute request, sometimes by working with regular route drivers to fill in gaps. Bus drivers noted that substitute drivers do not typically stay in the job long, as they often begin receiving phone calls requesting them as early as 4:30 a.m. each day.

RECOMMENDATION 7.3

Develop one additional full-time substitute driver position per zone (total of three new positions).

A division the size of BCPS can expect to fully use what will be six full-time substitute drivers. By offering the positions as full-time, with benefits, the division would likely be able to retain the substitutes, which will reduce hiring and training costs in the department. In addition to substituting, BCPS should ensure full employment of these drivers through field trip or other mid-day route assignments.

FISCAL IMPACT

Assuming each driver is hired to work 7.5 hours per day at a rate of $9.50 per hour, the division will spend approximately $12,825 per position each year in wages. With benefits of 35 percent, all three additional substitute driver positions will cost approximately $52,000.

Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19
Develop three full-time substitute driver positions.	($52,000)	($52,000)	($52,000)	($52,000)	($52,000)

B. Planning, Policies, and Procedures

Transportation is a vital support service that requires sound management. School board policies set the standard for administrative procedures created by staff. Transportation policies should support a safe and economical operation. Although numerous state regulations govern transportation services, school divisions have the flexibility to establish procedures that can enhance operations such as setting bell schedules, designing efficient routes, and fostering sound maintenance procedures.

FINDING 7.4

The department has a procedure that requires bus drivers to verify that an authorized adult is present when K-3 students are dropped off at home. If an authorized adult is not present, the driver will contact the central office staff, who attempts to locate an authorized adult. If one cannot be found during the course of the regular route time of

the bus, the driver returns the student to the school. Although this practice is often time-consuming for the central office dispatchers who must locate missing authorized adults, it ensures that no young student is left unattended.

COMMENDATION

BCPS requires bus drivers to leave K-3 students with an authorized adult.

FINDING 7.5

The department provides transportation for students in the Head Start program but does not receive any funding for this. In years past, the Lyn-CAG Head Start program paid the transportation department for separate bus runs for Head Start students. However, the scheduling of those buses shortened the instructional day for the Head Start students. So, the Head Start program began paying for aides on the regular route buses that now transport Head Start students.

However, the transport of Head Start students on regular routes has other costs that are not being covered. The transportation supervisor noted that there are at least several instances where Head Start students on regular routes results in additional route miles that would not otherwise be necessary. With the existing data, it is unclear what the true cost is of providing Head Start transportation.

RECOMMENDATION 7.5

Develop an annual assessment of Head Start transportation costs and request reimbursement to cover all relevant costs.

At a minimum, it appears that BCPS is missing an opportunity to have the transportation costs considered part of its in-kind contribution for the Head Start grant. The division could also charge the program for the actual cost of providing services. The cost of transporting Head Start children, consistent with the provisions of 45 CFR 1310, is an allowable expense of Head Start grant funds.

FISCAL IMPACT

The consulting team estimates the likely full cost of this transportation to be $35,000 per year.

Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19
Charge the Head Start program for transportation services.	$35,000	$35,000	$35,000	$35,000	$35,000

FINDING 7.6

Bus dismissal at the schools is organized and orderly. Buses line up in a precise order each day and substitute drivers take care to drive the regularly assigned bus, if at all possible, so that students are always boarding a bus with the same number. Bus drivers wait until signaled by school staff that all students have boarded buses, they leave en masse.

School staffs provide supervision during bus loading. Bus and car rider traffic is separated – physically if possible, and by time as well. Typically, car riders must wait until all buses have left before they are dismissed to their cars. Drivers tend to know their assigned riders well and to interact with them in a positive manner.

COMMENDATION

BCPS bus drivers and school staff members maintain organized and orderly bus dismissal practices.

FINDING 7.7

Bus aides are only paid once they step onto a bus. If a parent of a special education student notifies the department ahead of time, the bus aide is contacted before the assigned start time and does not have to make the trip into work. However, this does not always happen, resulting in bus aides getting to their assigned start site, only to be told afterwards that they are not needed.

Bus aides noted that that it is generally up to them to establish a communication system with the parents of special needs students. They sometime receive notification from the transportation department and sometimes from the bus driver, but these processes are inconsistent. In the focus group with six aides, all noted that communications regarding whether a student is riding each day are problematic.

RECOMMENDATION 7.7

Change department procedure so that if aides report to work in good faith, they are paid for that shift even if their services are not needed.

Further, the department should consider budgeting for aides to work every school day, regardless of whether the students to which they are assigned attend school. This would be consistent with other division positions, whereby employee shifts are not cancelled due to student absences. It may be possible to assign bus aides to in-office or in-garage clerical duties during times when they are not needed to ride with a student, so that both the division and the aide benefit from the paid period of work.

FISCAL IMPACT

This recommendation will result in some additional costs, but data were not available to quantify how many hours are not currently being paid that would now be paid.

FINDING 7.8

The transportation department is relying on telephone calls and emails to fill needed driver substitute vacancies. This is inefficient, particularly since BCPS already has a substitute finder system in place for use with teacher positions. The division uses SubFinder, an automated calling system that finds available substitutes for open assignments.

The assistant transportation coordinator spends most of her time each day making sure that the division has every bus, car, and aide position filled. She tracks vacancies and who has filled them using a well-developed calendaring system within Google Docs and estimates that approximately 80 percent of all drivers and aides communicate via email or text regarding

vacancies and filling them. Substitutes are typically contacted by telephone and sometimes as early as 4:30 a.m., as drivers who need coverage that morning compete with each other to obtain a substitute. However, the division already has the automated SubFinder system in use with teacher positions. The consulting team observed that many BCPS bus drivers have a high level of technical competence already as many routinely use email to communicate with transportation staff.

RECOMMENDATION 7.8

Use the division's SubFinder system, currently used to fill teacher absences, with the division's drivers.

This should automate what is currently largely a piecemeal process and reduce the amount of time central office staff spends overseeing the process. It should also allow substitute drivers to block out times when they know they are not available, thus reducing the number of early-morning telephone calls.

FISCAL IMPACT

This recommendation can be implemented by the assistant transportation coordinator at no cost, as the division already has the automated system.

C. Routing and Scheduling

The routing/scheduling function is second only to the safety area in determining the effectiveness of a transportation system. Routing determines the total number of routes, which in combination with scheduling of bell times for the various schools, dictates the total number of buses required. This total route bus count drives nearly every expense associated with transportation. The better the division routes and schedules for the system, the more efficient it becomes.

Routing in BCPS is manual. The transportation department maintains large (3' x 4') paper maps, supplied by the county, onto which routes are color-coded. Drivers are responsible for developing their own route sheets and keeping them up to date in a binder for use by substitute drivers.

FINDING 7.9

The division is in its second year of staggered start times, with the elementary students in the earlier tier and the secondary students in the later tier. The division implemented tiered start times among its schools in 2011-12 as a way to reduce transportation expenses and made the decision to put the secondary students in the later tier based on research regarding circadian rhythms of adolescents, which found positive results in student achievement with later start times for high school students.

This measure has resulted in cost savings. As shown in **Exhibit 7.4**, the division made a significant reduction in its regular route mileage from 2010-11 to 2011-12 to a level that was 18 percent less than 2008-09. Total operational costs also decreased, likewise, the operational cost per student. The operational cost per mile has increased by just four percent over the past four

years. The 2011-12 operational cost per mile compares favorably to the average of the Virginia demographic cluster in which BCPS is placed ($2.90 versus $3.33).

Exhibit 7.4
Trend in regular transportation costs

Position	2008-09	2009-10	2010-11	2011-12	% Change
Students Transported	8,077	8,069	7,533	7,784	(4%)
Route Miles	1,140,624	1,182,304	1,175,400	937,413	(18%)
Buses	165	168	168	154	(7%)
Total Operational Cost	$ 3,185,158	$ 2,816,171	$ 3,161,757	$ 2,720,676	(15%)
Operational Cost per Mile	$ 2.79	$ 2.38	$ 2.69	$ 2.90	4%
Operational Cost per Student	$ 394	$ 349	$ 420	$ 350	(11%)

Source: VDOE Pupil Transportation Reports, 2009-10 through 2012-13.

COMMENDATION

The division has implemented tiered school start times, which saved approximately $500,000 in 2011-12 over 2010-11, despite an increase in student ridership.

FINDING 7.10

The division lacks any written policies on bus route design or designated walk zones. Many areas within the county have limited road access, leaving some buses to travel gravel, one-lane roads to deliver students to their homes. Some of these routes have poor options for bus turn-arounds and bridges with questionable load ratings.

On the bus ride-along, the consulting team observed a large number of stops directly in front of students' homes. While desirable on the larger roads in the county that have two-way traffic and no sidewalks, this level of transportation service on some of the smaller, lesser-travelled roads puts unnecessary wear and tear on buses. The ride-along included several turn-arounds on roads little wider than the bus itself, as well as one turn-around at the top of a hill where the bus points downward at the very edge of the road surface, beyond which is just air.

Moreover, a number of the route roads include small bridges that are without load limit ratings (**Exhibit 7.5**). According to Virginia Department of Transportation data, there are 366 bridges in Bedford County that they inspect every two years. Of these, 46, or 12 percent, are currently considered "structurally deficient."

Exhibit 7.5
Example bridge crossed by BCPS bus

Source: Prismatic, December 2013

In at least one case, BCPS has worked with parents whose residences are far up narrow, gravel or dirt roads. Their children are transported by bus from their assigned school to Big Island Elementary. Parents take their children home from there.

RECOMMENDATION 7.10

Adopt a board policy on school walk zones and an acceptable distance for students to walk to a bus stop, with consideration for hazardous areas in which students should not be expected to walk.

The division should develop routes that minimize travel on the poorest-quality roads and should likely adopt more zone pick-ups. To the extent possible, the division should seek to implement greater use of routes that take students in more rural areas most of the way home but then rely on parents to provide the last mile or so of transportation. As the division already has a policy to not drop off K-2 students unless an authorized adult is present, this may also help the department connect more quickly with parents each day.

Although Virginia does not fund student transportation directly, other states provide some financial support for student transportation. In those states, a 1.0-mile or 1.5-mile radius walk zone around the assigned school is typically where transportation funding begins. Most states also have exceptions for hazardous conditions within that radius.

FISCAL IMPACT

As the division does not have automated routing or any computerized compilation of mileage on dirt, gravel, narrow roads versus other types of road surfaces, it is difficult to calculate how many route miles might be reduced by implementing this recommendation. Assuming even a modest reduction of one percent in route miles each year would save approximately $34,000 per year (2012-13 total regular route mileage of 1.2 million miles, provided at a cost of $2.74 per mile).

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Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19
Adopt policies on walk zones and seek to reduce route mileage on unimproved roads.	$34,000	$34,000	$34,000	$34,000	$34,000

FINDING 7.11

BCPS lacks any routing software. All routes are developed manually and many have not been adjusted for years, despite shifting demographics among student residences. The 2011-12 reduction in routes was accomplished through a manual process, based first on the premise of implementing tiered school start times.

The transportation department maintains a complete set of paper maps for each route, but these have not been digitized or otherwise analyzed. **Exhibit 7.6** provides an example. Each color represents a portion of a different bus route. As shown in the upper right corner with the green and yellow routes, not all the routes are contiguous. Also as shown, many of the routes include portions where the bus travels to the end of a fairly small road then turns around and travels back along the same road.

Exhibit 7.6
Example BCPS route map
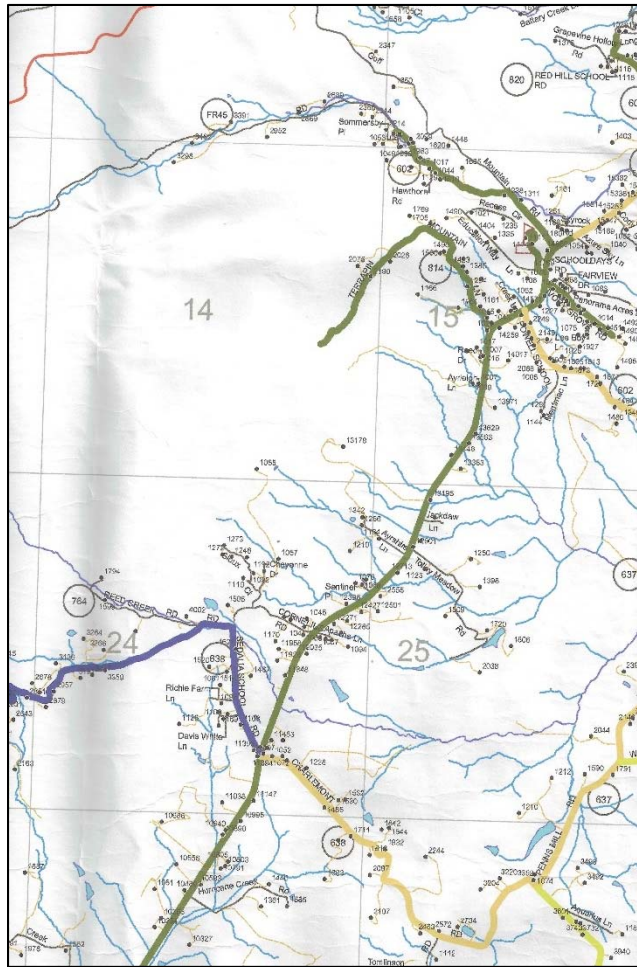
Source: BCPS, December 2013

The division does not currently post routes, either in text or map form, on its website for parents and students to review. Moreover, the division does not have the ability to input the address of a new student and instantly determine on which bus the student will ride and what times. Instead, department staff uses a manual process to make these determinations and then must separately notify the driver if there is a new associated stop for the student.

After the initial dramatic reduction in the number of buses and route miles achieved in 2011-12 from implementing a tiered bus system, operational route mileage has begun to increase again, as has the operational cost per student (**Exhibit 7.7**). Transportation staff could not pinpoint specific reasons for these increases, nor could staff identify the driving factors behind the reduction in deadhead mileage, beyond tightening of the process by which drivers are allowed to park their buses at home. Automated routing would provide the department with greater insight into the factors driving these figures.

Exhibit 7.7
Recent trend in regular transportation costs

Position	2010-11	2011-12	2012-13	% Change
Students Transported	7,533	7,784	7,779	3%
Route Miles	1,175,400	937,413	1,248,660	6%
Deadhead Miles	700,740	733,480	582,660	(17%)
Buses	168	154	154	(8%)
Total Operational Cost	$ 3,161,757	$ 2,720,676	$ 3,427,728	8%
Operational Cost per Mile	$ 2.69	$ 2.90	$ 2.75	2%
Operational Cost per Student	$ 420	$ 350	$ 441	5%

Source: VDOE Pupil Transportation Report, 2012-13.

Bedford County has robust geographic information systems (GIS) capabilities and has previously been asked to provide mapping of existing BCPS routes and attendance zones. The county uses the ESRI GIS platform, which is considered the gold standard in GIS.

Effective bus routing requires two main components: GIS and student address data. Both components must be up to date and supported by knowledgeable personnel. In the experience of the consulting team, most school division attempts at automated routing fail because their transportation departments lack the requisite skills to handle GIS and lack the time to become expert in it.

RECOMMENDATION 7.11

Work with the county to develop fully automated routing.

The county already has the systems and staff to handle this task, but will need a routing application that works with the existing ESRI GIS. Ideally, regular and special education routing would be a dynamic exercise, with route adjustments made as individual families move into and out of school attendance areas. However, BCPS would likely realize significant gains in routing efficiency just by requesting that county staff develop new routes at the beginning of each school year, based on the existing enrollment data, with perhaps an adjustment at the winter break.

FISCAL IMPACT

Bedford County already has advanced GIS skills and up-to-date geography. Moreover, the county staff has experience in working with student database information from PowerSchool. It is possible that the county will be able to provide automated routing with existing ESRI tools, but may need to acquire some tools from third-party sources. The consulting team estimates that no more than $25,000 may be needed for third-party software applications.

The division should expect to see increased route efficiency from implementing this recommendation. Other divisions typically experience a six percent reduction in route miles once they have successfully transitioned to automated routing. The consulting team conservatively estimates a five percent reduction in just regular route miles, which would generate an annual savings of approximately $170,000 (2012-13 total regular route mileage of 1.2 million miles, provided at a cost of $2.74 per mile). The consulting team believes that routing efficiencies will be found in special education routing as well, but lacks the data to estimate the savings.

Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19
Work with the county to implement automated routing.	$145,000	$170,000	$170,000	$170,000	$170,000

FINDING 7.12

All 15 elementary schools are on the same schedule. With only seven secondary schools, this has resulted in a first transportation tier that is heavier than the second tier. The division has not analyzed the potential transportation savings from staggering the elementary start times. All elementary schools currently operate from 7:55 a.m. to 2:25 p.m. while all secondary schools operate from 8:45/8:50/8:55 a.m. to 3:35 p.m.

BCPS successfully implemented its current tiered schedule in 2011-12 and realized immediate savings in both miles and dollars. This first tiered schedule was logical, given that the division had never before staggered school start times and so it was a large change for the community to embrace. Nevertheless, it was directly responsible for a reduction of 14 route buses despite an increase of 254 regular education students being transported.

Based on the current locations of BCPS elementary schools, three are located further out than the others. Starting those three schools at an earlier time would be a logical starting point for a staggered schedule at the elementary level.

RECOMMENDATION 7.12

Using automated routing capabilities, investigate a staggered elementary bell schedule that makes greater use of a smaller fleet and provides more opportunities for drivers to work more hours.

This recommendation will likely have the effect of reducing the number of buses the division needs on a daily basis, as well as the number of drivers. It will likely result in more drivers being fully employed and thus eligible for full benefits, but with fewer drivers overall.

Given that the analysis would rely heavily on generation of multiple scenarios for board consideration, the division should not attempt a new elementary bell schedule until it has successfully implemented automated routing.

FISCAL IMPACT

Once automated routing is in place, this recommendation can be implemented by transportation staff with assistance from county staff and should result in cost savings. It is not possible to estimate that savings at this time, as it will depend on how many elementary schools are staggered to a different start time and what is the effect on the number of buses needed on a daily basis.

FINDING 7.13

The transportation supervisor is not involved in any discussions regarding special education transportation as individual education plans (IEPs) are being developed. Instead, special education transportation requirements are passed to the

transportation department after the IEP has been finalized. This creates a cost center over which the transportation supervisor has no input.

As shown in **Exhibit 7.8**, the transportation of special education students is not only costly, but also variable each year. While the cost per student is the lowest it has been in three years, it spiked nine percent from 2010-11 to 2011-12 overall with an increase of just one student.

Exhibit 7.8
Recent trend in exclusive transportation costs

Position	2010-11	2011-12	2012-13	% Change
Students Transported	97	98	119	23%
Route Miles	210,600	212,040	247,176	17%
Buses	22	23	24	9%
Total Operational Cost	$ 676,793	$ $744,227	$ $812,553	20%
Operational Cost per Mile	$ 3.21	$ $3.51	$ $3.29	2%
Operational Cost per Student	$ 6,977	$ $7,594	$ $6,826	(2%)

Source: VDOE Pupil Transportation Report, 2012-13.

At the time of the on-site work, the division had 23 cars assigned for the transport of special education students. The miles associated with this provision of transportation is not included in the annual reporting to the VDOE (and not included in the figures in the previous exhibit), so it is unclear how many miles are driven daily on these routes, but each car has a minimum of an assigned driver and one aide per student. Up to two students can be accommodated in a car, after that, a bus is needed.

Depending on the student's needs, BCPS transportation can be provided in a number of ways:

- The student can be assigned to an existing special education or regular route.
- The student's parents can be offered a mileage reimbursement if they provide transportation themselves.
- The division can provide transportation in a division-owned car.

The most expensive of these options is the last. According to staff, there are currently at least a few parents of special education students who provide transportation themselves and receive a mileage reimbursement. Although permissible, the division has not explored the possibility of contracting out some of its needs for special education students.

The current BCPS budget documents do not appear to include the use of federal *IDEA* funds to offset some of the cost of providing special education transportation. According to the chief financial officer some *IDEA* funds are used to support bus aide positions, but not the individual car transportation costs.

RECOMMENDATION 7.13

Include the transportation supervisor or assistant coordinator in IEP meetings where transportation alternatives are discussed.

At a minimum, the special services department should meet with transportation department staff to better understand the costs of transportation cost drivers of various IEP options. The finance department should develop a report to assist both departments in tracking the expenses associated with providing car transportation. The chief financial officer should investigate

greater usage of *IDEA* funds to support transportation expenses of students beyond what is normally paid for regular transportation.

If further research indicates that state law would allow the division to offer parents some form of a stipend to provide transportation for their own child and that would be less expensive than division-provided transportation, the division should develop appropriate contract documents for use in IEP meetings.

FISCAL IMPACT

This recommendation will require some several hours per month by the transportation supervisor or assistant coordinator to be spent in IEP meetings. It should result in both decreased transportation costs for special education students and increased use of *IDEA* funds to defray transportation expenses. However, with the available data, it is not possible to estimate the fiscal impact.

FINDING 7.14

The field trip request, approval, and scheduling process is almost entirely manual, requiring multiple signatures and reviews. Staff at the three high schools tend to submit some of their field trips requests electronically, but the other schools are not expected to do the same. In 2012-13, BCPS reported driving nearly 100,000 miles for field trips, which includes athletic trips (4% of all miles for the year).

Not counting the time sheets that drivers fill out after completing a field trip, there are at least three paper forms that various BCPS staff fill out by hand for each field trip:

- Field Trip Application – schools initiate the request process with this form. On it, in addition to typical information such as the date of the field trip and the number of students attending, they are instructed to attach:
    - What is the educational value of this trip? Objectives?
    - How does this trip fit into the school's curriculum and objectives?
    - Cite specific activities you have done/will do to prepare students for this field trip experience.
    - Cite specific activities which students will do during the field trip to enhance and heighten their learning.
    - Cite specific activities you plan to have students engage in after the field trip to assess their learning from the trip.
    - Why is this trip essential to your teaching and students' learning?

    This form must be manually signed by the teacher, principal, director of instruction, bus driver(s), and transportation supervisor.
- Schedule of Field Trips on School Buses – the transportation department prepares a weekly recap of field trips that have been scheduled that week, for any week in the future; and
- Field Trip Report – the driver completes a two-page report on the trip, noting
    - the type of trip: educational, competition, band, or other;
    - the type of competition: varsity, junior varsity, both, b-team, band, or other;

- o type of sport: one of 14 choices;
- o participants: boys, girls, or both;
- o date of departure, date of return;
- o number of passengers;
- o six different odometer readings and the total miles driven;
- o six different time readings and the total time for the trip; and
- o checkbox as to whether the bus has been cleaned.

This form must be manually signed by the driver, trip sponsor (teacher), and principal.

It does not appear that many of the data items collected on these manual sheets are compiled and analyzed in any form. For example, the division did not have reports detailing how many field trips each year include math educational objectives versus history educational objectives.

A number of software providers offer robust solutions for field trip management. For example, SchoolDude offers a cloud-based field trip planning and management solution that includes requests, budgets, mileage, and driver pay. It also generates automatic emails to drivers regarding trip requirements.

RECOMMENDATION 7.14

Adopt an off-the-shelf field trip software package.

This should not only reduce the shuffling of a tremendous amount of paper between schools and the central office but should also free transportation staff time for other activities. The division should adopt a solution that provides a variety of reports so that it can monitor field trips by school, destination, etc.

FISCAL IMPACT

The exact fiscal impact will depend on the system selected. The consulting team estimates that a suitable package can be found for $10,000, with annual updates of $1,000.

Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19
Adopt a field trip software solution.	($10,000)	($1,000)	($1,000)	($1,000)	($1,000)

D. State Reporting

Annually, school divisions are required to provide a wealth of information on transportation operations. These data are compiled into the "Superintendent's Verification Report."

FINDING 7.15

The division provides required state reports timely but does not regularly analyze the data to identify areas in need of improvement. Virginia requires school divisions to report on a wide number of transportation data each year. Once published, each division has a report that includes their own information and comparisons to the assigned demographic cluster average.

Although transportation department staff regularly file the required data timely, staff does not use it as a tool to drive continued operational improvements. For example, while the reported decrease of deadhead miles from 733,480 in 2011-12 to 582,660 in 2012-13 is impressive, it was not the result of any deliberate reduction effort.

The process of continual improvement requires use of benchmarks. **Exhibit 7.9** provides some examples of transportation benchmarks used in other divisions. The state reports could also provide a useful starting point for developing ideas for operational improvements.

Exhibit 7.9
Suggested transportation industry benchmarks

Benchmark	Measure
Preventable Accidents	1 : 100,000 miles
On-Time Performance	99.5% (includes all services)
Routing Utilization Efficiency	80% of available time or available capacity
Runs per Bus (a.m.)	2.3 – 2.5 (triple tiered system) 1.6 – 1.9 (double tiered system)
Bus to Mechanic Ratio	25 – 30 : 1 (depends on fleet type & age)
Spare Bus Ratio	12 – 15% (depends on fleet mix & trip volume)
Driver Turnover Rate	< 15%
Parts Cost per Mile (no labor)	$.16 - $.18 (depends on fleet type & age)
Maintenance Cost per Mile (parts, supplies & labor)	$.39 - $.43 (depends on fleet type & age - assumes 13,000 miles per bus per year)
Fleet MPG	6.0 – 7.0 (depends on fleet mix, type, age)
Driver Labor % of Operating Costs	39 - 43% (benefits & work comp excluded)
Total Labor % of Operating Costs	54 - 61% (benefits & work comp excluded)
Insurance & Risk % of Cost	5 - 10% (excluding workers compensation)
Annual Cost per Bus Operated	$30,000 - $50,000 per bus (no capital cost)

Special Education Services
   -% of Pupils Transported
   -% of Service Time
   -% of Total System Costs
	
	 5-10%
	 20-40%
	 30-50%

Fleet Useful Life	10,000 - 15,000 miles per year – 180,000 max. 10-12 years (spares 11-13 years)

Source: Prismatic, December 2013.

RECOMMENDATION 7.15

Use the data in the state reports as a starting point to compile annual comparisons of the BCPS transportation operation.

The division should analyze both year-over-year data and cluster/peer data to assess its performance and identify areas for future improvements. It should also include any or all of the suggested transportation industry benchmarks.

FISCAL IMPACT

This recommendation should only require a few hours of the transportation supervisor's time each year, but may generate ideas for improved efficiencies.

E. Training and Safety

The transportation supervisor enlists the help of driver trainers and other support personnel. Transportation training programs have the following objectives:

- monitor all safety issues related to transportation;
- ensure training meets the school division and state requirements; and
- investigate accidents and submit the proper reports to the VDOE.

The division's transportation training and safety programs are the responsibility of the transportation supervisor.

FINDING 7.16

The transportation department has had no accidents in the last three years for which the bus driver was at fault. In 2012-13, one bus was totaled in an accident, but it was determined not to be the fault of the bus driver. The industry standard on school bus accidents is one preventable accident per 100,000 miles, which would "allow" BCPS to have as many as 12 preventable accidents a year, given the current regular route mileage.

COMMENDATION

BCPS bus drivers and mechanics operate and maintain a low bus accident record.

FINDING 7.17

The division's mechanics have had few training opportunities. Currently, the transportation supervisor notifies mechanics of potential manufacturer training opportunities, but there are no expectations for a set number of annual training hours. The newest BCPS mechanic previously worked in a large school district in another state which provided an average of 120 hours per year in mechanic training. Likewise, BCPS does not offer a tuition assistance, a stipend, or salary increase for ASE certification.

In general, BCPS mechanics feel they are learning "as it comes through the door." The division has computer programs for diagnosing many bus problems, but recently let its license for transmission software erroneously lapse.

Based on anecdotal evidence from bus drivers and central office staff, the mechanics are doing an admirable job of keeping buses in good working order. They take obvious pride in their work and are a dedicated group. They could likely be even more efficient and effective with regular training on new bus technologies.

RECOMMENDATION 7.17

Provide annual training for bus mechanics.

Just as the division encourages teachers and school administrators to seek continuous improvement through professional development, it should do the same with its non-certified staff, including bus mechanics. The field of bus repair is always evolving and becoming increasingly technologically sophisticated.

The consulting team recommends that BCPS allocate $2,000 per year for mechanic training.

| Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19
Provide annual mechanic training.	($2,000)	($2,000)	($2,000)	($2,000)	($2,000)

F. Vehicle Maintenance and Bus Replacement Schedules

Vehicle maintenance, repair, and replacement planning is an internal service that supports the delivery of transportation services. A proper maintenance program is critical to the success of any school transportation department.

BCPS owns its bus fleet. Maintenance is performed at a centralized garage located a few blocks from the central office. In addition to school buses, the mechanics perform maintenance on a number of school division owned vehicles. Mechanics work one of two daily shifts in order to be available from 6:00 a.m. until 5:00 p.m. each school day.

FINDING 7.18

The division has a single maintenance facility for both its yellow and white fleets. The facility is small and poorly maintained. When a bus is pulled into a bay, there is a clearance of less than two feet at the rear and sides of the bus (**Exhibit 7.10**), creating cramped working conditions.

Exhibit 7.10
Limited clearance in garage bus bays
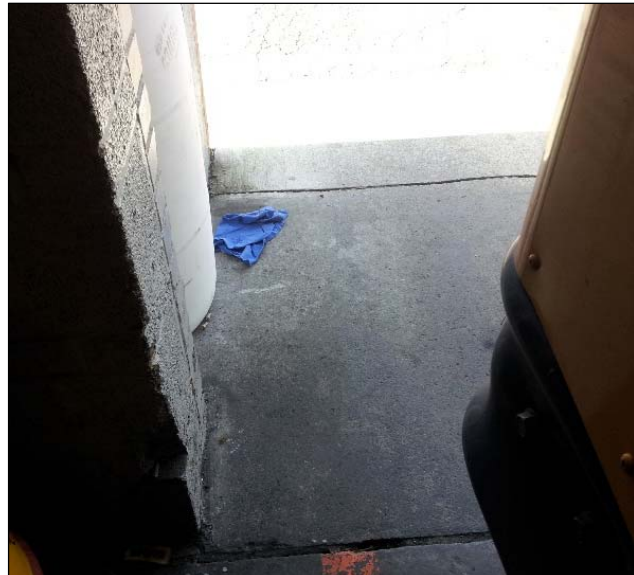
Source: Prismatic, December, 2013

The facility itself is sloping downward at one end, as shown by the angle of a machine on the floor in comparison to the window (**Exhibit 7.11**). Other facility problems included:

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- the lack of a traffic pattern for safe vehicle entry and egress;

- insufficient security fencing;

- liquid storage containers not properly labelled;

- slick floors in some parts of the facility;

- poor waste oil intermediate storage;

- insufficient lift equipment (the existing one was built in the 1940s and is no longer operable);

- eye wash stations missing components;

- first aid kits missing components;

- a second floor storage/employee break area whose only flooring is plywood sheeting rated for 150 pounds;

- waste oil used to heat the facility in colder months being transported in a hodge-podge of pipes that travel over work areas to reach the generator; and

- insufficient central storage so that parts are kept in multiple small, non-adjoining rooms.

Exhibit 7.11
Slope of current bus garage
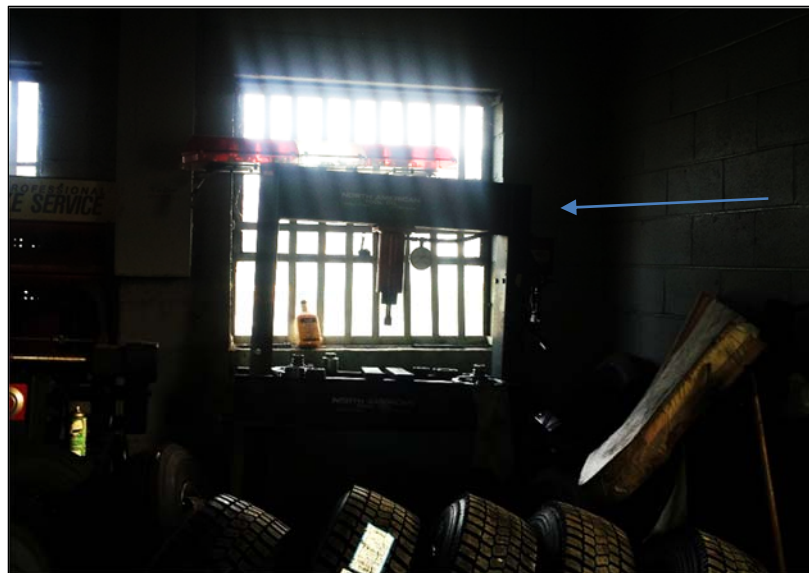
Source: Prismatic, December 2013.

Finally, the division lacks acceptable space for drivers and aides to congregate, if they choose, between their morning and afternoon duties. The current driver shack is small and unable to accommodate even a small percentage of the driver staff (**Exhibit 7.12**).

Exhibit 7.12
BPCS driver break area

Source: Prismatic, December 2013.

The mechanics are currently understaffed, considering the inventory of 229 buses and 126 cars and trucks. Using industry standards of one mechanic for 25-30 buses, BCPS should have between seven and nine mechanics just for the yellow fleet. However, there are seven mechanics (one is the lead), and they maintain not only the buses but also the cars and trucks.

The county has its own vehicle maintenance facility and employs mechanics who service cars and trucks. The facility could potentially serve both entities in a joint operation. According to staff, at one point several years ago, there were discussions about a joint facility, but they fell through; staff could not pinpoint any specific reason for the failure.

RECOMMENDATION 7.18

Develop a joint garage with the county, relocating all school division maintenance services to the new facility.

This should include repurposing the current garage area into a secure parking lot for a portion of the fleet, retaining the new fueling site there, and working with the county to contract with county employees for repair and maintenance of the BCPS white fleet. This would allow the bus mechanics to focus on their primary mission of supporting the bus fleet and would bring the division more in line with industry standards for mechanic staffing.

FISCAL IMPACT

The exact fiscal impact would depend on the arrangement determined with the county for joint use of facilities and contracting of car maintenance and repairs. According to division staff, it is likely that the county's current facility is sufficiently large to accommodate the BCPS mechanics without renovation. It may also have space that would be suitable for a driver lounge.

FINDING 7.19

The division lacks an adopted bus replacement schedule policy but has informally used a 15-year replacement schedule that matches state guidance. However, it has a number of route and spare buses that should have been replaced last year or this year but were not. It also has 10 buses that are older than 15 years.

The transportation department tracks the age of its buses and plans for replacement on a 15-year schedule. Buses are typically lease-purchased over a seven year contract. However, actual bus replacement is typically dependent on board budgeting decisions. As shown in **Exhibit 7.13**, the division has been inconsistent in its bus purchases over time. It apparently purchased only two buses in 2012, which necessitated a spike of 13 bus purchases in 2013. Such fluctuations in the purchase of equipment make budgeting comparisons difficult from year to year.

Exhibit 7.13
Number of buses by year of purchase
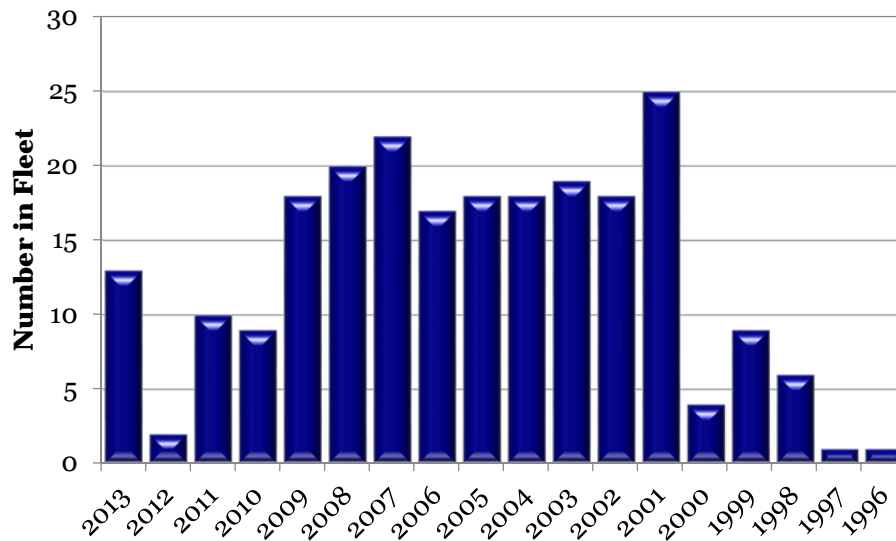
Source: BCPS, December 2013.

Bus replacement is one of the most important transportation policies a school board must establish. In essence, the school board determines the age of the school bus fleet. *School Bus Fleet* magazine[50] and other nationally recognized sources suggest school divisions maintain not more than a 12-year replacement policy. This means that the average age of all buses in the fleet is under 12 years. However, terrain, maintenance support, and other factors may dictate that a school division implement a shorter bus replacement cycle. The Governor of Virginia has recommended that the school bus replacement cycle for Virginia be 15 years.

RECOMMENDATION 7.19

Adopt a bus replacement policy and budget accordingly.

The division should adopt a bus replacement policy that considers bus age, mileage, repair history, and overall fleet size needs. This will generally equate to replacement approximately every 15 years. Without such a policy, school boards are often tempted to defer necessary bus purchases in tight budget times, creating a whipsaw effect in later years when greater bus purchases are necessary. Planning for a regular replacement cycle makes annual budgeting easier and helps guard against a tendency to avoid bus purchases in lean budget years.

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[50] http://www.schoolbusfleet.com

FISCAL IMPACT

The transportation supervisor can draft a policy for school board review in four hours. The consulting team recommends a replacement policy that will not put the division in the position of needing to replace more than eight percent of its fleet in a given year.

FINDING 7.20

The department has a white fleet of 126 cars and trucks for division use. Some, approximately 60, are maintenance vehicles that employees use daily in their jobs. Some, approximately 23, are used to transport special education students.

The final 43 are available as "staff cars" that end up seeing little annual use. When the transportation supervisor recently needed an additional car for special education transport, she found one staff car that had a total of eight miles' usage in a year. The division does not appear to have a formal process for tracking usage by department or individual. Many of the cars are parked at the central office, tying up spaces that could be used by staff. The transportation supervisor has attempted to reduce the number of staff cars but an effort from elsewhere within the central office is needed.

Although the division routinely obtains cars for its white fleet for free (surplused police vehicles), mechanics must spend time completing preventive and regular maintenance and the division must pay for registration and insurance. BCPS budget documents do not include a line item specifically for staff car expenditures.

RECOMMENDATION 7.20

Phase out all but a few staff cars in order to save parking space, as well as maintenance, registration, and insurance costs.

The superintendent should direct development of a tracking process to measure usage by each department and central office staff member in order to determine the exact number of cars the division should maintain. The division should only maintain staff cars in situations where paying the federal mileage reimbursement to the employee would exceed the cost of keeping a car in inventory.

Central office staff that previously utilized staff cars will need to be instructed in how to submit mileage reimbursement requests when they use their own cars for division travel. As the division does not have detailed records on the number of miles driven per year in the staff cars, the exact impact on the workload of those in the finance department cannot be calculated.

FISCAL IMPACT

The consulting team estimates that at least 30 staff cars could be eliminated from the division's white fleet. With a resale value of approximately $1,000 each and estimated annual maintenance, registration, and insurance costs of $500 each, implementing this recommendation will generate some revenue and avoid some costs.

Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19
Reduce fleet of staff cars.	$16,000	$15,000	$15,000	$15,000	$15,000

CHAPTER 8 — Technology Management

This chapter reviews the findings and recommendations related to technology management in Bedford County Public Schools (BCPS). The seven areas of review were:

A. Organization and Staffing
B. Instructional and Administrative Technology
C. Technology Planning and Budgeting
D. Technology Policies and Procedures
E. Inventory Control
F. Systems Infrastructure and Integration
G. Technology Acquisition, Donation, and Surplus Practices

The use of technology has enabled school systems to enhance operational, instructional, and business efficiency and effectiveness. Technological advances in hardware and software, paired with decreasing hardware prices and a push towards one-to-one computing, have precipitated an explosion in the proliferation of technology in today's schools.

The Foundation for Excellence Digital Learning Council introduced the *10 Elements of High Quality Digital Learning*[51] in the fall of 2010. These elements identify action to be taken by lawmakers and policymakers to promote a high quality education for all students. The Digital Learning 2012 State Analysis compares Virginia with the national average on each of the elements (**Exhibit 8.1**). Overall, Virginia scored 81 percent. While appearing rather low, the Commonwealth was behind only four other states. Virginia's biggest areas of concern include:

- Student Access – current caps on virtual school enrollment and restriction of access due to school division boundaries;

- Advancement – lack of opportunities to earn credits based on competency versus seat time; and

- Funding – lack of per course funding to pay providers for individual online courses and lack of course completion funding payment to providers based on student daily attendance, performance and competency.

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[51] http://www.digitallearningnow.com/10Elements/

Exhibit 8.1
Digital learning 2012 state analysis: Virginia

10 Elements of High Quality Digital Learning	Virginia Grade & Percentage		National Average Grade & Percentage	
1. Student eligibility: All students are digital learners.	C	75%	F	44%
2. Student access: All students have access to high-quality digital content and online courses.	D+	67%	C	73%
3. Personalized learning: All students can customize their education using digital content through an approved provider.	C	75%	D-	65%
4. Advancement: Students progress based on demonstrated competency.	D	63%	D	60%
5. Quality content: Digital content, instructional materials, and online and blended learning courses are high quality.	A	100%	A	93%
6. Quality instruction: Digital instruction is high quality.	A	100%	C+	77%
7. Quality choices: All students have access to multiple high-quality providers.	A	96%	D	65%
8. Assessment and accountability: Student learning is the metric for evaluating the quality of content and instruction.	A	100%	D	66%
9. Funding: Funding creates incentives for performance, options, and innovation.	D	63%	F	44%
10. Delivery: Infrastructure: Infrastructure supports digital learning.	C	75%	F	51%

Source: http://www.digitallearningnow.com/wp-content/uploads/reportcard/2012/states/VA.pdf

BCPS technology services are provided within the technology department that reports to the superintendent of schools. The responsibility of integrating technology into the curriculum is shared between the director of technology and the director of instruction. The technology department's primary responsibilities include:

- budgeting for all division-level technology purchases, systems, and initiatives;
- designing, installing, managing, and supporting the local area network (LAN) and the wide area network (WAN);
- purchasing, installing, maintaining, and supporting division-wide servers;
- purchasing, installing, and maintaining the division's network filtering and anti-intrusion systems;
- purchasing, installing, and supporting all computers and peripheral equipment, including the school board meeting room sound system;
- hosting division wide-applications including the finance and student data management systems;
- maintaining the hosted division web site and related applications;
- providing instructional technology-related professional development;

- providing support for all instructional software; and

- providing instructional technology-related assistance, including instructional data analysis, to school leadership and staff.

In total, the consulting team gave two commendations in this chapter:

- The school division has developed an exceptionally talented staff of network, systems, and data administrators.

- BCPS maintains a high-speed wide area network (WAN) that consists of fiber-optic cable and microwave antenna connectivity.

The consulting team also made 13 recommendations in this chapter:

- Evaluate and implement options that would enhance the efficiency and effectiveness of the field technicians.

- Hire and train an individual to assist the data manager and develop a set of operating procedures for all mission critical functions.

- Prepare a detailed implementation plan for the Virginia "Learning Backpack" initiative.

- Improve the technology plan by incorporating the technology and budget plans necessary to support the desired blended learning technology environment.

- Develop guidelines that govern the process for deploying new technologies.

- Develop a technology replacement plan.

- Develop a comprehensive disaster recovery plan that will ensure the ability to resume critical data functions in the event of a catastrophic loss.

- Create comprehensive written procedures and make them accessible to essential division staff.

- Develop an inventory reporting system that will track all of the technology assets of the division.

- Survey the existing network infrastructure, improving wiring and upgrading network switches where necessary.

- Negotiate with the local Internet provider to provide greater bandwidth to the school division.

- Develop a plan that will support the equitable deployment of technology resources across the division.

- Adopt strict guidelines governing the acquisition of software and hardware that will ensure compatibility with current operating systems and divisional support capabilities.

The estimated fiscal impacts of those recommendations for which the consulting team could reasonably quantify into dollars are shown below. Some recommendations will have fiscal impacts that depend on the specific implementation path chosen by the division while others will only require staff time; fiscal impacts for those recommendations are not shown here.

	Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19	Total
8.3	Hire a data technician to assist with student data management.	($41,281)	($41,281)	($41,281)	($41,281)	($41,281)	($206,405)
8.12	Contract for the development of an infrastructure improvement plan.	($50,000)	$0	$0	$0	$0	($50,000)

A. Organization and Staffing

Today, technology is a foundational aspect of almost every organization. Technology drives efficiencies and analyses in school divisions. The requirements of *No Child Left Behind* (NCLB) include the expectation that school divisions make data-driven decisions, that students achieve technological literacy before 9th grade, and that teachers effectively integrate technology into classroom instruction.

Exhibit 8.2 depicts the current organization of technology in BCPS.

Exhibit 8.2
Technology organizational structure
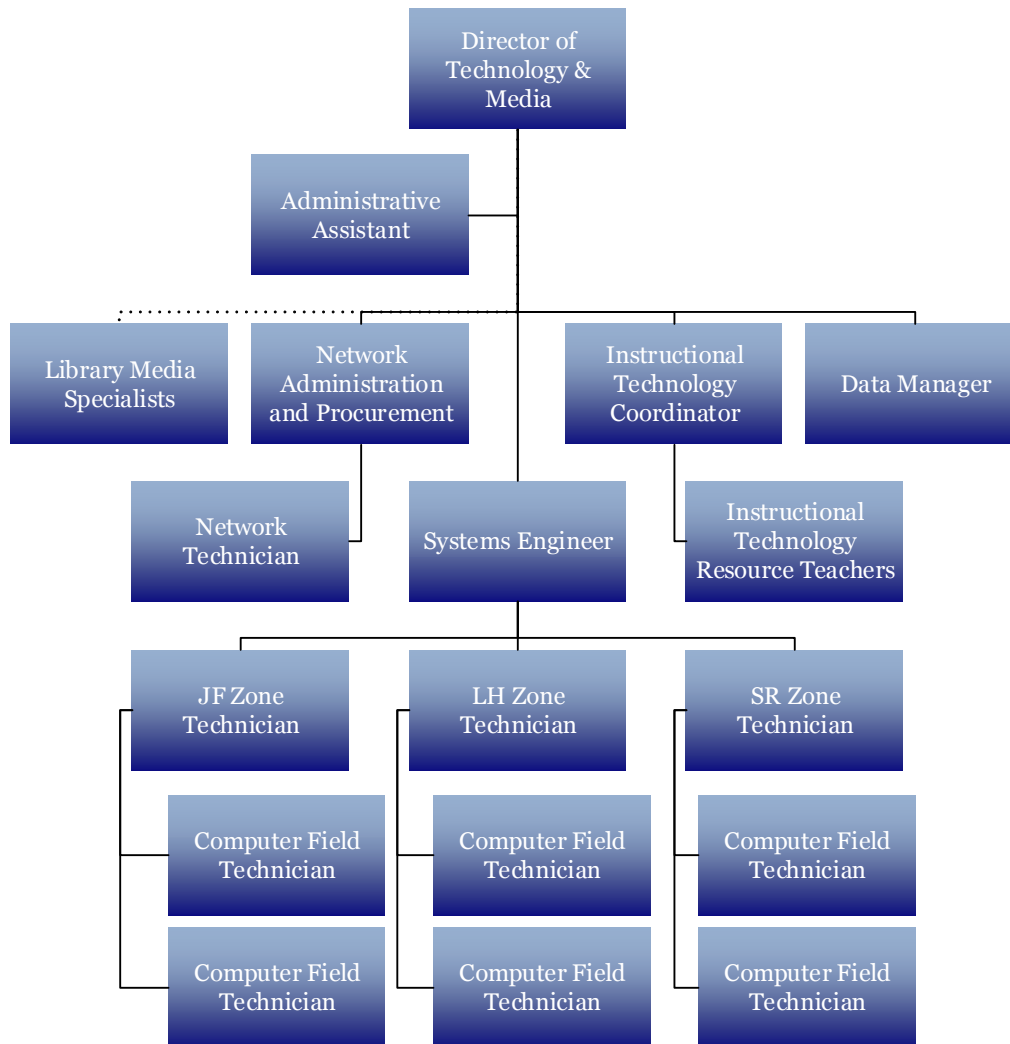
Source: BCPS, December 2013.

FINDING 8.1

The BCPS technology department staff is effective. Ideally, technology is one area of a school division that supports administrative and instructional personnel in a positive manner. Organizing and providing technology resources to effectively achieve this outcome can be extremely challenging.
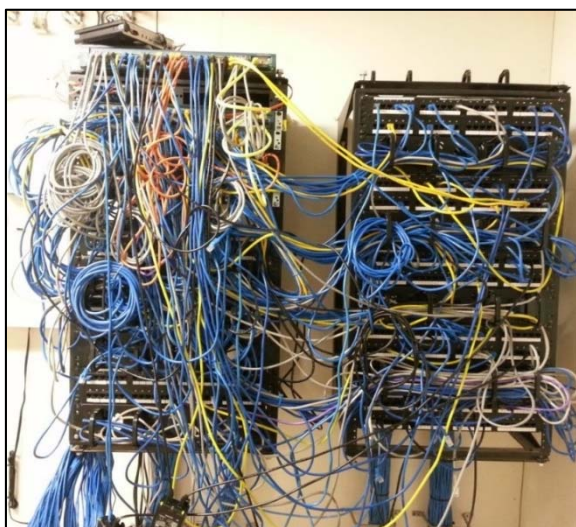
The current technology department has evolved over the past six years under the leadership of new director. The technology director is a former teacher who has evolved into a technology visionary. In the past five years positions of network administrator, systems engineer, and network technician were added through the budget process. Current administrators were promoted from the ranks of existing technology staff.

Selected individuals were provided educational opportunities to develop necessary skill sets as the positions evolved. As a result, BCPS has developed a highly educated staff that is self-

sufficient and requires little outside professional assistance. Many divisions must rely heavily upon outside technology firms for planning, design, and implementation of infrastructure enhancements.

Exhibits 8.3 and **8.4** offer a depiction of a critical network switch before and after the appointment of a network administrator. The improvements are quite astonishing. Prior to the assignment of the new technical staff, network changes were done with little planning. The after picture is evidence of adhering to planning and design standards.

<table>
<tr><td align="center">Exhibit 8.3
Network switch (before network administrator)</td><td align="center">Exhibit 8.4
Network switch (after network administrator)</td></tr>
</table>

Source: BCPS, December 2013.

Source: BCPS, December 2013.

COMMENDATION

The school division has developed an exceptionally talented staff of network, systems, and data administrators.

FINDING 8.2

The division's allocation of field technicians is inadequate for software and hardware support. Many BCPS devices are old and require constant care and replacement of components. Technician staffing is well below best practice levels.

The field technicians are responsible for the repair of all technology resources within a school building with the exception of Apple products. Some devices in computer labs and classrooms are 15 years old. In addition, the technicians must repair interactive whiteboards, printers, projectors, and other technology devices. Most computer lab computers are within the five year warranty coverage, but most of the classroom computers are out of warranty coverage.

Technology trouble tickets (work orders) are entered into an on-line tracking system by the school's media specialist. The zone technicians monitor the workloads of the assigned field technicians and assist where needed. Each of the three school zones is serviced by coordinating

a zone technician, a middle or high school technician (shared three days high school, two days middle school) and an elementary school technician (shared between five schools, one day per week).

Exhibit 8.5 breaks down trouble tickets by type of service and by assignment for the period January 2013 through November 2013. During that period, BCPS recorded 3,824 trouble tickets. As shown, technicians spend most of their time providing software support (42%) followed by hardware support (22%). Printer support, network support and the setup of peripheral devices account for a combined 20 percent.

Exhibit 8.5
Trouble tickets
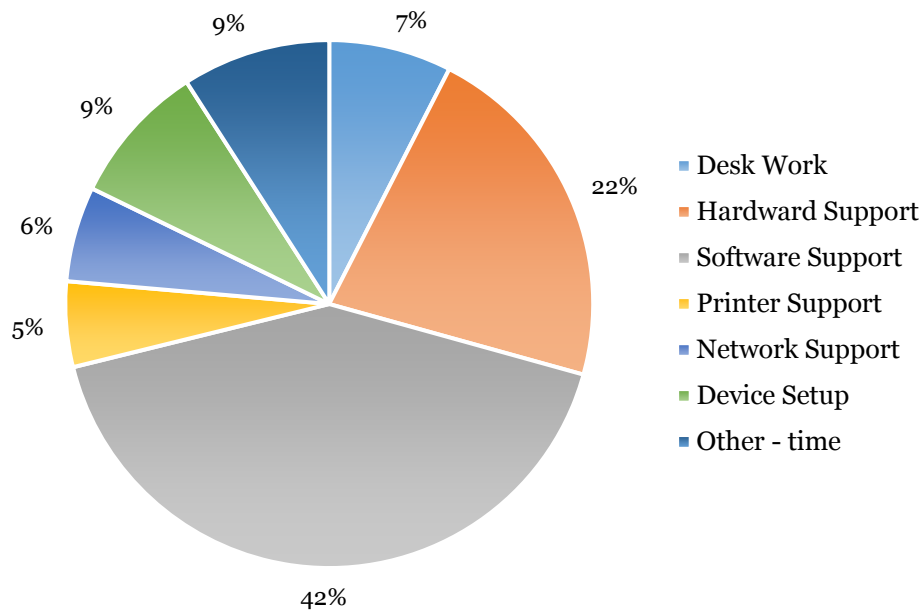
Source: BCPS, November 2013.

IT management staff report that, although the field techs do a very good job of prioritizing work tickets, there is a significant delay at the elementary schools that are visited only once per week. Further, due to the constrained manpower, important preventive maintenance is not being performed. Currently there is no funding for overtime.

One yardstick for measuring the necessary technology staffing is the ratio of computers to technicians. The International Society for Technology in Education (ISTE) has developed numerous benchmarking materials and standards related to technology staffing. The ISTE Technology Support Index, as shown in **Exhibit 8.6,** is a rubric for information technology departments to determine technician staffing requirements.

Exhibit 8.6
ISTE technology support index

Index Area	Technology Efficiency			
	Low	**Moderate**	**Satisfactory**	**High**
Computer to technician staffing ratio (number of computers to technicians)	250:1	150:1 to 250:1	75:1 to 150:1	Less than 75:1

Source: ISTE website, 2008.

The division's inventory of computer devices (exclusive of Apple products) totals 4,685, which yields a ratio of one field/zone technician per 520 devices. This places BCPS at less than half the ratio needed to be considered in the ISTE "low" category. In addition to the 4,685 computers the technicians are responsible for the ancillary devices shown in **Exhibit 8.7**.

Exhibit 8.7
Ancillary technology equipment

Elementary Schools	LCD Projectors	SMART Boards	Document Cameras	Printers	Network Copiers
Bedford	32	26	26	36	3
Bedford Primary	19	21	21	12	1
Big Island	17	15	14	18	1
Body Camp	14	14	11	7	1
Boonsboro	27	19	17	10	2
Forest	29	27	24	41	2
Goodview	36	37	32	15	1
Huddleston	18	17	13	18	1
Moneta	15	14	12	8	1
Montvale	24	21	17	13	2
New London Academy	26	20	20	32	1
Otter River	18	13	7	14	1
Stewartsville	28	28	23	27	3
Thaxton	16	15	16	14	1
Thomas Jefferson	42	34	33	15	4
Elementary Total	**361**	**321**	**286**	**280**	**25**
Middle Schools	**LCD Projectors**	**SMART Boards**	**Document Cameras**	**Printers**	**Network Copiers**
Bedford	35	28	29	19	1
Forest	66	20	51	44	3
Staunton River	42	30	34	29	2
Middle Total	**143**	**78**	**114**	**92**	**6**
High Schools	**LCD Projectors**	**SMART Boards**	**Document Cameras**	**Printers**	**Network Copiers**
Jefferson Forest	90	19	24	102	5
Liberty	53	9	36	38	3
Staunton River	62	16	38	29	5
Science & Tech Center	15	9	6	52	2
School Board Office	2	1	1	54	5
High Total	**222**	**54**	**105**	**275**	**20**
TOTAL	**726**	**453**	**505**	**647**	**51**

Source: BCPS, December 2013.

RECOMMENDATION 8.2

Evaluate and implement options that would enhance the efficiency and effectiveness of the field technicians.

The school board should consider, as a budget item, the addition of technology field technicians in an attempt to approach the staffing levels for at least low efficiency on the ISTE scale. Alternatively (or in addition to), the division should consider additional technologies and/or training that may reduce the current technician workload.

For example, the school division could investigate the use of networked copiers as a viable printing solution. Digital copiers can print documents at a fraction of the cost of a desktop printer. They do not require expensive toner and they are built for greater duty cycles. As an added benefit a significant number of printers may be removed from inventory thus allowing field technicians to work on more important issues.

The school division should also pursue the notion of standardizing computer hard disk images. A common image would eliminate the need for individual machine customization thus lessening the technician's workload. It is reported that 42 percent of the technician's time is spent on software related issues. It is most likely that the non-standard computer hard drive images are exacerbating the manpower problems.

The division should investigate the ability to push standard computer images without physically touching each machine. Network management systems, if installed within the server operating system, can allow for the management of individual machines from a single location.

FISCAL IMPACT

The division would need to hire nine additional filed technicians to meet the minimum ISTE technician staffing ratio. At a cost of $50,000 per field technician ($450,000 total) this option may be cost prohibitive. However, there are a number of other actions that may increase the effectiveness of the technical support staff that should be considered before staff is added. Moreover, any final staffing recommendations should consider the technology environment in which the department operates: A high technology environment may actually require less technician support than a lower technology environment, if it includes virtualization, for example.

Most copier vendors are willing to analyze a division's total digital printing requirements and make recommendations for significant cost savings resulting from the enhanced use of digital copiers. The study should be of no cost to the division. Additional efficiencies resulting from equipment standardization as well as enhanced network management systems should reduce the demands on field technicians.

Due to the uniqueness of any organization's network it would be difficult to accurately predict the cost of a network management system. The existing technology staff would be tasked with the development of a request for proposal that will address Bedford County's needs.

B.   Instructional and Administrative Technology

The school division supports more than 60 division-wide administrative and instructional software systems in its inventory for BCPS students and staff. Student information, finance,

human resources, library circulation, and curriculum and assessment systems are examples of the software systems that perform critical functions and are used by a majority of users within the division.

FINDING 8.3

The school division relies heavily upon the division data manager for collection and reporting of all student data. The data manager has worked with PowerSchool developers to understand the actual program code and date file layouts. As such, he is able to make systems modifications and generate a whole host of user reports. One example is the addition of data elements in support human resource reports related to teacher licensure and "highly qualified teacher" status. Another example is the generation of the special education December 1 child count report that was previously generated by a stand-alone system.

In addition, the data manager is called upon to assist schools in the reconciliation of student data, providing uploads of student data to various benchmark testing programs and assisting principals in the use of the Virginia Dashboard (Datacation, used for student assessment analysis and reporting).

However, the data manager functions as a standalone position in a mission critical area. There are no written procedures for the processes that he has developed nor is there an individual available to provide complete coverage for the position. The director of technology can keep PowerSchool functioning as a data collection facility; however, he would not be able to run critical reports and data uploads to the Virginia Department of Education.

RECOMMENDATION 8.3

Hire and train an individual to assist the data manager and develop a set of operating procedures for all mission critical functions.

The hiring of a lower skilled individual would allow more manpower in the department for the constant need for data reconciliation. Schools are primarily responsible for the entry of student data however it is the data management function that is responsible for discovering any data inconsistencies. Virginia's Educational Information Management System (EIMS) depends upon "clean data" for individual student and school evaluations. Tracking down erroneous entries is time consuming and draws the data manager from more important tasks.

The assistant could also be trained to perform other routine tasks and eventually learning some of the more complex responsibilities of data management. With a set of procedures this individual should, over time, be able to fill in for the data manager in his absence.

FISCAL IMPACT

The cost of a data technician is estimated at $41,281 per year assuming a grade 11 position at step 5 with 25 percent in benefits.

Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19
Hire a data technician to assist with student data management.	($41,281)	($41,281)	($41,281)	($41,281)	($41,281)

FINDING 8.4

The Virginia Department of Education (VDOE) is embarking on a student "Learning Backpack" initiative that will provide a state share of funding for the deployment of individual student laptop/tablet computers for each high school student on a phased deployment schedule.

Next year's state funding formula will provide proportional funding for all ninth grade students. In subsequent years, funding will be provided for each rising ninth grade population until all four high school grades are equipped with devices. After the four-year cycle, devices from graduating seniors will be distributed to incoming freshman.

BCPS is piloting an initiative in its three middle schools, assigning a different laptop/device model to one eighth grade team in each school in each. After the pilot, the division plans to select one model for full implementation. The VDOE Learning Backpack initiative could support the rollout of this project to the high schools.

RECCOMENDATION 8.4

Prepare a detailed implementation plan for the backpack initiative.

A successful program must include a planning process that addressed budgetary implications, selection, acquisition, implementation and follow-up evaluation. The budget must be able to handle the local funding share of the initiative's computer requirements.

The budget must also be able to accommodate the needs for any infrastructure enhancements necessary to support the great influx of wireless network devices. In addition, any requirements for additional software or licenses must be included in the fiscal plan.

A selection process should be developed that includes all interested participants, including technology services. A set of evaluation criteria should be established and the selection made that meets all of the program and division's needs.

The acquisition of the new equipment, software, and infrastructure must be coordinated so that all components are onsite and fully functional prior to the distribution of the devices. All instructional staff must be involved in the planning of the initiative and must be well- instructed in all components of the program. Significant staff and curriculum development must be completed prior to the start of the program. Finally a set of measurable outcomes needs to be established and evaluated after the program is underway.

FISCAL IMPACT

Plan development can be completed by the superintendent with assistance from department and school-based leaders in 30 to 40 hours. While the VDOE funding will provide significant resources for four years, BCPS will need to provide some local matching during that period and will need to provide funds for replacement devices after the initiative.

C. Technology Planning and Budgeting

Successful technology planning is the foundation for successful technology implementation and development. School division technology is not just a stand-alone program; it is a long-term, ongoing effort that affects every aspect of division operations. The technology planning process is complicated. There are many factors to consider, including instructional integration, legislated data reporting, funding, training, and support staffing.

Technology plans should cover between three to five years. By analyzing current trends in division demographics and available technology, planners can predict what the needs of the division will be and what technology will be best available to best fit those needs. Technology, however, is the fastest segment of our society, so frequent updates and revisions of any technology plan are necessary.

No Child Left Behind (*NCLB*) legislation sets the expectation that divisions will make data-driven decisions concerning instructional delivery and interventions, that students will achieve technological literacy before their ninth grade, and that teachers will effectively integrate technology into classroom instruction. Meeting these mandates requires that divisions have a seamless plan tying instruction, technology, professional development, scheduling, and budgetary considerations together to support increased effective use of technology in their classroom.

FINDING 8.5

Although the division has a detailed technology plan, it lacks funding and sufficient consideration of the impacts of the anticipated implementation of personalized learning. A plan without a detailed funding mechanism is generally nothing more than a wish list.

The division's 2011-2016 Technology Plan was adopted by the school board in 2011. Its goals are aligned with the National Educational Technology Plan, the Educational Technology Plan for Virginia, and the BCPS Strategic Plan. The plan was developed by a wide-ranging group of 42 individuals that represented the Technology Focus Group, the Technology Advisory Committee, and the Teacher Technology Advisory group.

The process included needs assessment utilizing a survey of school staff, parents, students and community members. In addition the Technology Focus Committee completed a SWOT (strengths, weaknesses, opportunities, and threats) assessment.

Using the division's mission, vision, goals, and strategies, the group developed a local strategy and measurement criteria based upon the Virginia state goals and objectives. The resulting plan was reviewed and approved by the VDOE. As a result of an approved technology plan, the division is annually eligible for E-Rate and Virginia Public School Authority Technology Funds, totaling $1.1 million.

The consulting team found the development of the BCPS technology plan to be commendable in many areas. However, the plan lacks a key element: a budget plan. The school division is embracing the concept of blended learning that will enhance student participation in personal, individualized learning, but at the same time, put a greater demand on technology resources and internet connectivity.

Blended learning allows teachers to work with students based upon a student's learning style and strengths. The most significant impact of this program in relation to technology is the concept of flipping. In this model, students are expected to gather lesson content from various online sources, encouraged to access the web for supplemental materials, and be prepared for classroom and collaborative activities. As internet access to a vast array of content sources is required, it is imperative that the equipment, infrastructure and training are in place to support the students' needs.

As yet, BCPS lags behind its peers in technology spending. **Exhibit 8.8** provides a comparison of technology spending in the division and its peers. As shown, BCPS ranks next to last and $43 less than the peer group average per pupil.

Exhibit 8.8
Comparison of technology spending, 2012-13

Division	Per Pupil
Fredrick	$ 491
Franklin	$ 436
Montgomery	$ 422
Rockingham	$ 398
Augusta	$ 378
Washington	$ 318
Peer Division Average	**$ 406**
Bedford	**$ 363**

Source: VDOE Budget Office in response to Prismatic request, 2013.

Technology can no longer be an afterthought or add-on in today's classrooms. It must be purposely integrated into instructional strategies and practices. In order for that to happen, funding must be available to ensure that classroom technology is up-to-date and usable. Several studies, including research by the Gartner Group, report that organizations should be budgeting between four and six percent of their overall budgets for technology. There are no established best practices or standards in this area for K-12 schools. However, some states are moving in that direction. Massachusetts, in 2006, recommended that districts budget $425 per student, considering total cost of ownership (TCO).[52] This recommendation was in line with the lower end of the Gartner Group recommendation, as $425 per student was four percent of total per-student spending in Massachusetts that year. This traditionally includes calculations of indirect costs, such as teacher time lost for support issues, as well as direct costs. Four percent of the BCPS 2011-12 expenditures would have been $384 per student.

The division has and continues to face significant fiscal challenges. Reports of a recent $10 million budget reduction and a continued downward trend in revenue have placed hardships on all facets of the school division. The cancellation of the second semester of the Cohort Staff Development program is but one example of technology cuts in the current year.

RECOMMENDATION 8.5

Improve the technology plan by incorporating the technology and budget plans necessary to support the desired personalized learning technology environment.

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[52] Approximately four percent of total budget.

It is imperative that all involved parties partake in the planning for expanded services and equipment, prior to the implementation of any new initiatives. The chief financial officer indicated that next year looks even worse: With the impact of increased benefit costs and lower enrollment, the division is looking at a budget for next year that will be leaner than this year. Unfortunately if the budget pie is not increasing in size, any increase in technology funds will need to be financed by reductions in other areas of the budget. The reality is that one cannot continue to do more with less.

The division must align its expectations with its resources. Excitement for new technologies and programs must be tempered with a strong dose of reality. It is time that the division focus on what is most important and channel its resources in that direction. The current process for adding new devices and programs only dilutes the effectiveness of the entire technology program.

FISCAL IMPACT

A combined total of 40 hours staff time, among all BCPS leaders, is estimated as needed to implement this recommendation. If the division elects to fund its technology plan at four percent, an additional $21 per student will need to be allocated annually.

FINDING 8.6

The division lacks detailed planning for the evaluation, acquisition, and implementation of new technologies. Further, there appears to be a significant lack of coordination in the planning and execution of technologies.

Various BCPS staff reported that a number of technology roll-outs have failed due to lack of planning and coordination. For example, the division planned to utilize an online registration system for students beginning in 2013-14. They set out to acquire and implement a vendor-developed application named Infosnap. The system was intended to allow parents to input vital student data via an online site. Infosnap would then provide an upload of student demographic information to the PowerSchool student data system.

The vendor failed to provide an operating platform in time for the data management staff to install, test, and prepare for the opening of school. As a result, individual schools were left to gather and enter information into PowerSchool.

In another instance, the division attempted to roll out electronic math textbooks in 2013-14. The decision was made apparently with little input from technology services and it was reported that the process seemed to have been coordinated solely by the instructional administrative staff. It was anticipated that the students would be able to readily access the E-Textbooks and related supplemental materials online. There was insufficient coordination in uploading student information to the textbook vendor, so there was a delay in accessibility. The access to the vendor database has since been resolved; however, some students do not have access to the internet at home. In response, the division has burned CDs for home use and classroom sets of textbooks have been acquired for classroom work.

The consulting team found a number of concerns regarding a lack of communications and technology initiatives:

- departments do not seem to communicate with others when making decisions;

- departments seem to protect their individual sandboxes and do not seem to care about how they impact others;

- decision-makers do not seem to be open to constructive criticism;

- users are usually the last ones to be included in the roll-out of a new technology and tend to be told to "just make it work"; and

- the "chain of command" sometimes leaves key individuals out of the loop.

RECOMMENDATION 8.6

Develop guidelines that govern the process for deploying new technologies.

The guidelines should include a process for identifying all of the direct and related tasks necessary to complete the project. In addition, the guidelines should detail how all of the specific tasks are to be assigned and coordinated throughout the entire development and deployment cycle. It should be clear who is responsible for which tasks and who is responsible for overseeing the entire process.

The process should begin with a stated need and not a newfound solution. The consulting team recommends that for each new need, the division convene a project management team from existing staff, based on required talents and individual expertise. The teams would be ad hoc and assigned to one project. Certain staff members may be assigned to several project management teams. **Exhibit 8.9** outlines a model process.

Exhibit 8.9
Model project process
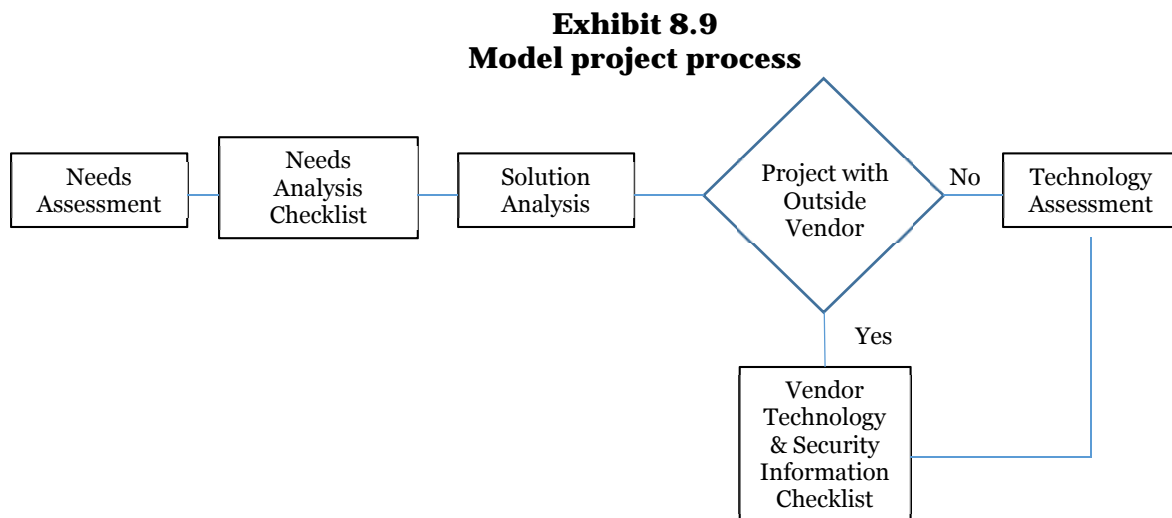
Source: Prismatic, December 2013.

The first step in the process is the needs assessment which is completed by the user(s). This step allows the project owner to iterate key information about the project to the larger audience. The needs assessment should include:

- Scope of need: describe the need
  - Describe the project benefits (BCPS vision and goals)
  - Target audience
  - How many schools or offices will be impacted?

- Funding
- Timeline
- Service and support needs: What types of resources can you provide for the project?
  - What type of resources and assistance do you need from the IT department?
- Customer Information: primary contact
  - Project sponsor
  - Endorsing member

Based on the information gathered during the needs assessment step, the project management team puts the project through a three-step vetting process:

1. **Needs Analysis Checklist**: The project management team reviews the user's needs and creates a project scope document. The scope helps identify potential resources and solutions for the project. Also in this step, the team verifies the information provided by the project sponsor and collects additional information that is necessary for the scope of the project.

2. **Solution Analysis**: The project management team reviews the proposed project and tries to find a solution that will deliver the highest value with the least amount of resources. During this step, the team looks to see if the division's existing application(s) or solution(s) can address the project's needs. If there is no existing application, the team seeks to determine if an off-the-shelf commercial product(s) can be used to address the needs of the users. The team recommends a custom development solution only if there is no reasonable way to address user's needs with an existing solution. If the recommended solution involves utilizing a vendor, the division requests detailed technical information from the vendor in order to properly asses the project. The information collected during this step includes hardware, software, network, database, security, support, and training.

3. **Technology Assessment**: The project management team identifies the technical components (e.g., servers, support, and network) of the solution. IT determines what technologies are going to be used and their impact on the existing technology infrastructure.

Upon completion of these steps the department sends the recommended solutions to be reviewed by the division's senior leadership for consideration and approval to proceed as a project. This process ensures the proposed project will work with the existing technology of the division, that there are no duplicative solutions within the division, and if there is an existing solution, the division can purchase it rather than developing one.

FISCAL IMPACT

The guidelines can be developed by the technology director. The consulting team estimates they can be developed with approximately 40 hours of effort.

FINDING 8.7

The division lacks an equipment replacement plan. Many staff members observed that the division has been unsuccessful in maintaining a reasonable replacement schedule for aging computers.

To achieve satisfactory efficiency status on the ISTE Index, equipment should be placed on a

four- to five-year life cycle. Some categories, such as student lab computers, may require more frequent replacement than those computers used in administrative capacities. Additionally, the ISTE Index indicates that lacking a computer replacement schedule of any kind falls into the low efficiency category. Failing to surplus equipment when it is no longer usable and continuing to service obsolete equipment also fall into the low efficiency category.

RECOMMENDATION 8.7

Develop a technology replacement plan.

Using existing inventory information, the technology director should establish a priority list of which types of computers are to be replaced first (e.g. student use, and then, in what order others will be replaced) and with what type of device. The technology director should also establish the expected longevity and scheduled replacement for each computer category.

Once these replacement schedules have been established, the superintendent should annually link district general funds designated for computer replacement to the number of computers to be replaced. The same process can be used for other computer-related equipment, such as printers.

FISCAL IMPACT

The technology director can develop the priority list in 40 hours. The fiscal impact of this recommendation will depend upon the replacement schedule adopted. For example, a five-year replacement schedule will be less costly than a four-year schedule. The actual fiscal impact cannot be determined until inventory is assessed and prioritized.

FINDING 8.8

BCPS does not have a comprehensive disaster recovery plan. In the event of a natural disaster or severe power surge, the division does not have procedures documented to ensure that its critical data, systems, and programs can be brought back to pre-disaster status. Should a catastrophic event occur, such as a hurricane, flood, fire or vandalism, the division's data would be at risk of loss. In addition to data loss, the division would not be able to perform important functions related to student information processing and key business operations until the original systems were restored.

Currently, the division performs daily backups for all critical systems. The information is stored at an off-site location. However, this procedure is not a comprehensive plan, as it is missing important elements necessary to allow the division to recover key systems and data in the event of a disaster. **Exhibit 8.10** defines the process of developing an effective disaster recovery plan.

Exhibit 8.10
Summary of essential disaster recovery plan elements

Step	Details
Build the disaster recovery team.	Identify a disaster recovery team that includes key policy makers, building management, end users, key outside contractors, and technical staff.
Obtain and/or approximate key information.	Develop an exhaustive list of critical activities performed within the system.
	Develop an estimate of the minimum space and equipment necessary for restoring essential operations.
	Develop a timeframe for starting initial operations after a security incident.
	Develop a list of key personnel and their responsibilities.
Perform and/or delegate key duties.	Develop an inventory of all computer technology assets, including data, software, hardware, documentation, and supplies.
	Set up a reciprocal agreement with comparable organizations to share each other's equipment or lease backup equipment to allow the system to operate critical functions in the event of a disaster.
	Make plans to procure hardware, software, and other equipment as necessary to ensure that critical operations are resumed as soon as possible.
	Establish procedures for obtaining off-site backup records.
	Locate support resources that might be needed, such as equipment repair, trucking, and cleaning companies.
	Arrange with vendors to provide priority delivery for emergency orders.
	Identify data recovery specialists and establish emergency agreements.
Specify details within the plan.	Identify individual roles and responsibilities by name and job title so that everyone knows exactly what needs to be done.
	Define actions to be taken in advance of an occurrence or undesirable event.
	Define actions to be taken at the onset of an undesirable event to limit damage, loss, and compromised data integrity.
	Identify actions to be taken to restore critical functions.
	Define actions to be taken to re-establish normal operations.
Test the plan.	Test the plan frequently and completely.
	Analyze the results to improve the plan and identify further needs.
Deal with damage appropriately.	If a disaster actually occurs, document all costs and videotape the damage.
	Be prepared to overcome downtime on your own; insurance settlements can take time to resolve.
Give consideration to other significant issues.	Do not make a plan unnecessarily complicated.
	Make one individual responsible for maintaining the plan, but have it structured so that others are authorized and prepared to implement if it is needed.
	Update the plan regularly and whenever changes are made to your system.

Source: National Center for Education Statistics, "Safeguarding Your Technology," April 2003.

PRISMATIC
SERVICES, INC.

RECOMMENDATION 8.8

Develop a comprehensive disaster recovery plan that will ensure the ability to resume critical data functions in the event of a catastrophic loss.

To successfully implement this recommendation, BCPS should first establish a disaster recovery planning committee. During the planning process the division should classify applications and systems into categories such as mission critical, critical, essential, and non-critical. These categories indicate how important the application or system is to the division's operation and whether or not the application or system functions can be performed manually.

The division should then determine the desired restoration timeframe for each category. Results of these discussions will be the primary drivers of the scope of the plan and the financial cost to the division for implementing the disaster recovery plan.

FISCAL IMPACT

This recommendation can be implemented by current staff.

D. Technology Policies and Procedures

Having policies and procedures is essential for any department to be effective and in compliance with state and federal regulations or laws. Divisions need clear policies and procedures to guides its often large technology purchases and to support effective and acceptable use of those resources.

FINDING 8.9

The technology department does not currently have a comprehensive procedures manual. The positions of system engineers, network administrator, and data manager have been added as key technology positions over the past several years. Each is a singular position, working independently, and in charge of a key technology function. Each has also developed their process for managing their areas of responsibility.

The loss of any one of these individuals would severely impact critical aspects of the technology system. There are no written procedures that would allow an individual to step in and perform all of the necessary functions of these particular positions.

The department lacks written policies and procedures in areas including acquiring computer equipment and software, desktop, laptop, printer, and projector standards, donation guidelines for hardware and software, and information systems help desk guidelines. In addition, there are no written procedures, such as back-up procedures, network services help desk guidelines, or for dealing with email, user account creation, and password creation and deletions.

Developing and implementing well-written and organized procedures helps an organization to:

- protect the institutional knowledge of an organization so that new employees can benefit from the knowledge and experience of experienced former employees;

- provide the basis for training new employees; and

- provide a tool for evaluating employees based on their adherence to procedures.

RECOMMENDATION 8.9

Create comprehensive written procedures and make them accessible to essential division staff.

To implement this recommendation, the technology department should first collect and review all existing written procedures. Once those are reviewed and updated, each function within the department (e.g., information systems, network services) should then identify the critical processes in their respective areas which need written procedures.

Once written, procedures should be reviewed and approved by the appropriate division staff. After approval, newly-developed procedures should be posted with any existing procedures in a location which provides easy access for key technology staff. Keeping the procedures up to date is equally important. As the procedures change, each department function should update the procedures to reflect those changes.

FISCAL IMPACT

The consulting team estimates that it will require 20 to 40 hours for the technology director to oversee development of these procedures.

E. Inventory Control

Items should be recorded in a digital file by serial number, tagged, and have their location and person of primary responsibility noted, as well as date of purchase. Multiple digital copies of this file should be saved and given to the superintendent and principals. Updates should be made as new purchases are received and obsolete equipment is retired. At a minimum, an annual inventory of all equipment should be conducted.

FINDING 8.10

The division lacks a detailed inventory of all of its technology equipment. Lists of equipment have been supplied upon request, however there appears to be no consolidated list of all equipment and its location. General count information is available, but there are no details as to the age of an asset, its unique identifying number, or its deployment (student use, etc.).

Technology equipment can be expensive and susceptible to loss and damage. It is important for insurance purposes to know what equipment resides in each location. In case of loss, the insurance adjustor will want a proof of loss.

In addition, with the significant proliferation of technology schools have acquired through various funding channels, it is imperative that the technology department maintain an accounting of all equipment that must supported. An accurate inventory of equipment, showing

its age, is also helpful in preparing replacement schedules and for tracking excessive maintenance costs.

RECOMMENDATION 8.10

Develop an inventory reporting system that will track all of the technology assets of the division.

Initially, the division should develop a procedure for keeping track of its technology assets from the minute they are received to the time of their disposal. The division also needs a procedure for noting any changes to the status of an asset. If an asset is moved to a different location or if the asset is disposed of, that action needs to be recorded in the inventory data base.

The BCPS data manager noted that the existing "Destiny Asset Manager" by Follet being used for a library management system may be modified to collect technology assets as well as textbooks and audio visual equipment. Otherwise, the division should consider the purchase of an existing inventory management application.

FISCAL IMPACT

Development of an inventory management and reporting procedures can be accomplished by the IT management team in conjunction with the data manager. It is anticipated that the total time commitment would be less than 32 hours. The actual tracking of all technology assets may require more IT staff time than is currently spent on this function.

Since the system would be designed to capture only newly acquired materials and equipment, the division may want to complete a physical inventory of technology assets. Such a physical inventory may be best accomplished by an outside inventory firm. A budget of $25,000 may be a reasonable for collecting significant asset data. The total cost of the physical inventory would depend upon the asset value threshold the division establishes.

F.   Systems Infrastructure and Integration

Technology infrastructure consists of cabling, hubs, switches, routers, and other devices that connect the various parts of an organization through local area networks (LANs) and a wide area network (WAN). A high-speed infrastructure allows users to access information inside and outside of the organization.

One of the most basic requirements of a technology system is a solid infrastructure. It is much like a highway, moving data at high speeds with significant traffic. Dirt roads for cars are no longer in extensive use for major U.S. highways for a good reason. Similarly, information highways (infrastructure) must be more and more robust as they become more heavily trafficked.

FINDING 8.11

BCPS has a robust network that provides high-speed network access to all buildings within the division. The technology department proactively monitors the network with various software and hardware tools to ensure uninterrupted connectivity.

All buildings in the division are serviced by either fiber-optic or microwave devices providing interconnectivity between schools and the central office at a minimum bandwidth of 100 megabits per second. This allows high-speed connectivity to the divisions servers as well as the internet.

COMMENDATION

BCPS maintains a high-speed wide area network (WAN) that consists of fiber-optic cable and microwave antenna connectivity.

FINDING 8.12

The aging network infrastructure is in need of upgrade and replacement. Some networks are being served by the original wiring and switching equipment that was installed almost 20 years ago. Only because of the exceptional dedication and constant attention of the technology staff are the local area networks still working.

Most BCPS schools were built prior to the requirement for network cabling. As a result, the original category 5 (CAT 5) wiring was not professionally installed in standard cable trays but instead looped above the ceiling and cable-tied in place. The work was performed on an ad hoc basis by existing staff. Cable connections were not certified upon installation.

The network consists of gigabit switches at each location interconnected via either fiber-optic or microwave routers. From there, distributions switches are connected via a gigabit backbone. The distribution switches provide 100 megabit, to the desktop and wireless access points.

Currently, individual facilities have two different LAN access speeds. The schools connected to the city/town fiber ring enjoy 1 gigabit per second bandwidth access speed. They are:

- Liberty High School;
- Bedford Middle School;
- Big Island Elementary School;
- Bedford Elementary;
- Bedford Science and Technology Center;
- Bedford Primary; and
- Central Office (Technology Center).

All other locations connect via a WAN access of 100 megabits per second.
The division is currently working to install wireless connectivity in all of its schools. Thus far, wireless connectivity has been established in the high and middle schools; elementary schools are scheduled to be completed in 2014. All of the new computers that will be accessing the wireless access points will be putting great stress on the LAN switches.

Exhibits 8.11 and **8.12** depict a typical recent switch installation in BCPS. The first exhibit shows all of the wired network connections. The second shows the injectors necessary to power the wireless access points (WAPs). This injector configuration services 12 WAPS that are spread throughout a portion of the building. Each WAP can serve about 30 wireless devices. These installations are typical of recent renovations where network enhancements have been made

part of major renovation activity. Unfortunately, there are many schools that have not received this level of attention as they have not been recently renovated.

Exhibit 8.11
Wired network connections

Source: Prismatic, December 2013.

Exhibit 8.12
Injectors for wireless access points

Source: Prismatic, December 2013.

RECOMMENDATION 8.12

Survey the existing network infrastructure, improving wiring and upgrading network switches where necessary.

With the move to one-to-one computing, network traffic will explode in the next few years. It is imperative that all aspects of the infrastructure be able to handle the demand. Installing new managed power over Ethernet (POE) switches would not only improve switch throughput but would eliminate the need for the power injectors, as power to any network devices would be provided by the POE switch.

When switches are upgraded, the division should consider deploying blade switches. The advantage that a blade switch offers is a common, redundant power supply and a common backbone. Instead of adding individual switches, a blade with 24 ports may be added and address the common power supply and high-speed internal backbone. This application results in considerable power savings and enhanced management capabilities.
Exhibit 8.13 provides an example of a new generation blade switch.

Exhibit 8.13
Typical blade network switch

Source: Prismatic, December 2013.

An added benefit would be realized if the division ever wanted to implement "voice over IP" (VOIP) telephone service. VOIP telephone provides all internal telephone communications over existing network wiring. Telephone devices can be placed wherever there is a network connection. VOIP telephone also provides significant savings by utilizing fewer outside telephone connections that are shared by all users. The VOIP telephones require power that would be supplied by POE switches.

As for the slower-speed WAN connections, it was reported that there is already dark fiber run to all locations as a result of the Mid Atlantic Broadband Initiative. Additionally the existing contract with Contera is set to expire within the next year. Activation of a complete fiber-optic WAN should be investigated prior to the renegotiation with Contera.

FISCAL IMPACT

The cost to upgrade the division's network wiring, switching and telephone system may be quite significant but cannot be accurately estimated without an assessment that was beyond the scope of this study. Contracting with a technology integration specialist team to develop an assessment of the current conditions and a detailed plan for improvements is recommended. The existing technology staff, while possessing the knowledge to develop such a plan, is constrained by critical day-to-day activities. A consulting team will be able to assemble a group of various experts to develop detailed costs estimates and implementation plans.

The consulting team estimates that the necessary study will cost between $25,000 and $50,000.

Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19
Contract for the development of an infrastructure improvement plan.	($50,000)	$0	$0	$0	$0

FINDING 8.13

The school division is connected to the internet via a 100 megabit connection, impairing Internet and cloud-based applications. A common concern expressed in almost every interview with the consulting team is that there is not enough bandwidth to accommodate current applications. Many instructional applications now require access to the Internet for content and supplemental material. The blended learning concept promotes Internet access to materials for individualized instruction. The flipped classroom concept requires students to access content material outside of class.

Currently, all other Internet access must be suspended during SOL testing in the division. The testing process utilizes all of the Internet bandwidth that is available.

Any contemplated one-to-one computing environment will flood the network with more devices needing Internet access. A move to electronic textbooks will also have a significant impact upon network traffic.

RECOMMENDATION 8.13

Negotiate with the local Internet provider to provide greater bandwidth to the school division.

It was reported that the current provider, the local cable company, cannot provide any additional bandwidth. If true, the division should contact other providers for alternatives. In addition, the county should be involved, as the cable company should be obligated to provide a certain level of service under its local franchise agreement.

FISCAL IMPACT

The cost to enhance Internet accessibility bandwidth is unknown at this time as the current Internet service provider has been unwilling to provide such an enhanced service. The school division will need to develop an alternative source if the current service cannot be improved.

G. Technology Acquisition, Donation, and Surplus Practices

Any additions or deletions of school property are typically subject to intense public scrutiny. As such, the public expects strict governance of the acquisition and disposal process as well as equity in the distribution of such assets.

School divisions typically struggle with inventory disposal. Compounding the disposal problem, the resale value of obsolete equipment is typically quite low. This provides little incentive for divisions to dispose of obsolete equipment in a timely manner.

FINDING 8.14

There appears to be a significant inequity related to the deployment of technology equipment and software in schools. It was reported that some schools have more opportunities to acquire technology due to the availability of directed grants. Underperforming schools are viewed as being rewarded by the placement of new technology resources.

Division staff noted a significant disparity among schools as to the amount of deployed technology. It was noted that some schools receive additional technology through various

grants. Underperforming and financially impacted population schools may qualify for significant federal grants while achieving schools or schools in more affluent areas are excluded. The schools that are excluded have to count on parent organizations, fundraising activities, and other benefactors to supplement their technology assets.

RECOMMENDATION 8.14

Develop a plan that will support the equitable deployment of technology resources across the division.

An effort must be made to level the playing field so that all schools within the division have equal opportunities. The division may need to consider backfilling some of the schools that are not eligible for grant funds with local dollars.

FISCAL IMPACT

Developing the plan can be done by current technology staff in minimal time. Depending on the extent of inequity, achieving equity may require additional technology expenditures.

FINDING 8.15

The division has implemented many diverse and incompatible applications in the schools. It appears that independent decisions sometimes result in the acquisition of incompatible software. During the consulting team's fieldwork, staff provided many examples of different technologies that are being purchased at the schools. The freedom to acquire technologies at the local school level can negatively impact infrastructure and support services. When new technologies are acquired, it becomes the responsibility of technology services to install them and make them work. Sometimes the equipment or application is incompatible with the existing infrastructure.

Many new programs are being introduced by a number of instructional departments as well as individual schools. It was reported that there seems to be a new benchmark assessment program introduced each year.

Unfortunately, some programs do not work with the existing infrastructure. Some cannot be supported due to lack of proper training. In short, the process of acquiring new technologies can be frustrating and overwhelming to those that are expected to support them.

RECOMMENDATION 8.15

Adopt strict guidelines governing the acquisition of software and hardware that will ensure compatibility with current operating systems and divisional support capabilities.

The technology department should prepare guidelines that specify operating systems, hardware and infrastructure standards to which any new programs must conform. There should also be requirements for the acquisition of adequate training for all individuals engaged in the use or support of the new program.

A reasonable process would be for all technology equipment, regardless of funding source, to be procured by a specific person within the department. That individual will make arrangements

for the delivery and immediate tagging of the equipment. Once the equipment receives a unique asset tag, all pertinent information can be placed into a database for easy reporting.

FISCAL IMPACT

The consulting team estimates that it will only require a few hours of the technology director's time to develop the initial guidelines. Ensuring compliance with the guidelines will be an ongoing process of communication between staffs in the technology and finance departments.

This chapter presents the findings, commendations, and recommendations regarding the operations of the school nutrition program in Bedford County Public Schools (BCPS). The areas of review include:

    A. Organization and Staffing
    B. Policies, Procedures, and Compliance
    C. Planning and Budgeting
    D. Management and Facility Operations
    E. Qualifying Students for Free and Reduced-Price Meals
    F. Student Participation
    G. Nutrition and Nutrition Education Programs
    H. Purchasing, Warehousing, and Contracting

School meal programs began with the *Child Nutrition Act of 1946*, which authorized the National School Lunch Program (NSLP) to "safeguard the health and well-being of the nation's children." The program, administered by the U.S. Department of Agriculture (USDA), is open to all public and nonprofit private schools, along with all residential childcare institutions.

BCPS participates in the NSLP, the School Breakfast Program (SBP), and the USDA Foods Program. Divisions that participate in these federal programs receive cash subsidies and donated commodities from the USDA for each eligible meal they serve. In return, the division must serve its students meals that meet federal guidelines for nutritional values, as well as offer free or reduced-price meals to eligible students.

Students in the lowest socioeconomic bracket qualify for free meals, while others qualify for reduced-price meals. All meals served according to federal guidelines receive some level of reimbursement, including those served to students who pay full price. School divisions do not receive federal reimbursement support for teacher or guest meals. The *Healthy Hunger-Free Kids Act* (*HHFKA*) of 2010 provides an additional six cents reimbursement per lunch to school divisions that are certified to be in compliance with the new meal patterns.

Exhibit 9.1 shows the applicable 2012-13 and 2013-14 federal reimbursement rates for breakfast and lunch. The rates listed include the additional six cents reimbursement, since BCPS has been certified to be in compliance.

Exhibit 9.1
Federal per meal reimbursement rates

	School Breakfast Program		National School Lunch Program	
	2012-13	**2013-14**	**2012-13**	**2013-14**
Free	$ 1.55	$ 1.58	$ 2.92	$ 2.99
Reduced Price	$ 1.25	$ 1.28	$ 2.52	$ 2.59
Paid	$ 0.27	$ 0.28	$ 0.33	$ 0.34

Source: USDA, 2013.

Effectiveness in school food service is measured by the level of service provided to school children and compliance with federal, state, and local policies. Efficiency is measured by the division's cost per meal and staff productivity performance measures. The main goal of a successful food service operation is to provide nutritious meals to students every day school is in session, and to do so at a minimum of breakeven cost.

In total, the consulting team gave seven commendations in this chapter:

- BCPS has closed campuses at all schools during meal times and accommodates all students with adequate time to eat and enough seating.

- The department has a maintenance contract with a company that does preventive maintenance and keeps the kitchen equipment in good repair in a timely manner.

- BCPS is in compliance with the Virginia regulations governing competitive food sales in school lunchrooms.

- The division has the necessary technology infrastructure in place to support the kitchens and lunchrooms.

- BCPS is commended for providing water to students in addition to the water fountains in the lunchrooms.

- BCPS has met the requirements to be certified and in compliance with the requirements of HHFKA and is receiving the additional 6-cents reimbursement.

- BCPS belongs to a regional buying group to purchase their food products and kitchen supplies.

The consulting team also made 11 recommendations in this chapter:

- Hire one additional secretarial support person.

- Increase the division's food service productivity.

- Develop a comprehensive school nutrition procedures manual that is reviewed annually and revised as needed.

- Develop a department-level strategic plan.

- Use existing data and reports to make operational adjustments as indicated.

- Reflect the dollar value of USDA commodities when allocating expenditures for food costs on profit and loss statements.

- Charge the school nutrition department indirect costs at the restricted rate.

- Develop a database of all equipment in the school kitchens by type, age, frequency of repair, and condition. Establish a line item in the budget for purchasing replacement equipment that meets a certain threshold for age and number of repairs.

- Develop strategies to increase the number of students completing applications for free and reduced price meals.

- Develop strategies for increasing student participation rates, focusing first at the elementary level.

- Discontinue the practice of allocating rebates, and the accompanying paperwork, to individual schools on a percentage basis and follow best practice accounting methods for recording the rebate in the same way that the value of commodities is recorded.

The estimated fiscal impacts of those recommendations for which the consulting team could reasonably quantify into dollars are shown below. Some recommendations will have fiscal impacts that depend on the specific implementation path chosen by the division while others will only require staff time; fiscal impacts for those recommendations are not shown here.

	Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19	Total
9.1	Hire one additional secretary.	($37,627)	($37,627)	($37,627)	($37,627)	($37,627)	($188,135)
9.2	Improve food service productivity.	$50,692	$101,200	$101,200	$101,200	$101,200	$455,400
9.8	Charge school nutrition department indirect costs.	$33,742	$33,742	$33,742	$33,742	$33,742	$168,710
9.13	Improve meal application returns.	$50,591	$50,591	$50,591	$50,591	$50,591	$252,955
9.14	Increase student meal participation.	$0	$42,159	$84,318	$126,477	$126,477	$379,431

A. Organization and Staffing

The cost of staffing is typically about equal to the cost of food in a school nutrition program. The National Food Service Management Institute (NFSMI) a national organization federally funded by a grant administered through the USDA, is dedicated to applied research, education and training, and technical assistance for child nutrition programs. Its Financial Management Information System recommends that program administration not exceed seven percent of total expenditures and that school labor and associated benefits not exceed 40 percent. However, there are many nuances associated with staff costs and staff productivity to be considered.

BCPS offers breakfast and lunch meals to students in all of its schools, as well as after-school snacks to students at Big Island Elementary, Bedford Middle, Moneta Elementary, Staunton River High, and Staunton River Middle schools. To accomplish this, it has the organization structure shown in **Exhibit 9.2.** The BCPS supervisor of school nutrition manages two central office employees: a school nutrition field manager and a school nutrition secretary.

Each local school nutrition manager works seven to eight hours per day, and reports to the local school principal and the school nutrition field manager. General school nutrition workers work between four and six hours per day depending on the school and work assignment.

Exhibit 9.2
Food services organization

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                    ┌──────────────────┐
                    │ Chief Financial  │
                    │     Officer      │
                    └────────┬─────────┘
                             │
                    ┌────────┴─────────┐
                    │  Supervisor of   │
                    │ School Nutrition │
                    └────────┬─────────┘
                             │
          ┌──────────────┐   │   ┌──────────────┐
          │ Field Manager├───┼───┤  Secretary   │
          └──────────────┘   │   └──────────────┘
                             │
                    ┌────────┴─────────┐
                    │     Managers     │
                    └────────┬─────────┘
                             │
                    ┌────────┴─────────┐
                    │    Assistant     │
                    │     Managers     │
                    └────────┬─────────┘
                             │
                    ┌────────┴─────────┐
                    │     Workers      │
                    └──────────────────┘
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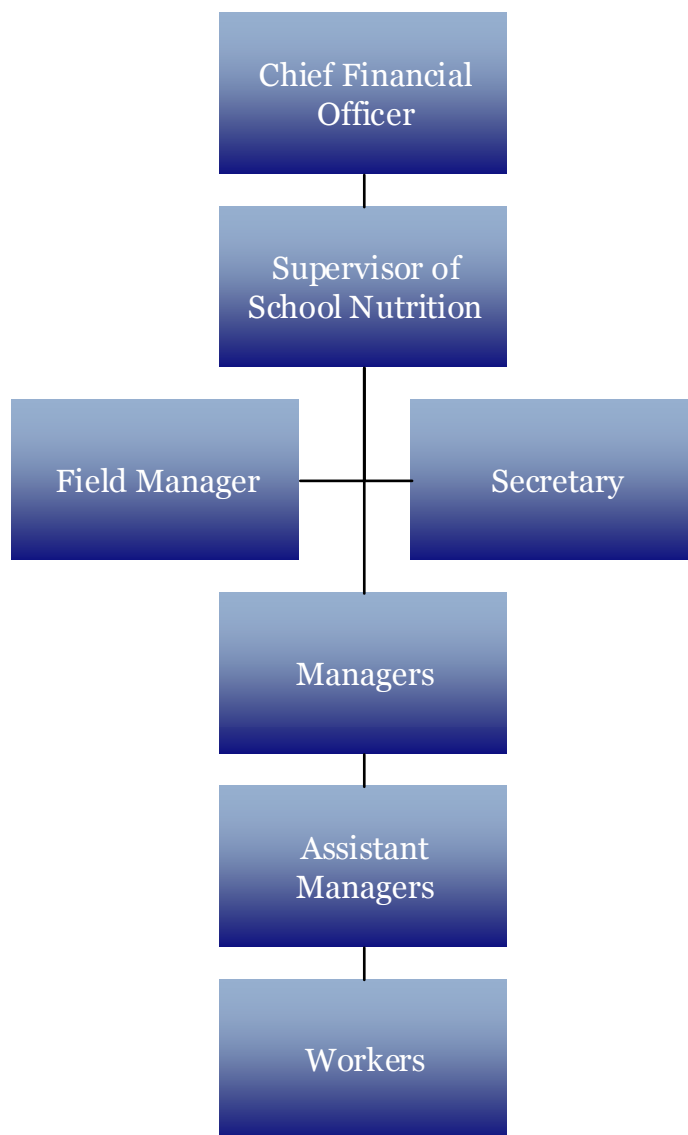
Source: BCPS, December 2013.

FINDING 9.1

The school nutrition department maintains a relatively small central office staff that includes a supervisor of school nutrition, a field manager, and a secretary.
During interviews with the consulting team, the supervisor and field manager both said they spend little time directly supervising school operations. The majority of their time is spent preparing reports about various data collected from the schools and little data analysis is conducted. Information collected is not used to determine if changes and improvements need to be made in any areas to increase efficiency and effectiveness.

During school visits, the consulting team found inconsistencies in serving procedures. Quality of presentation varied from school to school. Some schools wrapped menu items with plastic wrap, such as fruits, vegetables, and entrees, and others did not. Some put lids on fruit cups while

others did not. Some cut fresh fruit into smaller pieces while others served the fruit whole. These examples of inconsistency indicate a lack of monitoring and oversight.

RECOMMENDATION 9.1

Hire one additional secretarial support person.

An additional secretarial person can take over some of the data tabulation and report preparation that the supervisor and field manager are currently doing. That will allow the field manager to spend more time visiting the schools on a regular basis. The majority of her time can be spent in direct supervision of the kitchen staff. School operations can be monitored to ensure production and serving standards are met. The supervisor will have the time to determine training needs at the school level, as well as to conduct this training.

The supervisor will also have the time to set standards for production and service. She will be able to focus on more strategic areas by analyzing and interpreting the data collected. Areas for improvement can be identified and a plan developed to address those topics of concern.

FISCAL IMPACT

The estimated salary for an additional secretary position is $37,627 annually.

Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19
Hire one additional secretary.	($37,627)	($37,627)	($37,627)	($37,627)	($37,627)

FINDING 9.2

The BCPS school nutrition program lacks a staffing plan that establishes staffing levels based upon the Virginia Department of Education School Nutrition Program (SNP) goals for cafeteria staffing. In addition, the department is not meeting recommended industry guidelines for staffing school kitchens.

The most common means of measuring employee productivity in school nutrition is the Meals per Labor Hour (MPLH) measure. This is calculated by dividing the number of meal equivalents produced and served in one day by the number of labor hours required to produce those meals.

A meal equivalent is the rate used to compare the amount of labor needed to prepare one lunch with the labor needed to prepare breakfasts, snacks, or a la carte items. The student-reimbursable lunch meal is the standard unit of conversion for determining meal equivalents. School lunch is used as the basis of comparison because it is the main source of revenue, and it takes the most time to prepare. Therefore, all meal types are converted to meal equivalents for the purposes of measurement.

A meal equivalent is not a unit of production, but rather a calculation that allows a school nutrition manager to equate all meals and a la carte sales to a standard. The a la carte revenue is converted to a meal equivalent by dividing total revenue by a standard. The Virginia standard is composed of the federal free lunch reimbursement rate plus the state reimbursement per free meal plus the federal commodity value per meal. The VDOE SNP uses the following conversions to meal equivalents:

- one lunch equates to one meal equivalent;

- two breakfasts equate to one meal equivalent; and

- a la carte sales of $3.21 equate to one meal equivalent.

Industry best practice guidelines for MPLH staffing are shown in **Exhibit 9.3**. This chart provides MPLH guidelines for both conventional and convenient systems of food preparation. The consulting team found BCPS to be largely using a conventional system of food preparation.

Exhibit 9.3
Industry standard recommended meals per labor hour

| Number of Meal Equivalents | Meals Per Labor Hour (MPLH) | | | |
| | Conventional System | | Convenience System | |
	Low Productivity	High Productivity	Low Productivity	High Productivity
Up to 100	8	10	10	12
101 - 150	9	11	11	13
151 - 200	10-11	12	12	14
202 - 250	12	14	14	15
251 - 300	13	15	15	16
301 - 400	14	16	16	18
401 - 500	14	17	18	19
501 - 600	15	17	18	19
601 - 700	16	18	19	20
701 - 800	17	19	20	22
801 - 900	18	20	21	23
901 up	19	21	22	23

Source: School Foodservice Management for the 21st Century, 5th Edition.

The MPLH per school is determined by dividing the total daily meal equivalent by the total daily labor hours at each school. **Exhibit 9.4** compares BCPS MPLH by school to the national standard. For comparison purposes, as the kitchens in BCPS are conventional, the national average for a low productivity conventional system was used. SNP has established a range of 14 to 20 meals per labor hour goal.

Productivity in all of BCPS school nutrition operations falls below both industry standards and SNP goals. When more meals are produced in an hour, the labor cost for each meal is reduced. As the variances in the exhibit indicate, all Bedford school kitchens fall below SNP goals. It is also an indication that staffing is above industry standards.

Exhibit 9.4
BCPS meals per labor hour compared to national standards

Schools	Meal Equivalents	Daily Labor	MPLH	Standard MPLH	Variance
Bedford ES	475	43.5	10.9	14	3.1
Bedford Primary	295	27.5	10.7	13	2.3
Big Island ES	170	21.5	7.9	10	2.1
Body Camp ES	215	22.5	9.6	12	2.4
Boonsboro ES	241	23.5	10.3	12	1.7
Forest ES	260	22.5	11.6	13	1.4
Goodview ES	512	44.0	11.6	15	3.4
Huddleston ES	196	23.0	8.5	10	1.5
Moneta ES	245	21.5	11.4	12	0.6
Montvale ES	278	23.5	11.8	13	1.2
New London Academy	239	21.0	11.4	12	0.6
Otter River ES	196	21.0	9.3	10	0.7
Stewartsville ES	442	40.5	10.9	14	3.1
Thaxton ES	190	23.0	8.3	10	1.7
Thomas Jefferson ES	393	34.0	11.6	14	2.4
Bedford MS	434	40.0	10.9	14	3.2
Forest MS	633	52.5	12.1	16	3.9
Staunton River MS	676	63.0	10.7	16	5.3
Jefferson Forest HS	781	67.0	11.7	17	5.3
Liberty HS	667	61.5	10.8	16	5.2
Staunton River HS	742	57.0	13.0	17	4.0
Excess Labor Hours Division-wide					**55.1**

Source: BCPS school nutrition department, December 2013.

In total, there is a division-wide excess of 55.1 daily labor hours. The number of hours that are necessary to deliver each school's daily meal equivalents at a low level of productivity is calculated, and that school's actual daily labor hours are subtracted from the results to arrive at a labor hour variance for each school. The labor hour variance indicates either the number of excess daily labor hours per school (negative numbers), or additional labor hours necessary to meet the standard (positive numbers). The following formulas are used to calculate this:

- *Daily Meal Equivalents ÷ Standard MPLH = Standard (Low) Labor Hours*

- *Standard (Low) Labor Hours – BCPS Daily Labor Hours = Labor Hours Variance*

RECOMMENDATION 9.2

Increase the division's food service productivity.

There are ways to increase the productivity rate and produce more meals per hour of paid labor:

- Decrease the number of labor hours — the division could reduce staff at schools where staff hours are above national standard, or decrease the number of staff-hours worked daily by adjusting work schedules.

- Increase the number of meal equivalents — the division would need to implement measures to increase participation. Unless the food services staff is feeding all of the students, faculty, and staff every day, there are possibilities for increasing participation. The food service managers can use eligibility information to help determine where revenue can be increased. Every student who is enrolled and every adult who is employed by the school is a potential customer.

- Increase adult participation — not only does this help generate more revenue, but this also offers additional benefits. Student behavior and attitudes toward the food services program often improve when faculty participation improves.

- Increase marketing efforts — this should also increase sales. This may include ongoing, regular activities throughout the school year, as well as special events. Without marketing, parents and students are unaware of the benefits and opportunities of the breakfast and lunch programs, causing participation in these programs to suffer. Adequate marketing helps to ensure more successful program operations.

FISCAL IMPACT

The division could pursue increased school nutrition productivity in a number of ways. Assuming the division chooses to achieve all the needed productivity gains by reducing labor hours, BCPS would need to reduce daily cafeteria labor hours by 55. Assuming 184 operating days and $10.00 per labor hour, implementing this recommendation can generate an annual savings of $101,200. Savings are shown scaled in over two years. Of course, the division could choose to increase productivity in a variety of ways, such as some reduction in labor hours and greater marketing efforts that result in increased student meal participation.

Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19
Improve food service productivity.	$50,600	$101,200	$101,200	$101,200	$101,200

B. Policies, Procedures, and Compliance

The school board adopts policies that establish direction for the division, set the goals, assign authority, and establish controls that make school governance and management possible. Procedures inform division employees how to carry out policies in their individual departments. Effective policies and procedures that are widely understood are critical in a school nutrition operation. The absence of these formal policies and procedures creates the potential for misinterpretation, omission, and lack of consistency within the school department.

FINDING 9.3

Although the division's board policy addresses food services, there is not a current food services procedural manual. A procedural manual was developed in July 2003, but has not been updated and does not address many of the issues facing today's operation. It does, however, contain information on food handling, safety procedures, order processing, cash handling, and student account management. Additionally, interviews with managers revealed that updates or changes in procedures and information are communicated verbally at meetings or through email memos. During one school visit, when asked about a policy, the manager went to the kitchen's policy and procedures manual to look up the information and show it to the

consulting team. This demonstrates that managers use their policy and procedures manual, and further indicates the need to keep it updated on a regular basis.

The school nutrition department needs clear directions that provide information on procedures and duties to be carried out within the division. This information is important to driving internal operations, as well as ensuring clear communication of school nutrition to the public.

School nutrition is a highly visible school operation, both to students and the community, and it also generates and spends a substantial amount of funds. For these reasons, a division must ensure that rigorous standards are in place to guide the quality of service delivery and efficiency of financial operations. One method of strengthening the oversight of food service operations is through comprehensive written procedures.

RECOMMENDATION 9.3

Develop a comprehensive school nutrition procedures manual that is reviewed annually and revised as needed.

BCPS should include all aspects of the school food services program in their policy and procedures manual. An example of a table of contents found in a comprehensive school food services procedures manual is provided in **Appendix B**. Each procedure included in the school nutrition procedures manual must be carefully evaluated for appropriateness and alignment with Virginia law and USDA regulations. The school nutrition supervisor should plan to keep the manual updated in a timely manner. Updated pages could be given to managers at their meetings with instructions to remove the outdated information and insert the new pages. Alternatively, the manual could be maintained online so that cafeteria managers can get updates immediately.

FISCAL IMPACT

While there is no quantifiable cost to implementing this recommendation, it is estimated that approximately 40 hours of staff time would be necessary to update the procedures manual.

FINDING 9.4

All schools in BCPS have closed campuses during mealtimes. Closed campus is when schools do not allow students to leave school for lunch. Although no formal board policy exists, it is an established practice among all schools. Closed campus policies can encourage increased meal participation and healthier eating habits.

The consulting team observed 14 schools during meal times. All schools except one had enough seats for all students in the meal period. In all schools except one the line wait time was less than five minutes. In all schools the meal period was long enough for the last student served to have 15 minutes to eat. It appears schools have the capacity and ability to accommodate this policy.

COMMENDATION

BCPS has closed campuses at all schools during meal times and accommodates all students with adequate time to eat and enough seating.

C. Planning and Budgeting

As the passage of *HHFKA* amply demonstrated, change is a constant in school nutrition. New nutritional requirements at the federal level must be implemented in such a way that is appealing to local student tastes. The NFSMI recommends an ideal breakdown of expenditures (**Exhibit 9.5**) whereby school labor and food expenditures are each 40 percent. The remaining 20 percent of the budget is to be spent on administration, direct and indirect costs, and equipment.

Exhibit 9.5
Distribution of child nutrition expenditures - industry standards
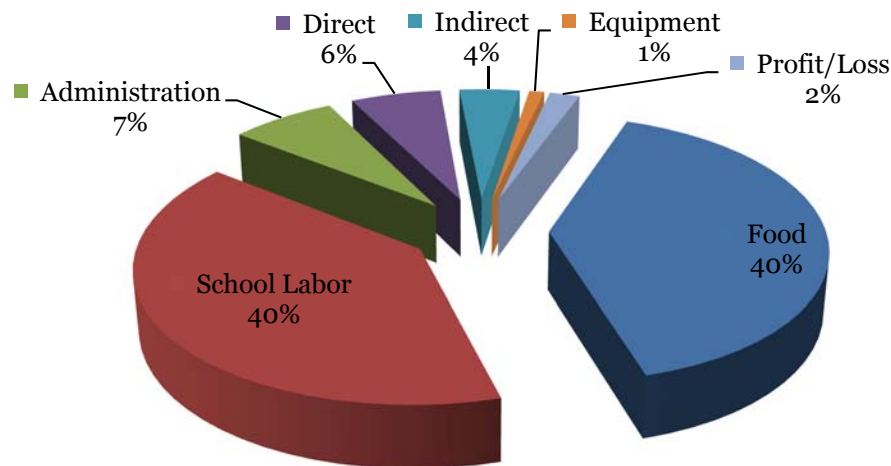
Source: NFSMI Financial Management Information System

FINDING 9.5

The department has developed a mission statement; however, it does not conduct strategic planning or set goals for the short- and long-term. When interviewed, the supervisor reported that they do not set goals. She said their focus every year is to increase participation and also noted the need for a marketing plan.

Best practices for any organization is to start with developing a mission statement and then develop a strategic plan that supports mission accomplishment. The process of strategic planning identifies issues within the organization that need to be addressed. The next step is to develop strategies and action items that will make the necessary changes to tackle the issues. These will be both short- and long-term. Ideally, representatives from all organizational levels are involved in the process.

RECOMMENDATION 9.5

Develop a department-level strategic plan.

The department has a good model to follow in the BCPS strategic plan. The department should ensure that its plan supports the overall goals of the division.

FISCAL IMPACT

It is estimated that no more than 40 hours of staff time would be necessary to implement this recommendation.

FINDING 9.6

The department prepares a great number of data reports for overall program performance as well as individual school operations; however, the data are not deeply analyzed or used to establish goals. These reports contain most of the necessary information to evaluate performance and determine areas of concern requiring action for changes and adjustments. One exception: There is no costing out of meals. The supervisor and field manager were able to show the consulting team the various reports and explain the process used to collect the data.

Profit and loss reports are prepared for each individual school on a monthly basis allowing managers to be aware of how their operation is performing. The manager focus group said they receive the data they need to know how their operation is doing.

Although the data are generated to assess operations, they are not routinely used to make operational adjustments. The nutrition program supervisor does not perform much if any interpretation and analysis of the data contained in the reports. The reports are not used to make changes leading to greater efficiencies. For example, managers and workers mentioned in the focus groups that participation levels had been going down over the past two years but their labor hours had not been decreased. This was confirmed by the supervisor. Data on individual school operations is not used for determining best practices or areas needing improvement. There are no goals established and monitoring to determine if goals are met.

The US Department of Education in the 2009 edition of *Financial Accounting for Local and State School Systems* states, "The successful management of any large organization requires effective use of information." They go on to say that "timely and accurate data can help decision makers focus on improvement strategies, budgetary control, and program evaluation."

RECOMMENDATION 9.6

Use existing data and reports to make operational adjustments as indicated.

The school nutrition supervisor should develop a process to analyze each report regularly to determine if changes need to be made at the central level or at individual schools. She should then set goals for operational areas, such as participation levels by eligibility, and monitor whether the goals have been achieved. Finally, she should set up a system to establish benchmarks and measure success.

FISCAL IMPACT

This recommendation can be implemented by the school nutrition supervisor spending several hours per month. It has the potential to result in greater revenues or reduced costs as analysis leads to changes and adjustments.

FINDING 9.7

The department does not apply the fair market value of USDA commodities in recordkeeping or when deciding whether to accept commodity items. This understates the value of these foods and distorts the financial picture of the program.

During interviews, both the supervisor and the field manager stated that the food revenue and expenditure categories did not include the value of USDA commodities. Only the processing fee is included. In the manager focus group, managers indicated they like to use USDA commodities because it does not cost them anything. If the value of USDA foods is not included on the profit and loss statements for both the central office and the individual schools, they will not accurately reflect the true cost of doing business and will significantly understate food costs. There are times when the total per case cost of a USDA commodity (fair market value plus fees for processing and administration) could be higher than the price per case of a similar item when purchased on the open market. Thinking of these items as "free" results in poor decision making when purchasing and when choosing items to prepare and serve in the schools.

Financial accounting requires that once a commodity item is received it is treated as revenue to the operation and recorded as an expenditure when it is used. The total cost of processing and administrative fees per case must be added to the fair market value to get a true cost per case of the item. The 2009 edition of *Financial Accounting for Local and State School Systems* states, "school districts that receive federal commodities should recognize the fair value as revenue and the value of commodity inventory remaining on hand at the end of the fiscal year-end should be reflected in the fund balance."

RECOMMENDATION 9.7

Reflect the dollar value of USDA commodities when allocating expenditures for food costs on profit and loss statements.

The program should use the combined total of the fair value of USDA commodities plus administrative and processing fees when accounting for these at both the central office and school levels.

FISCAL IMPACT

This recommendation can be implemented by school nutrition staff in minimal time, requiring only a change in accounting processes.

FINDING 9.8

BCPS is not charging the school nutrition department for indirect costs. Federal guidelines permit the allocation of certain indirect costs to be transferred from the food service fund to the general fund. Indirect costs are incurred for the benefit of multiple programs and typically support administrative overhead functions. If a department is charged for indirect costs there are rules for apportioning such charges using an established indirect cost rate and a documented methodology that accurately allocates such indirect costs.

Guidance from USDA regarding the application of indirect costs to school food service operations can be found in *Indirect Costs – Guidance for State Agencies and School Food Authorities*, published in 2011. It states that the school division may bill the school food service at the unrestricted rate but some divisions have opted to support the food service by billing at

the restricted rate which is lower. BCPS's approved indirect cost rates for 2013-14 are 0.8 percent for restricted and 10.7 percent for unrestricted.

Federal regulations allow three months of operating costs to be accrued as a fund balance for school nutrition programs. The VDOE SNP reports indicate the BCPS school nutrition department had 3.57 months of operating balance available at the end of 2012-13, which is 0.57 months higher than allowed. This is also higher than all other peer divisions, as shown in **Exhibit 9.6.** This high fund balance indicates that the department is able to pay the allowable indirect costs to the general fund.

Exhibit 9.6
Total months operating balance available, 2012-13

Division	Number of Months	Comparison to USDA Allowance
Augusta County	2.6	(0.4)
Franklin County	0.5	(2.5)
Frederick County	1.5	(1.5)
Montgomery County	2.8	(0.2)
Rockingham County	2.3	(0.7)
Washington County	1.4	(1.6)
Peer Division Average	**2.1**	**(0.9)**
Bedford County	**3.6**	**0.6**

Source: VDOE, 2013.

RECOMMENDATION 9.8

Charge the school nutrition department indirect costs at the restricted rate.

The school nutrition department should begin paying the allowable restricted indirect rate of 0.8 percent in 2014-15. Based on 2012-13 school nutrition expenditures of $4.2 million, this would result in a contribution to the BCPS general fund. The division should assess the impact of this new charge on the school nutrition fund balance after using this rate for several years and determine if the unrestricted rate could be used instead.

FISCAL IMPACT

Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19
Charge school nutrition program for indirect costs at the restricted rate.	$33,742	$33,742	$33,742	$33,742	$33,742

D. Management and Facility Operations

School nutrition facilities must be well-maintained, cleaned, and repaired. Deferred maintenance should not be tolerated. They must be sufficient to serve a campus student body without excessive numbers of lunch periods. Efficiency of kitchens and serving lines is a critical factor.

A key factor in kitchen staff productivity is the proper use of time-saving food preparation equipment. A further key element in long-term financial stability within a student nutrition program is adequate and proper maintenance of that equipment, as well as timely replacement and upgrading as warranted.

FINDING 9.9

The equipment at the 14 kitchens the consulting team visited appears to be well-maintained and operational. There were no major pieces of equipment that were inoperable or in need of immediate servicing. The kitchen equipment in all schools visited was adequate for the number of meals served.

The department has a maintenance contract with a company that does repairs and preventive maintenance on the kitchen equipment. During focus group sessions with managers and workers, all agreed that repairs have been done in a timely manner. All also commented that they have the correct equipment with which to prepare meals.

COMMENDATION

The department has a maintenance contract with a company that does preventive maintenance and keeps the kitchen equipment in good repair in a timely manner.

FINDING 9.10

There is no equipment replacement plan to budget for improvements in capital assets. An equipment inventory was completed for all kitchens in 2006 but it has not been updated as new equipment was added or old equipment was removed. Ages of the equipment range from 13 years in the newest kitchen to 48 years old in some kitchens. The average age of all equipment on the lists is 30 years old. There is not a database by school about frequency of repair by piece of equipment.

Some secondary schools are still using fryers and the use of this method of cooking should be eliminated in the near future to comply with nutritional requirements and best practices for school meals programs. During their focus group, managers stated that when the use of fryers was discontinued, they did not receive additional ovens as a replacement. As of 2006, the division had 18 fryers in the kitchens. During kitchen observations, the consulting team observed most of these were not being used.

RECOMMENDATION 9.10

Develop a database of all equipment in the school kitchens by type, age, frequency of repair, and condition. Establish a line item in the budget for purchasing replacement equipment that meets a certain threshold for age and number of repairs.

An audit of condition and serviceability would significantly improve the overall picture of the health of each kitchen with regards to its ability to conduct current or future expanded cooking operations. **Exhibit 9.7** provides a sample of output from a similar equipment audit completed in another school division. That audit resulted in a one-page sheet for each piece of equipment that included make, model, serial number, an equipment rating, and a comment on the condition and/or operational reliability of the equipment on a scale from one to five.

Exhibit 9.7
Sample page from an equipment audit

School Information (Not Shown)

Equipment Category: **Steamer**

Description: **Double Stack Convection Steamer**

Brand: **Cleveland**   Model: **36CGM16300**

Serial: **95411-06C-01**

Equipment Rating: ✳✳✳✳

Notes:

In very good working condition

Source: Prismatic file photo, March 2013.

Planning should include replacing fryers with ovens where they are still in use and making a determination if additional ovens are needed at those schools that are no longer using fryers. Explore if there is an available market for used fryers in the area.

FISCAL IMPACT

This recommendation can be implemented by current school nutrition staff. It is estimated that less than 30 hours of time will be needed.

FINDING 9.11

During school visits, the consulting team found no evidence of noncompliance with the Virginia law on competitive food sales. The Virginia law states there can be no competitive food sales between 6:00 a.m. and the end of breakfast and during all of the lunch period. Items in vending machines were not available to students during meal times. There is no school board policy governing vending machines, however all machines are turned off during meal times.

Liberty High School had vending machines in the lunchroom. These were stocked with water only. The machines are filled by school nutrition staff and the revenues are credited to their a la carte account.

COMMENDATION

BCPS is in compliance with the Virginia regulations governing competitive food sales in school lunchrooms.

FINDING 9.12

The division has the necessary technology infrastructure to support all of the kitchens and lunchrooms. All kitchens are wired and networked for computerized management information systems, including Point-of-Sale (POS). Managers are comfortable using technology in their daily operations.

Other uses of technology within the nutrition services department include:

- Free and reduced meal applications are processed using Data Business Systems Café Enterprise.
- Kitchens order using US Foodservice's online order system.
- Nutritional analysis is done using the NutriKids program.
- Inventories are completed using the division's in-house inventory form on Excel.
- Payroll is sent online to the division office and processed in the division payroll department.

COMMENDATION

The division has the necessary technology infrastructure in place to support the kitchens and lunchrooms.

E. Qualifying Students for Free and Reduced-Price Meals

The National School Lunch Program is an appropriated entitlement to all eligible students living in the United States, regardless of citizenship status. Students are entitled to free lunches if their families' incomes are below 130 percent of the annual income poverty level guidelines established by the US Department of Health and Human Services and updated annually by the Census Bureau. Students who are members of households receiving food stamp benefits or cash assistance through the Temporary Assistance for Needy Families block grant, as well as homeless, runaway, and migrant students also qualify for free meals.

Students with family incomes below 185 percent of poverty are eligible for a reduced price lunch. Schools cannot charge students who receive reduced price lunches more than 40 cents per meal. Students who do not qualify for free or reduced price lunch can purchase slightly subsidized meals, but these lunches are considered "paid" because the student shoulders most of the cost. In 2013, the lunch program subsidized each "paid" meal between 28 and 34 cents to offset administrative costs.

Alternatively, students can be automatically enrolled through a process known as "direct certification." Under the direct certification process, state agencies or school divisions obtain

lists of families enrolled in the Food Stamp program or Temporary Assistance for Needy Families (i.e. welfare) program and match those lists with the names of students enrolled in schools the agency serves. As of 2008-09, all school divisions are required to directly certify students enrolled in the Food Stamp program. This change has increased access to free and reduced lunches and limited the potential for error or over-enrollment by automatically enrolling students rather than relying on parent applications.

BCPS provides meal applications to parents at registration by putting them in their student packets. Family applications are processed in the central office utilizing the CAFE cafeteria management software. The software assigns the free, reduced, or paid status to applications based on the information input by the central office nutrition secretary. The software also generates the approval or denial letters, which are put in the US mail to parents. Applications are maintained in the central office and additional applications or changes in status occur on an as-needed basis throughout the school year.

The central office nutrition secretary and school nutrition supervisor complete the process known as verification utilizing the information generation by the CAFE software. Verification is the confirmation of eligibility for free and reduced price meals under the NSLP and SBP. Verification is only required when eligibility is determined through the application process, not through direct certification.

FINDING 9.13

BCPS nutrition department has a good system of distributing applications to parents and processing those applications that it receives. Yet its free and reduced eligibility is one of the lowest amongst its peer divisions. Some parents may not fill out an application due to perceived barriers or fear of perceived stigma.

Of the 10,553 students of BCPS, 3,034 (28.8%), are eligible for free meals and 757 (7.2%) are eligible for reduced price meals, for a total free and reduced eligibility of 3,791 (36.0%). **Exhibit 9.8** compares BCPS free and reduced eligibility to peer divisions. As the chart illustrates, BCPS's approved eligibility is lower than the average of peer divisions, with only one division having fewer eligible students and five divisions with more eligible students. Additionally, BCPS's eligibility percentage is below the national average of 61.6 percent.

Exhibit 9.8
National school lunch program free and reduced price eligibility report
2012-13

Division	Membership	Free Eligibility	Free %	Reduced Eligibility	Reduced %	Total F/R Eligibility	Total F/R %
Augusta County	10,771	3,361	31.2%	528	8.7%	3,889	39.9%
Franklin County	7,498	3,194	42.6%	407	8.2%	3,601	50.8%
Frederick County	13,104	3,662	28.0%	361	6.2%	4,023	34.0%
Montgomery County	9,852	3,071	31.2%	365	7.1%	3,436	38.3%
Rockingham County	4,393	2,036	46.4%	361	8.2%	2,397	54.6%
Washington County	7,403	2,819	38.1%	568	7.7%	3,387	45.8%
Peer Division Average	**8,837**	**3,024**	**36.2%**	**589**	**7.7%**	**3,613**	**43.9%**
Bedford County	**10,553**	**3,034**	**28.8%**	**757**	**7.2%**	**3,791**	**36.0%**

Source: VDOE, 2013.

In interviews, three managers and the supervisor of nutrition services mentioned the possibility that some parents who are eligible for benefits do not apply. One manager said there were some parents in their school who would not fill out the application form. Another manager said not all who are eligible apply. Another said meal benefits information needs to get out to parents. She mentioned hearing a parent say that their family did not need meal assistance as much as some others might and did not want to take away from those who really needed it. The supervisor said some parents are concerned about confidentiality and there may also be some stigma associated with applying for free meals among some families.

RECOMMENDATION 9.13

Develop strategies to increase the number of students completing applications for free and reduced price meals.

The division should implement a marketing campaign to provide more information on how the meal application and eligibility program works. Information could be provided to local newspapers, highlighted on the BCPS website, and put in each school's newsletter. Managers should work with their school principal and social worker to ensure all eligible parents return applications.

FISCAL IMPACT

Given the peer division data, it is reasonable to assume that greater efforts to get families qualified for meal benefits would result in at least 100 additional students qualifying. Assuming all 100 qualify for free meals and that they select a reimbursable lunch each day, the division would realize an additional $50,591 in revenue annually:

100 additional free-qualified students x $2.99 reimbursement for lunch x 180 attendance days x 0.94 attendance factor

The actual amount of additional income realized will vary based on the number of additional students approved free or reduced and the changes in USDA reimbursement rates each year.

Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19
Improve meal application returns.	$50,591	$50,591	$50,591	$50,591	$50,591

F. Student Participation

One of the basic measures of food service operations is student meal participation. All meals served according to federal guidelines receive some level of reimbursement, including those served to students who pay full price. Student participation in a division's meal programs are directly impacted by a variety of operational factors, including student access to food, food quality and variety, alternatives to the school meal, and cafeteria environment.

The meal changes required by *HHFKA* and their impact on student participation have been discussed at the national level. The School Nutrition Association (SNA) tracked lunch and breakfast participation nationally between September 2012 and March 2013. It reported a 3.2 percent decrease in average lunch participation but a 2.1 percent increase in breakfast participation, compared to the same time period from 2011-12. These data do not clearly point to *HHFKA* changes as depressing student meal participation.

FINDING 9.14

BCPS meal participation is low in a majority of its elementary schools as compared to industry standards. This could be due to a variety of factors.

Because meal participation rates are highly variable across the nation, depending greatly on local circumstances and management, only a few rules of thumb exist for assessing student meal participation.

In 2000, one of the most widely used school nutrition management manuals published industry standards for student lunch participation. These are shown in **Exhibit 9.9**. In divisions with low proportions of free and reduced-price qualifying students, one would expect even lower rates of participation, as those students have relatively more alternatives to the school lunch meal. BCPS has closed campuses so one would expect participation rates in their secondary schools to be slightly higher than other divisions with open campuses.

Exhibit 9.9
Industry standard lunch participation rates

School Level	Industry Standard
Elementary	70%
Middle	60%
High	50%

Source: Pannell-Martin, School Foodservice Management, 4th Edition, 2000.

Exhibit 9.10 compares lunch participation rates to average daily attendance. As shown, two of the three high schools' participation is above industry standards and one high school is

dramatically lower. Two of the middle schools' participation rates are lower than the average and one is higher. Four of the elementary schools' participation met the industry average and 11 were below the average.

According to a report on nutrition assistance programs, published by The National Data Bank (NDB), USDA/Food and Nutrition Services, BCPS's participation rate is lower than the 2011 national average of 67.2 percent by 12.4 percentage points.

Exhibit 9.10
2012-13 BCPS lunch participation rates by school

School	ADA	% Free of ADP	% Reduced of ADP	% Paid of ADP	% of ADA Participating
Bedford ES	429	62.2%	11.5%	26.6%	**77.2%**
Bedford Primary	273	64.0%	6.7%	29.2%	**65.2%**
Big Island ES	146	49.5%	6.1%	43.4%	**67.8%**
Body Camp ES	178	70.8%	10.8%	18.5%	**73.0%**
Boonsboro ES	275	26.6%	7.1%	66.9%	**61.5%**
Forest ES	434	18.6%	6.6%	74.9%	**42.2%**
Goodview ES	493	53.2%	10.4%	36.4%	**70.2%**
Huddleston ES	173	56.1%	7.5%	36.5%	**61.9%**
Moneta ES	228	51.3%	12.5%	36.8%	**66.7%**
Montvale ES	248	58.9%	9.7%	31.4%	**70.6%**
New London Academy	329	27.8%	11.9%	60.2%	**53.5%**
Otter River ES	214	30.2%	7.8%	62.0%	**60.3%**
Stewartsville ES	399	58.5%	13.1%	28.5%	**65.2%**
Thaxton ES	183	45.3%	14.5%	40.2%	**63.9%**
Thomas Jefferson ES	596	30.2%	9.8%	60.0%	**47.8%**
Bedford MS	437	54.9%	12.0%	33.1%	**70.5%**
Forest MS	937	21.1%	8.3%	71.6%	**51.4%**
Staunton River MS	721	46.9%	9.2%	43.8%	**56.1%**
Jefferson Forest HS	1,347	21.2%	8.6%	70.2%	**25.2%**
Liberty HS	858	45.7%	11.0%	43.4%	**55.4%**
Staunton River HS	969	46.9%	9.2%	43.8%	**56.1%**
Total	**9,867**	**43.7%**	**9.9%**	**46.3%**	**54.9%**

Source: BCPS food services and VDOE.

In focus group sessions with managers and workers, they indicated that participation had been dropping and they felt the reason was the menu changes due to *HHFKA*. This opinion was echoed by the supervisor and field manager during interviews. Participants in the focus groups expressed negative feelings about the food quality as a result of using items that had to meet the new nutritional requirements of *HHFKA*. During school visits the consulting team heard a manager tell elementary students next year their biscuits will be whole grain. Negative messages or feelings about food items communicated by staff can affect participation levels. The consulting team has found that menu changes due to *HHFKA* do not necessarily lead to decreases in student participation in other school divisions.

In BCPS, the consulting team found a number of areas of concern that could be affecting participation rates. During meal observations half of the schools were not encouraging the selection of fresh fruits and vegetables. In those schools most were not offering any fresh fruit or

vegetable selections as a choice. Many schools had just one choice of fruit for breakfast and lunch. The only fruit choice in one school was USDA commodity mixed dried fruit (**Exhibit 9.11**). The manager said she was trying to get it used up. Most schools wrapped the fruit with plastic wrap or put a lid on the container making it difficult to see what the item was (**Exhibits 9.12** and **9.13**). Many schools also wrapped other food items with plastic wrap. As a comparison, **Exhibits 9.14** and **9.15** shows the attractive fruit and vegetable choices provided in one elementary school. How a food item is presented can help encourage a customer to select it.

Exhibit 9.11
Commodity mixed dried fruit at
Body Camp Elementary School

Source: Prismatic, December 2013.

Exhibit 9.12
Lidded and bagged fruit servings at Forest Elementary School

Source: Prismatic, December 2013.

Exhibit 9.13
Plastic wrapped servings at Staunton River Middle School

Source: Prismatic, December 2013.

Exhibit 9.14
Fresh, attractive vegetable servings at Bedford Elementary School

Source: Prismatic, December 2013.

Exhibit 9.15
Fresh, attractive fruit servings at Bedford Elementary School

Source: Prismatic, December 2013.

RECOMMENDATION 9.14

Develop strategies for increasing student participation rates, focusing first at the elementary level.

The division should:

- conduct surveys of parents to determine why their students are not participating;
- set up focus groups of students at all grade levels to evaluate new menu items and recipes and evaluate current menu offerings;
- develop procedures and training for managers to conduct student taste tests and conduct these at all schools;
- set up procedures to monitor plate waste at all schools and tabulate results to determine items needing to be taken off the menu;
- offer more choices of fruits and vegetables for every meal with at least one fresh option available to all students;
- pilot and market a fresh fruit/vegetable bar at an elementary school and monitor participation levels to determine possibility of replication at other schools;
- develop standards of excellence for menu item presentation and require all schools to comply by monitoring on a frequent basis;
- explore alternative serving options for breakfast like breakfast in the classroom or breakfast after the first bell;
- evaluate the financial feasibility of offering breakfast and/or lunch at no cost to those students eligible for reduced price meals;
- use the division website, local newspapers, and school newsletters to communicate changes and positive messages about the school meals program;
- develop a marketing plan with input from students and managers; and
- provide customer service training for managers and staff.

There are many resources available to help with these efforts. The Smarter Lunchrooms Movement at the Cornell Center for Behavioral Economics in Child Nutrition Programs has a variety of training materials, best practices, research articles, and self-assessment forms. The School Nutrition Association has a self-assessment section on marketing in their *Keys to Excellence.* NFSMI has a publication *Best Practices for Marketing the School Nutrition Program* as well as training courses for staff such as *Focus on the Customer.* USDA's Team Nutrition has a toolkit *Fruits and Vegetables Galore* which contains a workbook titled *Meal Appeal Attracting Customers.*

FISCAL IMPACT

This recommendation can be implemented by current student nutrition staff. The exact amount of time to be spent will depend on the actions undertaken by the department, but should result in increased participation. In particular, the division should focus on increasing elementary lunch participation rates as well as all breakfast participation rates.

Currently, on average only about half of the elementary students eligible for free meals participate in the program for lunch each day. Improving by just an additional 250 students who are eligible for free meals would result in increased revenues of $126,477 annually:

250 additional students participating x $2.99 federal reimbursement x 180 school days x 0.94 attendance factor

Based on observations in other divisions, and data currently developing nationally, the consulting team strongly encourages BCPS to consider offering free meals to its students who only qualify for reduced-price meals. The experiences of other divisions, including Fairfax County Public Schools in Virginia, indicate that participation among reduced-price eligible students greatly increases if they can participate for free. The nutritional benefit to this student group would be important and the federal reimbursement of $2.59 per meal served would help offset BCPS absorbing the 40 cent per meal cost.

The consulting team anticipates that it will take several years to achieve this level of participation, so the fiscal impact is estimated as increasing over time.

Recommendation	2014-15	2015-16	2016-17	2017-18	2018-19
Increase student meal participation.	$0	$42,159	$84,318	$126,477	$126,477

G. Nutrition and Nutrition Education Programs

In a study conducted by Youth Expanded Food and Nutrition Education Program in 2010[53], research in school-based nutrition education has found that change in nutrition-related behaviors requires intense, long-term interventions. The amount of exposure to nutrition education, while adequate to bring about changes in knowledge, may not be adequate to influence students' behavior. This underscores the need for ongoing nutrition education, if a school division hopes to influence behavior ultimately.

FINDING 9.15

The *Healthy, Hunger-Free Kids Act of 2010* (*HFFKA*) provides for sweeping changes to school child nutrition programs. It also makes significant changes in the required meal components. **Exhibit 9.16** provides just a few of the changes in program administration and operation. As shown, cafeterias are now required to provide free drinking water to students.

During school visits the consulting team observed containers of water placed in the lunchroom for students. In some schools the student got a cup from the cashier; in others, more cups were available by the water container. **Exhibits 9.17** and **9.18** show examples of water availability for students.

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[53] Florida Parents Join Students in Voting on Healthy New Menu Options - Tray Talk, School Nutrition Association (January 2013)

Exhibit 9.16
Excerpted summary of the *Healthy, Hunger-Free Kids Act of 2010*

Section and Title	Summary of Provision
Sec. 203.Water (NSLP/SBP)	• Requires schools to make free potable water available where meals are served.
Sec. 205. Equity in school lunch pricing	• Requires schools to charge students for paid meals at a price that is on average equal to the difference between free meal reimbursement and paid meal reimbursement; Schools that currently charge less are required to gradually increase their prices over time until they meet the requirement; Schools may choose to cover the difference in revenue with non-Federal funds instead of raising paid meal prices. • Establishes a maximum annual increase in the required paid increases of 10 cents annually, but allows schools to establish a higher increase at their discretion.
Sec. 206. Revenue from non-program food	• Requires all non-reimbursable meal foods sold by school food programs to generate revenue at least equal to their cost.
Sec. 208. Nutrition standards for all foods sold in schools	• Requires USDA to establish national nutrition standards for all food sold and served in schools at any time during the school day.
Sec. 306. Professional standards for school food service	• Establishes a program of required education, training, and certification for all school food service directors.

Source: USDA, December 2010.

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Exhibit 9.17
**Example of water availability at
Bedford Elementary School**

Source: Prismatic, December 2013.

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Exhibit 9.18
**Example of water availability at
Forest Elementary School**

Source: Prismatic, December 2013.

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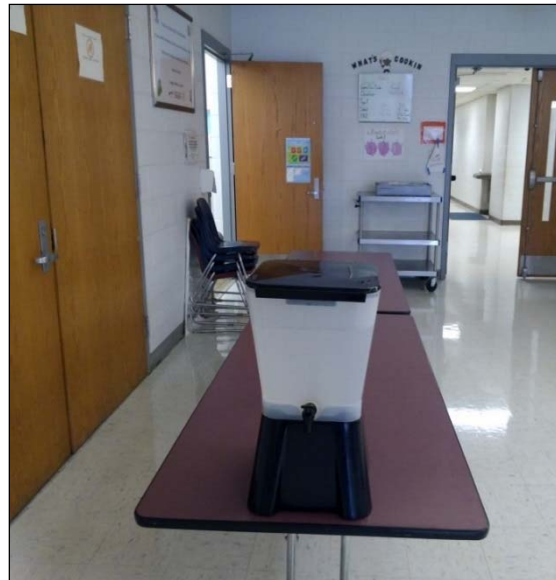
COMMENDATION

BCPS is commended for providing water to students in addition to the water fountains in the lunchrooms.

FINDING 9.16

In addition to changes in program administration, *HHFKA* **also requires broad changes to the menus, both in nutritional requirements and menu components.** The BCPS food services department has done an admirable job in meeting the challenges of *HHFKA*.

Exhibits 9.19 and **9.20** provide the nutritional changes required under *HFFKA*. As shown, both the breakfast and lunch menus must offer more fruits and vegetables. Milk must be low fat or fat-free. Sodium levels must be reduced and trans fats must be eliminated.

Exhibit 9.19
Summary of changes in nutritional requirements for breakfast

Item	Old Requirement	New Requirement		
Fruit	½ cup per day (vegetable substitution allowed)	1 cup per day (vegetable substitution allowed) Quantity required for 2014-15. Students are allowed to select ½ cup of fruit under OVS		
Grains and Meat/Meat Alternate	2 cups of grains or 2 cups of meat/meat alternates or 1 cup of each per day	For grains, daily minimum of 1 ounce equivalent minimum per day; weekly minimum ranges that vary by grade: • K-5: 7-10 ounces • 6-8: 8-10 ounces • 9-12: 9-10 ounces May substitute meat/meat alternates after minimum daily requirement for grains is met		
Whole Grains	Encouraged	At least half of the grains to be whole grain-rich beginning July 1, 2013. Beginning July 1, 2014, all grains must be whole grain-rich.		
Milk	1 cup	1 cup, 1% (unflavored) fat-free (unflavored/flavored)		
Sodium	Reduce, no set targets	Target 1: 2014-15	Target 2: 2017-18	Target 3: 2022-23
		K-5: ≤ 540 mg 6-8: ≤ 600 mg 9-12: ≤ 640 mg	K-5: ≤ 485 mg 6-8: ≤ 535 mg 9-12: ≤ 570 mg	K-5: ≤ 430 mg 6-8: ≤ 470 mg 9-12: ≤ 500 mg
Calories	Varied, depending on menu planning system in use, but only minimums provided	Only food-based menu planning allowed with these calorie guidelines: • K-5: 350-500 calories • 6-8: 400-550 calories • 9-12: 450-600 calories		
Trans Fat	No limit	Zero grams per serving (nutrition label)		

Source: USDA, January 2012.

Exhibit 9.20
Summary of changes in nutritional requirements for lunch

Item	Old Requirement	New Requirement		
Fruit and Vegetables	½ - ¾ cup of fruit and vegetables combined per day	¾ - 1 cup of vegetables plus ½ - 1 cup of fruit per day		
Vegetables	No specifications as to type of vegetable	Weekly requirements for: • dark green • red/orange • beans/peas • starchy • other		
Meat/Meat Alternate	1.5 - 2 ounce equivalents (daily minimum)	K-5: 1 oz. eq. min. daily (8-10 oz. weekly) 6-8: 1 oz. eq. min. daily (9-10 oz. weekly) 9-12: 2 oz. eq. min. daily (10-12 oz. weekly)		
Grains	8 servings per week (min. of 1 serving per day)	K-5: 1 oz. eq. min. daily (8-9 oz. weekly) 6-8: 1 oz. eq. min. daily (8-10 oz. weekly) 9-12: 2 oz. eq. min. daily (10-12 oz. weekly)		
Whole Grains	Encouraged	Beginning July 1, 2014, all grains must be whole grain-rich.		
Milk	1 cup	1 cup, 1% (unflavored) fat-free (unflavored/flavored)		
Sodium	Reduce, no set targets	Target 1: 2014-15	Target 2: 2017-18	Target 3: 2022-23
		K-5: ≤ 1230 mg 6-8: ≤ 1360 mg 9-12: ≤ 1420 mg	K-5: ≤ 935 mg 6-8: ≤ 1035 mg 9-12: ≤ 1080 mg	K-5: ≤ 640 mg 6-8: ≤ 710 mg 9-12: ≤ 740 mg
Calories	Varied, depending on menu planning system in use, but only minimums provided	Only food-based menu planning allowed with these calorie guidelines: • K-5: 550-650 calories • 6-8: 600-700 calories • 9-12: 750-850 calories		
Trans Fat	No limit	Zero grams per serving (nutrition label)		

Source: USDA, January 2012.

The bulk of the changes are required by 2014-15, but the final sodium reduction is not required until 2022-23. The implementation timeline for these changes is shown in **Exhibit 9.21**.

The *HHFKA* provides an additional 6-cent per lunch reimbursement to school divisions that certified to be in compliance with the new meal patterns. The increased reimbursement, a significant investment in improving the quality of school meals, is provided to school divisions once they meet the new meal patterns published in the final rule on January 26, 2012. Funding became available to school divisions starting October 1, 2012.

COMMENDATION

BCPS has met the requirements to be certified and in compliance with the requirements of *HHFKA* and is receiving the additional 6-cents reimbursement.

Exhibit 9.21
Implementation timeline for compliance with *Healthy, Hunger-Free Kids Act of 2010*

New Requirements	Implementation (School Year) for NSLP (L) and SBP (B)						
	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2022-23
Fruits Component							
Offer fruit daily	L						
Fruit quantity increase to 5 cups/week (minimum 1 cup/day)			B				
Vegetable Component							
Offer vegetables subgroups weekly	L						
Grains Component							
Half of grains must be whole grain-rich	L	B					
All grains must be wholegrain-rich			L, B				
Offer weekly grains ranges	L	B					
Meats/Meat Alternates Component							
Offer weekly meats/meat alternates ranges (daily min.)	L						
Milk Component							
Offer only fat-free (unflavored or flavored) and low-fat (unflavored) milk	L, B						
Dietary Specifications (to be met on average over a week)							
Calorie ranges	L	B					
Saturated fat limit (no change)	L, B						
Sodium Targets • Target 1 • Target 2 • Final target			L, B			L, B	L, B
Zero grams of <u>trans</u> fat per portion	L	B					
Menu Planning							
A single FBMP approach	L	B					
Age-Grade Groups							
Establish age/grade groups: K-5, 6-8, 9-12	L	B					
Offer vs. Serve							
Reimbursable meals must contain a fruit or vegetable (1/2 cup minimum)	L		B				
Monitoring							
3-year administrative review cycle		L, B					
Conduct weighted nutrient analysis on 1 week of menus	L	B					

Note: "B" indicates deadline for breakfast; "L" indicates deadline for lunch
Source: USDA, 2012

H.   Purchasing, Warehousing, and Contracting

Savvy purchasing and contracting can enhance both the financial bottom line and the quality of food served in a division's cafeterias. As noted in *Managing Child Nutrition Programs*, "purchasing has a greater impact on the quality of food served to students than any other school food and nutrition management function" (p. 392). A school food program maintains myriad contracts with food suppliers, technology providers, staff trainers, and equipment servicers. Effective competitive bidding provides the foundation for expectations regarding food, equipment, and service quality. How the resulting contracts are structured to provide long-term efficient support of a food service program is critical.

FINDING 9.17

The division participates in the Roanoke Regional Nutrition Buying Group (RRNBG). The RRNBG is a regional purchasing cooperative comprised of:

- Alleghany County Public Schools;
- Bedford County Public Schools;
- Botetourt County Public Schools;
- Craig County Public Schools;
- Roanoke County Public Schools; and
- Salem City Public Schools.

BCPS purchases their food products and kitchen supplies from bids awarded by this cooperative buying group.

Cooperative purchasing through a buying group can improve buying power resulting in considerable savings on food, paper products, and supplies. Participation in a buying coop can help smaller divisions realize cost savings through economies of scale by combining all intended purchases into one bid.

COMMENDATION

BCPS belongs to a regional buying group to purchase food products and kitchen supplies.

FINDING 9.18

The student nutrition department's handling of rebates received from vendors could be improved. When the rebate is received from the vendor the BCPS supervisor breaks down the amount into a percentage for each school. There is no system for allocation of the percentage. It is not an equal amount, nor is it based on amount of usage by school of the item. Determination is made based on the school's need for additional revenue. The process to determine how much of the rebate will be allocated to each school and the accompanying paperwork and recordkeeping is excessive and unnecessary. In addition, passing on a portion of the rebate to school kitchens without an equitable allocation by item used can inflate the revenue for kitchens and distort their profit and loss statement. This method of recording and allocating does not follow financial accounting best practices for school food service operations.

The American Commodity Distribution Association (ACDA) published *RA Handbook A Guide to USDA Foods for Recipient Agencies* in February 2013. This guide states that "The rebate system is a straightforward means of passing the value of USDA Foods through to RAs. The recipient orders and receives end products for which USDA has approved the use of donated USDA Foods (DF) from processors or distributors. The RA pays the processor or distributor the commercial price for the finished goods. At such times as are agreed to between the RA and the processor, the RA submits a rebate request from the processor for the value of the DF used in goods it has received." The rebates should be recorded in the same manner as the value of the USDA foods the division receives. Financial accounting for schools shows the value of USDA foods as a revenue item when they are received and an expense item when they are used.

RECOMMENDATION 9.18

Discontinue the practice of allocating rebates, and the accompanying paperwork, to individual schools on a percentage basis and follow best practice accounting methods for recording the rebate in the same way that the value of commodities is recorded.

FISCAL IMPACT

The food services supervisor can implement this recommendation in minimal time.

Detailed Steps for Master Plan Development for Bedford County Public Schools

A five-year facilities master plan should be a living document that guides facilities planning, design and construction for BCPS. It should be:

- officially monitored, updated, and distributed by the chief financial officer via the superintendent to the school board and the board of supervisors. Only planning actions compatible with this plan document may be initiated. If plans contrary to the document or not contained in the document are contemplated, then the plan must be amended;

- completed in time for the 2014-15 budget preparation, containing an immediate funding request for such items as new construction, renovation, additions, other capital improvement projects, and preventive as well as reactive maintenance. The funding request should also contain a forecast of potential needs for the remaining ten-year period. Thus the plan has details for years 1-5 and a broader forecast for years 6-10; and

- extended each year to cover a subsequent five year period (Example: the following year, it becomes the Five-Year Capital Facilities Plan 2015-2019.). This type of plan updating activity should become mandatory to keep the plan up-to-date, and to keep it useful as a guide document. The statutorily required capital improvement plan should be wholly incorporated in, and fully coordinated with, this effort.

Prototype Plan Description

The five-year facilities master plan should address the following:

- the strategy required to meet the need for facility improvement and for the capital investments necessary to support existing and projected educational needs;

- the educational goals of BCPS to satisfy the needs of students, parents, educators, administrative staff and the community;

- realistic plans to help BCPS provide for its short- and long-range facilities needs; and

- realistic spending plans on maintenance amounting to a minimum of two percent of current replacement value of all BCPS facilities.

The planning process never ends. As such, when the five-year facilities master plan 2014-2018 has been adopted, BCPS should then commence a re-evaluation of the plan in light of current and future needs. These reviews should occur as often as a new need arises, but not less than annually.

While the process for developing and maintaining a five-year facilities master plan can be complex and intricate for very large school districts, an effort should be made to keep the process uncomplicated in the case of BCPS. The following essentials should be included in Plan development and maintenance:

Goal-setting Around Four Priorities

Planners must address four critical factors throughout the planning and design process: quality, educational program, budget and time.

Before the planning process begins, BCPS should decide which of these four priority areas is most important:

- financial constraints
- time constraints
- educational specifications (facility programs)
- quality

For example, if BCPS is having financial problems, then budget may cause BCPS to follow a certain path to its end. Likewise, if time is a constraint, then BCPS staff and county officials must consider that quality and educational specifications may have to take a back seat. It would be advisable, however, that key personnel address all four of these factors when considering compromises on the needs of the educational program.

Goal-setting for the five-year facilities master plan should include the following:

- Recommend priorities and strategies concerning proposed projects, student and faculty stations, that will meet the facility needs and educational goals of BCPS.

- Conduct a thorough review, analysis, and evaluation of data that relate to facilities. This should include any needed updates of facilities condition, and of the contents of educational specifications. This process will enable understanding of the issues that require resolution.

- Continue gathering data and prepare a project plan of action. The project plan of action should identify projects and their priorities, define the scope, budgets and construction/renovation schedules, and it will help to coordinate the financial and project phase issues.

- Provide a process that includes and involves all stakeholders: community, schools, administrators, the school board, and other agencies of government.

- Develop implementation guidelines for the five-year facilities master plan and the project plan of action.

The Facilities Master Plan Team

The superintendent should establish a facilities master plan team within the current framework of committees. It is advised that the team be a subcommittee of the leadership team. Membership should consist of the superintendent, the chief financial officer, the supervisor of testing and planning, the supervisor of maintenance, and the safety and security manager. The CFO should report to the superintendent all activities of the facilities master plan team. The superintendent, in turn should keep the school board abreast of all developments concerning facilities planning.

This team should also include an external advisory/resource board consisting facilities and real estate experts, demographers, educators, and other stakeholders in the community. The team should guide the facilities planning, design and construction effort of BCPS, and focus especially on educational philosophy, financing, and facilities needs.

Initially, team meetings should be conducted not less frequently than every two weeks. This will speed the process and focus the membership on those issues that are being researched, developed or contemplated. As the entire process becomes more routine, the meetings may occur monthly and occasionally more or less frequently as needed.

It may be valuable to include members from other local and state government agencies on the team. Other school divisions have found that by partnering with non-educational agencies during the planning process, it is often possible to develop school facilities that provide for other needs and activities in the community, thus increasing prospective facilities use revenue, and a greater value of the facilities to the community.

It is crucial that the school board and the board of supervisors are in communication throughout the planning year leading up to the development of a facilities budget. Consequently, the school board and the board of supervisors should use a suitable current method, or devise a new method whereby the two entities may remain in strong communication as the elements of the facilities master plan are developed. For example, the main line of communication could proceed between the school board president and the chairperson of the board of supervisors, or between the superintendent and the county administrator.

Community Meetings

Authentic community engagement instills a sense of ownership within a community, which is a key factor in sustaining school improvement efforts. Community input is essential in any five-year facilities master planning process. It is advised that the team conduct a series of "open forum" meetings, around the county, encouraging community participation. Initially, there should be at least three rounds of meetings in strategic locations that maximize the potential for community involvement. For a resource list on community participation in school planning, see http://www.edfacilities.org/rl/ community participation.cfm.

During the first round of meetings, the planning process should be explained, goals and objectives presented, and community input solicited on the educational needs of the community. Included in this appraisal should be discussions eliciting information about special education needs of students, and whether these needs are currently being met.

During the second round of meetings, the community should be apprised of the data collection efforts to date, the current status of BCPS school facilities, and the demographic data affecting the master plan.

The third round of meetings should present the five-year facilities master plan, including the facilities condition assessment, the project plan, the implementation plan, and the financing plan. Any recommendations to construct new facilities, abandon existing facilities, or consolidate two or more facilities should be explained in detail at this meeting. Sufficient time should be allotted to ensure full community awareness of the impact of all plan recommendations.

As there may be considerable community discussion regarding the proposed project plan and financing plan, follow on meetings may be held to address these concerns.

Professional Consultant

The Team should hire, as soon as possible, a professional firm of planners, architects and engineers to prepare the initial five-year facilities master plan.

The professional firm should develop a profile of the implications of the BCPS educational goals for its facilities. The firm should propose actions that will help achieve these goals.

The firm should look at the impacts of current and projected enrollment vis-a-vis the capacity of the existing facilities. Data that may be included are demographics, floor plans of school buildings, and enrollment data from the previous school year.

The firm should assess the physical condition of the schools, along with any additional school-related buildings owned by BCPS. The data collected should be building by building, with as much detail as possible. BCPS already has an excellent database showing building condition, and much of this information merely needs to be updated rather than generated from scratch. Whatever data are compiled during the assessment should be used to analyze the facility's ability to meet the educational goals of BCPS.

The firm should also review historic budgets, major construction costs and costs of renovations. These data should be collected in any convenient form that is available. An analysis of current project budgets, including any shortfalls or overages, should be made as they relate to the ability of BCPS and individual schools to meet educational goals.

Sample Food Services Manual

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Use of Commodities

G. PURCHASING AND STORAGE

Ordering Food
Receiving Deliveries
Storage Areas
Protection of Food and Paper Goods

H. RECORD KEEPING

> HACCP (Hazard Analysis of Critical Control Points) Program
> Manager Record responsibility
> Local Records and Accountability
> Student Account Sales and Collections
> Inventory Adjustment Forms
> Reporting Accidents

I.SECURITY

> Hard Keys
> Entrance after School Hours

J. CASHIERING

> Counting Cash Received in Registers
> Purchasing Items by Students with Negative Balances
> Serving Homeless Students
> Use of Petty Cash
> POS Register Problems
> Serving Alternate Lunch to Elementary Students Who Owe Money

K. EQUIPMENT

> Care and Maintenance
> Requesting Equipment Repairs

L. MISCELLANEOUS

> Food Leaving School
> Gifts
> Awards Banquets
> Managers Conducting Kitchen Staff Development
> Transferring Food Items form One School to Another
> Pest Control
> Extra Duty Pay

M. ADDITIONAL PROGRAMS

> Summer Feeding Program

N. CARE AND USE INSTRUCTIONS FOR EQUIPMENT

> Introduction
> Ranges
> Steam-Jacketed Kettle
> Refrigerators
> Can Openers
> Hot Food Tables
> Three Compartment Sink
> Disposals
> Food Mixers
> Convection Oven
> Food Slicer
> Combi Ovens

Exhibit C-1
Overview

School Division	End-of-Year Membership Count	Percentage Students with Disabilities	Percentage Economically Disadvantaged	Total Number of Schools
Augusta County	10,413	8.2%	41.3%	21
Franklin County	7,084	15.8%	53.7%	16
Frederick County	12,888	11.0%	34.6%	18
Montgomery County	8,789	9.8%	42.9%	19
Rockingham County	11,255	9.0%	21.3%	23
Washington County	7,099	15.6%	47.7%	15
Peer Division Average	**9,588**	**11.6%**	**40.3%**	**19**
Bedford County	**10,268**	**10.3%**	**36.9%**	**21**

Source: 2011-12 VDOE Superintendent's Annual Report, VDOE 2010 Enrollment Reports, VDOE School Report Cards.

Exhibit C-2
2012 teacher staffing levels

School Division	Elementary Teaching Positions	Secondary Teaching Positions	Students per Classroom Teacher	
			Grades K-7	Grades 8-12
Augusta County	475.1	317.8	13.2	11.5
Franklin County	345.5	214.9	12.7	12.4
Frederick County	543.1	423.6	14.7	11.5
Montgomery County	355.8	422.1	16.3	8.5
Rockingham County	451.8	422.7	15.5	8.6
Washington County	369.8	192.5	11.9	14.0
Peer Division Average	**423.5**	**332.3**	**14.0**	**11.1**
Bedford County	**352.7**	**417.9**	**17.3**	**9.8**

Source: 2011-12 VDOE Superintendent's Annual Report.

Exhibit C-3
2012 sources of revenue/school operating funds

School Division	Sales and Use Tax	Federal Funds	State Funds	Local Funds	Other
Augusta County	$ 10,938,454	$ 10,248,043	$ 40,858,685	$ 40,544,992	$ 3,702,719
Franklin County	$ 7,372,437	$ 9,233,569	$ 28,527,736	$ 29,922,649	$ 3,652,458
Frederick County	$ 12,649,913	$ 11,190,615	$ 48,480,852	$ 70,996,456	$ 3,778,160
Montgomery County	$ 10,569,144	$ 9,191,657	$ 37,690,911	$ 49,956,049	$ 2,946,377
Rockingham County	$ 11,634,767	$ 10,082,987	$ 43,713,118	$ 46,516,236	$ 4,600,921
Washington County	$ 6,763,901	$ 7,991,004	$ 30,881,147	$ 20,668,927	$ 4,390,851
Peer Division Average	**$ 9,988,102**	**$ 9,656,312**	**$ 38,358,741**	**$ 43,100,884**	**$ 3,845,247**
Bedford County	**$ 9,132,404**	**$ 9,933,843**	**$ 33,701,587**	**$ 36,209,072**	**$ 8,041,074**

School Division	Sales and Use Tax	Federal Funds	State Funds	Local Funds	Other
Augusta County	10%	10%	38%	38%	3%
Franklin County	9%	12%	36%	38%	5%
Frederick County	9%	8%	33%	48%	3%
Montgomery County	10%	8%	34%	45%	3%
Rockingham County	10%	9%	38%	40%	4%
Washington County	10%	11%	44%	29%	6%
Peer Division Average	**10%**	**9%**	**37%**	**41%**	**4%**
Bedford County	**9%**	**10%**	**35%**	**37%**	**8%**

Source: 2011-12 VDOE Superintendent's Annual Report.

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Exhibit C-4
2012 cost per pupil

School Division	Instruction Spending per Pupil		Administration Spending per Pupil	
Augusta County	$	6,759	$	183
Franklin County	$	7,427	$	177
Frederick County	$	7,618	$	359
Montgomery County	$	7,623	$	199
Rockingham County	$	7,319	$	216
Washington County	$	6,844	$	224
Peer Division Average	**$**	**7,265**	**$**	**226**
Bedford County	**$**	**6,398**	**$**	**142**

Source: 2011-12 VDOE Superintendent's Annual Report.

Exhibit C-5
School-based staff per 1,000 students

School Division	End-of-Year Average Daily Membership Grades K-7	End-of-Year Average Daily Membership Grades 8-12	Staff per 1,000 Students			
			Principals and Assistant Principals	Teachers	Instructional Assistants	Others
Augusta County	6,250.9	3,647.6	4.1	78.2	14.0	9.0
Franklin County	4,394.9	2,654.6	4.2	75.9	16.9	8.9
Frederick County	7,984.3	4,890.0	3.8	74.5	14.6	6.6
Montgomery County	5,807.5	3,580.3	3.7	81.2	20.9	8.3
Rockingham County	6,979.1	3,629.9	4.2	79.5	14.5	7.7
Washington County	4,389.1	2,699.7	3.4	77.0	7.3	8.6
Peer Division Average	**5,967.6**	**3,517.0**	**3.9**	**77.7**	**14.7**	**8.2**
Bedford County	**6,088.2**	**4,100.0**	**14.0**	**73.9**	**14.8**	**7.5**

Source: 2011-12 VDOE Superintendent's Annual Report.

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Exhibit C-6
Instructional personnel

| School Division | Instruction | | | |
	Administrative Count	Technical and Clerical Count	Instructional Support Count	Other Professional Count
Augusta County	0.0	71.0	13.4	5.0
Franklin County	1.0	66.6	12.9	0.0
Frederick County	10.5	111.7	39.5	0.0
Montgomery County	18.2	95.0	16.1	3.0
Rockingham County	10.5	101.4	0.0	7.0
Washington County	9.6	63.0	0.0	1.0
Peer Division Average	**8.3**	**84.8**	**13.7**	**2.7**
Bedford County	**7.4**	**66.5**	**26.2**	**0.0**

Source: 2011-12 VDOE Superintendent's Annual Report.

Exhibit C-7
Administrative, attendance, and health personnel

| School Division | Administrative, Attendance, and Health | | |
	Administrative Count	Technical and Clerical Count	Other Professional Count
Augusta County	10.0	9.5	31.0
Franklin County	10.0	8.2	25.6
Frederick County	14.0	24.2	36.7
Montgomery County	14.0	12.9	28.0
Rockingham County	10.0	8.0	43.5
Washington County	9.0	14.3	21.2
Peer Division Average	**11.2**	**12.8**	**31.0**
Bedford County	**10.0**	**14.0**	**39.7**

Source: 2011-12 VDOE Superintendent's Annual Report.

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Exhibit C-8
Technology personnel

| School Division | Technology | | |
	Administrative Count	Technical and Clerical Count	Instructional Support Count
Augusta County	0.0	20.5	8.0
Franklin County	1.0	12.2	0.0
Frederick County	2.5	30.7	11.8
Montgomery County	1.0	16.0	10.0
Rockingham County	3.0	35.0	2.0
Washington County	1.0	8.0	0.0
Peer Division Average	**1.4**	**20.4**	**5.3**
Bedford County	**1.0**	**12.0**	**0.0**

Source: 2011-12 VDOE Superintendent's Annual Report.

Exhibit C-9
Transportation personnel

| School Division | Transportation | | | |
	Administrative Count	Technical and Clerical Count	Other Professional Count	Trades, Labor, and Service Count
Augusta County	0.0	8.0	4.0	206.6
Franklin County	3.5	17.2	0.0	155.8
Frederick County	1.0	27.4	2.0	191.2
Montgomery County	1.0	19.0	1.0	122.5
Rockingham County	1.0	4.0	0.0	233.9
Washington County	1.0	1.1	0.0	100.3
Peer Division Average	**1.3**	**12.8**	**1.2**	**168.4**
Bedford County	**0.0**	**0.0**	**2.0**	**131.6**

Source: 2011-12 VDOE Superintendent's Annual Report.

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Exhibit C-10
Operations and maintenance personnel

	Operations and Maintenance			
School Division	**Administrative Count**	**Technical and Clerical Count**	**Other Professional Count**	**Trades, Labor, and Service Count**
Augusta County	0.0	1.0	2.0	93.6
Franklin County	2.5	1.0	0.0	83.6
Frederick County	1.9	3.2	3.0	118.5
Montgomery County	4.0	4.5	0.0	137.8
Rockingham County	2.0	3.0	0.4	110.0
Washington County	1.0	1.0	0.0	61.5
Peer Division Average	**1.9**	**2.3**	**0.9**	**100.8**
Bedford County	**2.0**	**1.8**	**0.0**	**85.2**

Source: 2011-12 VDOE Superintendent's Annual Report.

Exhibit C-11
2012-13 free and reduced lunch

School Division	School Nutrition Program Membership Count	Total Free Lunches	Percent Free Lunches	Total Reduced Lunches	Percent Reduced Lunches	Percent Free/Reduced Lunches
Augusta County	10,771	3,361	31.2%	941	8.7%	39.9%
Franklin County	7,498	3,194	42.6%	611	8.2%	50.8%
Frederick County	13,104	3,662	28.0%	802	6.2%	34.0%
Montgomery County	9,852	3,071	31.2%	699	7.1%	38.3%
Rockingham County	4,393	2,036	46.4%	361	8.2%	54.6%
Washington County	7,403	2,819	38.1%	568	7.7%	45.8%
Peer Division Average	**8,837**	**3,024**	**36.2%**	**589**	**7.7%**	**43.9%**
Bedford County	**10,553**	**3,034**	**28.8%**	**757**	**7.2%**	**36.0%**

Source: 2011-12 VDOE Superintendent's Annual Report.

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Exhibit C-12
Graduates by diploma type

School Division	Total Count							
	Standard Diploma	Advanced Studies Diploma	Special Diploma	Certificate of Program Completion	GED Certificate	GAD Diploma	Modified Standard Diploma	Total Graduates and Completions 2011-12
Augusta County	334	398	13	1	8	0	21	791
Franklin County	237	265	20	0	0	0	10	552
Frederick County	415	467	11	1	5	0	17	949
Montgomery County	223	359	21	4	12	0	11	652
Rockingham County	374	398	22	5	2	0	16	825
Washington County	254	218	24	0	6	0	6	526
Peer Division Average	**306**	**350**	**18**	**2**	**6**	**0**	**14**	**716**
Bedford County	**307**	**417**	**26**	**6**	**10**	**0**	**9**	**783**

Source: 2011-12 VDOE Superintendent's Annual Report.

Exhibit C-13
Graduates by continuing education plans

School Division	Percentages of Total					
	Attending Two-Year Colleges	Attending Four-Year Colleges	Other Continuing Education Plans	Employment	Military	No Plans
Augusta County	29.7%	32.9%	2.3%	23.9%	3.5%	7.7%
Franklin County	40.6%	29.7%	6.9%	13.2%	5.4%	4.2%
Frederick County	8.2%	68.2%	4.5%	10.1%	5.9%	3.1%
Montgomery County	26.4%	51.5%	1.5%	10.9%	1.4%	8.3%
Rockingham County	4.2%	51.6%	9.1%	20.0%	3.8%	1.3%
Washington County	46.6%	30.4%	3.4%	16.4%	1.7%	1.5%
Peer Division Average	**25.9%**	**44.1%**	**4.6%**	**15.7%**	**3.6%**	**4.3%**
Bedford County	**26.1%**	**51.7%**	**4.5%**	**8.9%**	**2.3%**	**6.5%**

Source: 2011-12 VDOE Superintendent's Annual Report.

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Exhibit C-14
Dropout percentage

School Division	Grades 8-12 Total Membership Count	Total Dropouts Count	Dropout Percentage
Augusta County	5,066	57	1.1%
Franklin County	3,299	53	1.6%
Frederick County	6,105	98	1.6%
Montgomery County	4,314	50	1.2%
Rockingham County	5,241	61	1.2%
Washington County	3,382	14	0.4%
Peer Division Average	**4,568**	**55**	**1.2%**
Bedford County	**5,086**	**60**	**1.2%**

Source: 2010-11 VDOE Superintendent's Annual Report.

Finding	Recommendation/Commendation	Estimated (Costs) or Savings					Total Five-Year (Costs) or Savings
		2014-15	2015-16	2016-17	2017-18	2018-19	
Chapter 2	**Divisional Administration**						
2.1	BCPS has an effective governance structure.						
2.2	The superintendent encourages innovation and forward thinking in his executive staff, leading by example and implementing tools in BCPS administration that are designed to inform its current and future success.						
2.3	The superintendent blends his staff in a manner that leads to continuity with a willingness to change and consider new ideas in an effort to improve BCPS.						
2.4	Improve the organization of the central office and create a two-year plan for adding positions: Add three positions for the upcoming budget year, enhance one position, and adjust reporting lines of the three resulting executive tier positions.	($186,000)	($186,000)	($186,000)	($186,000)	($186,000)	($930,000)
2.5	BCPS has developed structures that encourage communication with internal and external stakeholders.						
2.6	Enhance communication efforts from central office to schools and with central office departments.	$0	$0	$0	$0	$0	$0
2.7	The superintendent and assistant superintendent successfully developed the principal's professional development program.						
2.8	The work of the assistant superintendent in developing and facilitating the tiered discipline plan for the division is exemplary.						
2.9	BCPS has an efficient process in place for the timely review and posting of school board policies.						
2.10	Develop procedures in each department both for internal staff to use at the central office and to guide principals in division-related work on a day-to-day basis.	$0	$0	$0	$0	$0	$0
2.11	The involvement of all stakeholders in the development of the strategic plan is exemplary.						
2.12	The superintendent has established his vision for the division in a continuous improvement model that guides central office departments and focuses on school improvement.						
2.13	Provide training for the school board on strategic planning, goal development, and program evaluation.	$0	$0	$0	$0	$0	$0
2.14	Improve the linkage between the strategic plan and the SIPs by creating specific short-term, SMART goals that support long-range goals.	$0	$0	$0	$0	$0	$0

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Finding	Recommendation/Commendation	Estimated (Costs) or Savings					Total Five-Year (Costs) or Savings
		2014-15	2015-16	2016-17	2017-18	2018-19	
2.15	Provide program evaluation training for all division and department staff involved in the implementation of action plans and school improvement plans.	$0	$0	$0	$0	$0	$0
2.16	Utilize research on what makes an effective school board.	$0	$0	$0	$0	$0	$0
	Subtotal	**($186,000)**	**($186,000)**	**($186,000)**	**($186,000)**	**($186,000)**	**($930,000)**
Chapter 3	**Educational Service Delivery**						
3.1	BCPS has allocated in an equitable manner its teaching staff and exceeds SOQ minimums.						
3.2	BCPS is commended for visionary thinking regarding the future for the division's student learning environment.						
3.3	Develop scheduling plans for middle schools and high schools that synchronize with and support personalized learning.	$0	$0	$0	$0	$0	$0
3.4	Develop and implement uniform processes, procedures, and sources for administering formative and benchmark assessments.	$0	$0	$0	$0	$0	$0
3.5	Implement a comprehensive ongoing process for analyzing student performance data throughout the school year.	$0	$0	$0	$0	$0	$0
3.6	Develop and implement processes and procedures to manage, revise, and update pacing guides, curriculum maps, and educational resources based on student performance data and educational changes.	$0	$0	$0	$0	$0	$0
3.7	Implement processes and procedures to ensure all teachers implement the written, taught, and tested curriculum with integrity.	$0	$0	$0	$0	$0	$0
3.8	Develop and implement a multi-year comprehensive division-wide instructional plan.	$0	$0	$0	$0	$0	$0

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Finding	Recommendation/Commendation	Estimated (Costs) or Savings					Total Five-Year (Costs) or Savings
		2014-15	2015-16	2016-17	2017-18	2018-19	
3.9	Establish regularly scheduled time for teacher collaboration and implement common release time for staff collaboration and planning.	$0	$0	$0	$0	$0	$0
3.10	The division has done a commendable job of implementing Response to Intervention (RTI) and interfacing it with the School Consultation Team (SCT) program to serve special education students.						
3.11	There are exceptional efforts in BCPS to offer multiple learning opportunities for gifted students in the elementary grade levels.						
3.12	Monitor the implementation of appropriately enhanced educational learning opportunities for all gifted and talented BCPS students.	$0	$0	$0	$0	$0	$0
	Subtotal	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Chapter 4	**Human Resources**						
4.1	The BCPS HR department has performed exemplary work in the areas of personnel, as measured by established HR metrics for performance and effectiveness.						
4.2	Increase the clerical staff of HR by one.	($33,600)	($33,600)	($33,600)	($33,600)	($33,600)	($168,000)
4.3	Develop and implement a customer feedback system that produces information in two regards: evaluating the nature and quality of HR services, and assessing an employee job satisfaction survey.	($10,000)	$0	$0	($10,000)	$0	($20,000)
4.4	Update systematically all job descriptions to ensure that they accurately reflect job functions and comply with applicable FLSA laws.	$0	$0	$0	$0	$0	$0
4.5	Implement a document imaging system for record maintenance.	($10,000)	($5,000)	($5,000)	($5,000)	($5,000)	($30,000)
4.6	Place all personnel file folders in fire- and waterproof cabinets which can be locked when not in use. These will eventually be eliminated through the document imaging system for records storage.	($16,000)	$0	$0	$0	$0	($16,000)
4.7	The division is implementing a comprehensive staffing standards plan that equalizes the staffing of schools and departments according to specific standard.						

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Finding	Recommendation/Commendation	Estimated (Costs) or Savings					Total Five-Year (Costs) or Savings
		2014-15	2015-16	2016-17	2017-18	2018-19	
4.8	Provide incentives for teachers to achieve a demonstrable level of impact on student achievement and mastery of teaching, possibly through the BPCS teacher career ladder and/or through National Board certification.	$0	$0	$0	$0	$0	$0
4.9	Develop a comprehensive division-wide professional development master plan.	$0	$0	$0	$0	$0	$0
4.10	Involve central office instructional personnel in the development of individual campus CSIPs especially in regard to needed teacher training.	$0	$0	$0	$0	$0	$0
4.11	Resume monitoring compliance with FLSA rules in regard to both accurate job classifications and compensation for overtime and compensatory time.	$0	$0	$0	$0	$0	$0
4.12	Ensure that provisions of FLSA rules and school board policies in regard to awarding overtime pay and compensatory time are implemented and followed.	$0	$0	$0	$0	$0	$0
4.13	HR has collected and filed performance evaluations on virtually all BCPS employees.						
	Subtotal	**($69,600)**	**($38,600)**	**($38,600)**	**($48,600)**	**($38,600)**	**($234,000)**
Chapter 5	**Facilities Use and Management**						
5.1	Establish a succession plan and hire the successor to the current maintenance supervisor with a minimum three-month overlap.	($28,250)	$0	$0	$0	$0	($28,250)
5.2	Prepare a permanent, ongoing facilities master plan and master planning process with a 10-year strategic horizon and a five-year working horizon that includes specific cost objectives.	($140,000)	$0	$0	$0	$0	($140,000)
5.3	Close Bedford Primary and Moneta Elementary Schools.	$1,600,000	$1,600,000	$1,600,000	$1,600,000	$1,600,000	$8,000,000

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Finding	Recommendation/Commendation	Estimated (Costs) or Savings					Total Five-Year (Costs) or Savings
		2014-15	2015-16	2016-17	2017-18	2018-19	
5.4	Remove 14 two-classroom units and two one-classroom units by the end of 2014-15.	$390,000	$90,000	$90,000	$90,000	$90,000	$750,000
5.5	Approve and document all key policies, rules, and procedures for facilities use and management.	$0	$0	$0	$0	$0	$0
5.6	Review the existing community use of facilities policy and revise it as necessary.	$12,000	$14,200	$14,200	$14,200	$14,200	$68,800
5.7	The division retains an expert, experienced, and collaborative team for the maintenance of its school facilities.						
5.8	Issue work orders electronically on the previous afternoon for pick-up on tablets and/or smartphones issued to the maintenance staff.	($17,050)	($13,200)	($13,200)	($13,200)	($13,200)	($69,850)
5.9	Provide access for skilled maintenance staff and zone technicians to all buildings.	($1,300)	$0	$0	$0	$0	($1,300)
5.10	The school division is commended for its painstaking attention to the safety, health, and welfare of its students, staff, and visitors, and for its innovative awards program.						
5.11	Adopt a budget policy for facilities maintenance.	$0	$0	$0	$0	$0	$0
5.12	Perform a building condition assessment every five years.	$0	$0	$0	$0	$0	$0
5.13	Hire six additional skilled maintenance workers to form three teams of three, one for each high school zone.	($408,000)	($408,000)	($408,000)	($408,000)	($408,000)	($2,040,000)
5.14	Establish a formal roster of substitute custodians.	$0	$0	$0	$0	$0	$0
5.15	Organize circuit riding grounds crews for each high school service area.	($421,350)	($271,350)	($271,350)	($271,350)	($271,350)	($1,506,750)
5.16	BCPS custodians are diligent, competent, and effective.						
5.17	Explore and implement ways of reducing turnover among custodians.	$0	$0	$0	$0	$0	$0
5.18	Buy new and up-to-date versions of the job training videos and discard outdated training materials.	($3,000)	($200)	($200)	($200)	($200)	($3,800)

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Finding	Recommendation/Commendation	Estimated (Costs) or Savings					Total Five-Year (Costs) or Savings
		2014-15	2015-16	2016-17	2017-18	2018-19	
5.19	Accelerate implementation of the current BCPS plan that carpet will not be replaced with carpet.	$0	$0	$0	$0	$0	$0
5.20	Purchase additional ec-H2O machines to equip all schools fully.	$0	$0	$0	$0	$0	$0
5.21	The board of supervisors and the school board are commended for hiring an energy services company (ESCO) to help them finance needed energy improvements using the projected energy savings from these improvements.						
5.22	Establish an energy management program.	$0	$0	$0	$0	$0	$0
5.23	Perform an analysis using the energy management systems software to determine where the extra energy consumption occurs, and make adjustments as necessary.	$0	$0	$0	$0	$0	$0
5.24	Improve security of school access.	$0	$0	$0	$0	$0	$0
5.25	Develop a plan to equip all schools with state-of-the-art high resolution security cameras on the interiors and on school grounds.	$0	$0	$0	$0	$0	$0
5.26	Switch the building inventory of the division to a card swipe or proximity door access system.	$0	$0	$0	$0	$0	$0
5.27	Conduct an assessment of the adequacy and safety of the Thaxton Elementary School site.	$0	$0	$0	$0	$0	$0
	Subtotal	**$983,050**	**$1,011,450**	**$1,011,450**	**$1,011,450**	**$1,311,450**	**$5,028,850**
Chapter 6	**Financial Management**						
6.1	BCPS has developed a good working relationship between the division's CFO and county officials.						
6.2	Continue to analyze finance staff work assignments, make adjustments to fully utilize staff time, and relieve the CFO of duties performed to enable him time to perform other functions for the division.	$0	$0	$0	$0	$0	$0

Finding	Recommendation/Commendation	Estimated (Costs) or Savings					Total Five-Year (Costs) or Savings
		2014-15	2015-16	2016-17	2017-18	2018-19	
6.3	Develop formal workers compensation and safety policies and procedures, establish a safety committee, analyze accidents, and conduct safety training directed at reducing reoccurring accidents.	$0	$0	$0	$0	$0	$0
6.4	BCPS maintains a low administrative cost ratio, making additional funds available for instruction.						
6.5	BCPS has established an Employee Access Center that provides employees with a resource to easily obtain personal information and eliminated the need to print paper pay stubs.						
6.6	BCPS has a payroll checklist that helps ensure monthly payrolls are processed timely and all components of the process are completed when required.						
6.7	BCPS's payroll reconciliation process ensures contract employees are paid correctly after changes are made to their pay amounts.						
6.8	BCPS's payroll and vendor payment processes enable the county to process checks and direct deposit timely and accurately.						
6.9	Revise the payroll screen in the Employee Access Center to provide more information when employees perform duties in addition to their contract pay.	$0	$0	$0	$0	$0	$0
6.10	Review year-end balances remaining in schools' allocated funds and return excess balances to the school board.	$44,976	$0	$0	$0	$0	$44,976
6.11	The BCPS budget development process, documented in a budget planning calendar, provides participants with a scheduled time for input and a checklist of necessary actions to meet prescribed due dates.						
6.12	BCPS places its annual budget on the website to provide all readers with easy access to the data.						
6.13	BCPS's quarterly board reports present easily-understood data on the financial operations and conditions of funds that have been analyzed by the CFO.						
6.14	Prepare routine financial reports for the nutrition program that show the results of operations.	$0	$0	$0	$0	$0	$0
6.15	Acquire and implement an automated time-keeping system.	($140,000)	$0	$0	$0	$0	($140,000)
6.16	Develop a board policy to help ensure the protection of the division's investment in its fixed assets.	$0	$0	$0	$0	$0	$0
6.17	Require central office approval before deleting items from the fixed asset system.	$0	$0	$0	$0	$0	$0

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Finding	Recommendation/Commendation	Estimated (Costs) or Savings					Total Five-Year (Costs) or Savings
		2014-15	2015-16	2016-17	2017-18	2018-19	
6.18	Develop processes to ensure that fixed asset items are added to the fixed asset system in a timely manner.	$0	$0	$0	$0	$0	$0
6.19	Develop a procedures manual for activity funds and train staff on the standard approved processes for managing these activity funds.	$0	$0	$0	$0	$0	$0
6.20	Develop a user manual for school and department staff to assist them in completing finance and budget related duties and provide periodic training.	$0	$0	$0	$0	$0	$0
6.21	Develop desk procedures for the important duties performed by each staff member in the finance department, and cross-train them in each other's duties.	$0	$0	$0	$0	$0	$0
6.22	Identify all critical functions performed by finance staff, and document procedures in a comprehensive procedures manual.	$0	$0	$0	$0	$0	$0
	Subtotal	**($95,024)**	**$0**	**$0**	**$0**	**$0**	**($95,024)**
Chapter 7	**Transportation**						
7.1	Hire one additional secretarial support person so that the supervisor and assistant coordinator can be freed from some of their routine tasks to focus on more strategic areas, including automated routing, driver training, and special needs transportation.	($29,830)	($29,830)	($29,830)	($29,830)	($29,830)	($145,150)
7.2	Offer more opportunities for drivers to obtain full-time employment.	$0	$0	$0	$0	$0	$0
7.3	Develop one additional full-time substitute driver position per zone (total of three new positions).	($52,000)	($52,000)	($52,000)	($52,000)	($52,000)	($260,000)
7.4	BCPS requires bus drivers to leave K-3 students with an authorized adult.						

Finding	Recommendation/Commendation	Estimated (Costs) or Savings					Total Five-Year (Costs) or Savings
		2014-15	2015-16	2016-17	2017-18	2018-19	
7.5	Develop an annual assessment of Head Start transportation costs and request reimbursement to cover all relevant costs.	$35,000	$35,000	$35,000	$35,000	$35,000	$175,000
7.6	BCPS bus drivers and school staff members maintain organized and orderly bus dismissal practices.						
7.7	Change department procedure so that if aides report to work in good faith, they are paid for that shift even if their services are not needed.	$0	$0	$0	$0	$0	$0
7.8	Use the division's SubFinder system, currently used to fill teacher absences, with the division's drivers.	$0	$0	$0	$0	$0	$0
7.9	The division has implemented tiered school start times, which saved approximately $500,000 in 2011-12 over 2010-11, despite an increase in student ridership.						
7.10	Adopt a board policy on school walk zones and an acceptable distance for students to walk to a bus stop, with consideration for hazardous areas in which students should not be expected to walk.	$34,000	$34,000	$34,000	$34,000	$34,000	$170,000
7.11	Work with the county to develop fully automated routing.	$145,000	$170,000	$170,000	$170,000	$170,000	$825,000
7.12	Using automated routing capabilities, investigate a staggered elementary bell schedule that makes greater use of a smaller fleet and provides more opportunities for drivers to work more hours.	$0	$0	$0	$0	$0	$0
7.13	Include the transportation supervisor or assistant coordinator in IEP meetings where transportation alternatives are discussed.	$0	$0	$0	$0	$0	$0
7.14	Adopt an off-the-shelf field trip software package.	($10,000)	($1,000)	($1,000)	($1,000)	($1,000)	($14,000)

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Finding	Recommendation/Commendation	Estimated (Costs) or Savings					Total Five-Year (Costs) or Savings
		2014-15	2015-16	2016-17	2017-18	2018-19	
7.15	Use the data in the state reports as a starting point to compile annual comparisons of the BCPS transportation operation.	$0	$0	$0	$0	$0	$0
7.16	BCPS bus drivers and mechanics operate and maintain a low bus accident record.						
7.17	Provide annual training for bus mechanics.	($2,000)	($2,000)	($2,000)	($2,000)	($2,000)	($10,000)
7.18	Develop a joint garage with the county, relocating all school division maintenance services to the new facility.	$0	$0	$0	$0	$0	$0
7.19	Adopt a bus replacement policy and budget accordingly.	$0	$0	$0	$0	$0	$0
7.20	Phase out all but a few staff cars in order to save parking space, as well as maintenance, registration, and insurance costs.	$16,000	$15,000	$15,000	$15,000	$15,000	$76,000
	Subtotal	**$136,170**	**$169,170**	**$169,170**	**$169,170**	**$169,170**	**$812,850**
Chapter 8	**Technology Management**						
8.1	The school division has developed an exceptionally talented staff of network, systems, and data administrators.						
8.2	Evaluate and implement options that would enhance the efficiency and effectiveness of the field technicians.	$0	$0	$0	$0	$0	$0
8.3	Hire and train an individual to assist the data manager and develop a set of operating procedures for all mission critical functions.	($41,281)	($41,281)	($41,281)	($41,281)	($41,281)	($206,405)
8.4	Prepare a detailed implementation plan for the backpack initiative.	$0	$0	$0	$0	$0	$0
8.5	Improve the technology plan by incorporating the technology and budget plans necessary to support the desired personalized learning technology environment.	$0	$0	$0	$0	$0	$0
8.6	Develop guidelines that govern the process for deploying new technologies.	$0	$0	$0	$0	$0	$0

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Finding	Recommendation/Commendation	Estimated (Costs) or Savings					Total Five-Year (Costs) or Savings
		2014-15	2015-16	2016-17	2017-18	2018-19	
8.7	Develop a technology replacement plan.	$0	$0	$0	$0	$0	$0
8.8	Develop a comprehensive disaster recovery plan that will ensure the ability to resume critical data functions in the event of a catastrophic loss.	$0	$0	$0	$0	$0	$0
8.9	Create comprehensive written procedures and make them accessible to essential division staff.	$0	$0	$0	$0	$0	$0
8.10	Develop an inventory reporting system that will track all of the technology assets of the division.	$0	$0	$0	$0	$0	$0
8.11	BCPS maintains a high-speed wide area network (WAN) that consists of fiber-optic cable and microwave antenna connectivity.						
8.12	Survey the existing network infrastructure, improving wiring and upgrading network switches where necessary.	($50,000)	$0	$0	$0	$0	($50,000)
8.13	Negotiate with the local Internet provider to provide greater bandwidth to the school division.	$0	$0	$0	$0	$0	$0
8.14	Develop a plan that will support the equitable deployment of technology resources across the division.	$0	$0	$0	$0	$0	$0
8.15	Adopt strict guidelines governing the acquisition of software and hardware that will ensure compatibility with current operating systems and divisional support capabilities.	$0	$0	$0	$0	$0	$0
	Subtotal	**($91,281)**	**($41,281)**	**($41,281)**	**($41,281)**	**($41,281)**	**($256,405)**
Chapter 9	**Food Services**						
9.1	Hire one additional secretarial support person.	($37,627)	($37,627)	($37,627)	($37,627)	($37,627)	($188,135)
9.2	Increase the division's food service productivity.	$50,600	$101,200	$101,200	$101,200	$101,200	$455,400

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Finding	Recommendation/Commendation	Estimated (Costs) or Savings					Total Five-Year (Costs) or Savings
		2014-15	2015-16	2016-17	2017-18	2018-19	
9.3	Develop a comprehensive school nutrition procedures manual that is reviewed annually and revised as needed.	$0	$0	$0	$0	$0	$0
9.4	BCPS has closed campuses at all schools during meal times and accommodates all students with adequate time to eat and enough seating.						
9.5	Develop a department-level strategic plan.	$0	$0	$0	$0	$0	$0
9.6	Use existing data and reports to make operational adjustments as indicated.	$0	$0	$0	$0	$0	$0
9.7	Reflect the dollar value of USDA commodities when allocating expenditures for food costs on profit and loss statements.	$0	$0	$0	$0	$0	$0
9.8	Charge the school nutrition department indirect costs at the restricted rate.	$33,742	$33,742	$33,742	$33,742	$33,742	$168,710
9.9	The department has a maintenance contract with a company that does preventive maintenance and keeps the kitchen equipment in good repair in a timely manner.						
9.10	Develop a database of all equipment in the school kitchens by type, age, frequency of repair, and condition. Establish a line item in the budget for purchasing replacement equipment that meets a certain threshold for age and number of repairs.	$0	$0	$0	$0	$0	$0
9.11	BCPS is in compliance with the Virginia regulations governing competitive food sales in school lunchrooms.						
9.12	The division has the necessary technology infrastructure in place to support the kitchens and lunchrooms.						
9.13	Develop strategies to increase the number of students completing applications for free and reduced price meals.	$50,591	$50,591	$50,591	$50,591	$50,591	$252,955
9.14	Develop strategies for increasing student participation rates, focusing first at the elementary level.	$0	$42,159	$84,318	$126,477	$126,477	$379,431
9.15	BCPS is commended for providing water to students in addition to the water fountains in the lunchrooms.						
9.16	BCPS has met the requirements to be certified and in compliance with the requirements of HHFKA and is receiving the additional 6-cents reimbursement.						

Finding	Recommendation/Commendation	Estimated (Costs) or Savings					Total Five-Year (Costs) or Savings
		2014-15	2015-16	2016-17	2017-18	2018-19	
9.17	BCPS belongs to a regional buying group to purchase food products and kitchen supplies.						
9.18	Discontinue the practice of allocating rebates, and the accompanying paperwork, to individual schools on a percentage basis and follow best practice accounting methods for recording the rebate in the same way that the value of commodities is recorded.	$0	$0	$0	$0	$0	$0
	Subtotal	$97,306	$190,065	$232,224	$274,383	$274,383	$1,068,361
	Total savings	$2,411,909	$2,185,892	$2,228,051	$2,270,210	$2,270,210	$11,366,272
	Total costs	($1,637,288)	($1,081,088)	($1,081,088)	($1,091,088)	($1,081,088)	($5,971,640)
	Total net savings and costs	$774,621	$1,104,804	$1,146,963	$1,179,122	$1,189,122	$5,394,632

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