

Botetourt County Public Schools
School Efficiency Review for Botetourt County
Final Report

January 15, 2015

BOTETOURT COUNTY PUBLIC SCHOOLS
SCHOOL EFFICIENCY REVIEW FOR BOTETOURT COUNTY
FINAL REPORT

JANUARY 15, 2015



TABLE OF CONTENTS

INTRODUCTION 2

1.0 DIVISIONAL ADMINISTRATION..... 13

2.0 EDUCATIONAL SERVICE DELIVERY.....31

3.0 HUMAN RESOURCES.....57

4.0 FACILITIES USE AND MANAGEMENT70

5.0 FINANCIAL MANAGEMENT.....93

6.0 TRANSPORTATION 120

7.0 TECHNOLOGY MANAGEMENT..... 156

8.0 FOOD SERVICES..... 184

INTRODUCTION

In August of 2014, MGT of America (MGT) was hired by the Virginia Department of Planning and Budget (DPB) to conduct an efficiency and effectiveness review of Botetourt County Public Schools. The state of Virginia expends more than \$14 billion in state, federal, and local funds to provide educational services to public elementary and secondary students. In 2003, Virginia developed the concept for an efficiency and effectiveness review process to ensure that non-instructional functions in school divisions were running efficiently and that all available funds were directed to the classrooms. Since inception, the review process has been completed in forty-one school divisions with recommended net savings of almost \$45 million annually.

The review includes the analysis of eight areas, each presented in a separate section: divisional administration, educational services delivery, human resources, facilities use and management, financial management, transportation, technology management, and food service. The goal is provide an objective review of the efficiency of non-instructional services in the school division and to identify areas of possible savings or efficiency that could be made through changes in program, staffing, policy, or approach. The insight gained from each review is available for other divisions through the published reports on the Virginia Department of Education's website http://www.doe.virginia.gov/school_finance/efficiency_reviews/index.shtml.

This section describes the background and context for the study and includes the methodologies used for the organizational analysis. This section is divided into the following four subsections:

- A. Acknowledgements
- B. Methodology
- C. Report Organization
- D. Summary of Commendations and Recommendations

A. ACKNOWLEDGEMENTS

MGT wishes to acknowledge the significant effort and support provided by the Botetourt County Public Schools and the staff. Specifically, we appreciate the assistance from Superintendent Dr. Tony Brads and the senior staff of this division. Dr. Brads and his staff encouraged open and direct communication about any issues or concerns, gathered documents for review, and made themselves and their departments available to consultants during the on-site week. We also greatly appreciate having the opportunity to meet and interview all members of the school board to understand their unique perspectives about operations in Botetourt County. Additionally, since school divisions in Virginia are funded through the county government, we acknowledge and appreciate the opportunity to interview county supervisors and the county executive to gain their perspectives about school operations.

All findings, commendations and recommendations have been developed by MGT's consultants based on data and perceptions identified during this study.

B. METHODOLOGY

MGT organized this review around five major phases based on the Virginia School Efficiency Review Program Protocol (http://www.dpb.virginia.gov/school/Final%20SERVE%20Protocols_July_2009.pdf). The phases are as shown below and include introductory project startup activities, activities to gather

division background and information, on-site, in-depth review activities, reporting and communication activities, and project close-out.

PHASE I – PROJECT INITIATION	
Task 1.0	Conduct Project Startup
Task 2.0	Develop Preliminary Profile of Division
PHASE II –DIAGNOSTIC REVIEW and PEER BENCHMARKS	
Task 3.0	Conduct Diagnostic Review
Task 4.0	Conduct Benchmark Analysis with Peer School Divisions
Task 5.0	Tailor Study Guidelines to the School Division
PHASE III – IN-DEPTH EFFICIENCY REVIEW	
Task 6.0	Review Operational Areas: <ul style="list-style-type: none"> ▶ Divisional Administration ▶ Educational Service Delivery Costs ▶ Human Resources ▶ Facilities Use and Management ▶ Financial Management ▶ Transportation ▶ Technology Management ▶ Food Service ▶ Areas of Special Concern
PHASE IV – PROJECT REPORTING	
Task 7.0	Provide Fieldwork Debriefing
Task 8.0	Provide Bi-weekly Progress Reports
Task 9.0	Prepare Interim Briefing Document
Task 10.0	Prepare Initial Draft, Exposure Draft, and Final Reports and Presentation (if requested)
PHASE V – PROJECT DEBRIEFING AND WRAP-UP	
Task 11.0	Prepare Concluding and Summary Documents

Upon contract approval, MGT’s Project Director and a senior MGT partner conducted an initial telephone conference call with division staff as well as staff from DPB to finalize schedules and discuss immediate plans. The Project Director met in Botetourt County on August 19-20, 2014 for the project initiation meeting, conducting interviews with senior BCPS staff and school board members and finalizing the schedule and plans. MGT requested numerous documents from the division, including, but not limited to, the following:

- ◆ Policies and administrative procedures
- ◆ Organizational charts
- ◆ Job descriptions
- ◆ Financial reports
- ◆ Operation handbooks and procedures
- ◆ Program and compliance reports
- ◆ Curriculum and instruction programs, data, and reports
- ◆ Student assessment data
- ◆ Technology plans
- ◆ Annual performance reports
- ◆ Annual budget and expenditure reports

MGT provided a review team of seven content specialists who conducted the on-site work. In addition, MGT's project staff included analysts and clerical support. The consultant team worked in BCPS from September 22- 26, conducting interviews with staff at all levels, as well as county officials, visiting schools, reviewing data, and gathering further information. Team members visited all schools several times to observe and interview site staff. Team members also rode school buses and observed operations in technology, maintenance, facility, and food service areas. During the onsite week, consultants met every evening to review data and identify any issues or findings that needed further review. Following the site visit, MGT's staff have accessed additional information from the division website or other sources.

In addition to using data gathered from Botetourt County, MGT gathered data from other school divisions. The practice of benchmarking is often used to make comparisons between and among school divisions. Benchmarking refers to the use of commonly held organizational characteristics in making concrete statistical or descriptive comparisons of organizational systems and processes. It is also a performance measurement tool used in conjunction with improvement initiatives to measure comparative operating performance and identify best practices. Effective benchmarking has proven to be especially valuable to strategic planning initiatives within school divisions.

With this in mind, MGT initiated a benchmarking comparison of BCPS to provide a common foundation to compare systems and processes within the division with those other, similar systems. It is important for readers to keep in mind when comparisons are made across divisions that some data are not comparable, as different school divisions have different operational definitions, and data self-reported by school divisions can be subjective. MGT has made every attempt to verify these data. Most data are extracted from the Virginia Department of Education's website to provide standardized data across school divisions. Exhibit information is from the 2013-14 school year whenever possible, or from the most current, fully-reported data year.

MGT worked with the division and DPB to select seven Virginia school divisions to compare with BCPS. The divisions were selected based on several factors, including student enrollment, number of schools, student performance, and the VADOE 2014-16 Composite Index. While MGT did not base recommendations solely on comparison school division findings, we used these analyses to provide insights on where the division stands among its peers. Where appropriate, peer division comparisons are included in each section of this report. Peer divisions for this study are shown below.

- ◆ Accomack County Public Schools
- ◆ Caroline County Public Schools
- ◆ King George County Public Schools
- ◆ Mecklenburg County Public Schools
- ◆ Orange County Public Schools
- ◆ Powhatan County Public Schools
- ◆ Wythe County Public Schools

Exhibit I-1 provides some initial comparisons for each school division based on student enrollment, size in square miles, poverty level, which is described by the percentage of students who qualify for free or reduced price meals (F/R meals), support for divergent learners, which is described by the percentage of students who qualify for the English Language Learners (ELL) program, the pupil teacher ratio, and the VA Department of Education Composite Index¹ which is an indicator of local county wealth and ability to support schools.

EXHIBIT I-1
PEER COMPARISON DATA
2014

DIVISION	ENROLLMENT	SQ. MILES	% F/R MEALS	% ELL	PUPIL/ TEACHER RATIO	VADOE FY2014-16 COMPOSITE INDEX
Botetourt County	4,856	541.20	22.15	0.82	13.13	0.3718
Accomack County	5,247	449.50	70.73	17.76	10.91	0.3553
Caroline County	4,326	527.51	52.57	1.53	15.64	0.3272
King George County	4,634	179.64	32.76	0.58	13.28	0.3772
Mecklenburg County	5,181	625.49	62.02	1.51	12.40	0.3608
Orange County	4,261	340.78	18.22	3.12	13.16	0.3618
Powhatan County	4,323	260.22	49.19	0.46	13.27	0.3912
Wythe County	4,326	461.82	52.57	0.23	15.64	0.3182
Peer Average	4,614	406.42	48.55	3.60	12.89	0.3560

Source: Square miles from US Census Bureau Quickfacts. All other data from Virginia Department of Education website, 2014.

¹ http://www.doe.virginia.gov/school_finance/budget/compositeindex_local_abilitypay/

The Composite Index determines a school division's ability to pay education costs fundamental to the Commonwealth's Standards of Quality (SOQ). The Composite Index is calculated using three indicators of a locality's ability-to-pay:

- True value of real property (weighted 50 percent)
- Adjusted gross income (weighted 40 percent)
- Taxable retail sales (weighted 10 percent)

Each locality's index is adjusted to maintain an overall statewide local share of 45 percent and an overall state share of 55 percent.

C. REPORT ORGANIZATION

This report is organized into eight chapters as follows:

- ◆ Chapter 1: Divisional Administration
- ◆ Chapter 2: Educational Service Delivery
- ◆ Chapter 3: Human Resources
- ◆ Chapter 4: Facilities Use and Management
- ◆ Chapter 5: Financial Management
- ◆ Chapter 6: Transportation
- ◆ Chapter 7: Technology Management
- ◆ Chapter 8: Food Services

Each chapter presents the findings, commendations, and recommendations for the operational area reviewed, including:

- ◆ A description of the current situation in the division.
- ◆ A description of the findings.
- ◆ MGT's commendation and/or recommendation for each finding.
- ◆ Where it can be quantified for the recommendation, a five-year fiscal impact statement detailing costs or savings, stated in 2014-15 dollars.

D. SUMMARY OF COMMENDATIONS AND RECOMMENDATIONS

The following commendations are included in the report:

- | | |
|-------------------------|--|
| Commendation 1-A | The Botetourt County School Division has developed a consistent and predictable process for the conduct of school board meetings. |
| Commendation 1-B | The Botetourt County School Division has achieved an outstanding reputation for school programs. |
| Commendation 1-C | The Botetourt County School Division policy manual is up to date and easily accessible. |
| Commendation 1-D | The Botetourt County School Division has developed a comprehensive plan. |
| Commendation 2-A | The division provides 21st Century student learning opportunities at the high school level. |
| Commendation 2-B | The division provides paid training time for special education instructional assistants. |
| Commendation 2-C | The division has created valuable partnerships to support special education program areas. |

- Commendation 3-A** **The HR department utilizes best practices such as cross training.**
- Commendation 3-B** **The “self-serve” website provides outstanding service and saves employee time and division resources.**
- Commendation 3-C** **Early Retiree Incentive Program revisions have increased efficiency and effectiveness of this resource while reducing costs.**
- Commendation 3-D** **Online HR software tools are effective and efficient.**
- Commendation 4-A** **The organization of the maintenance crews increases efficiency, effectiveness and a positive work culture.**
- Commendation 4-B** **Facility user fees are based on actual costs to the division.**
- Commendation 4-C** **BCPS and Botetourt County are working cooperatively to share resources.**
- Commendation 4-D** **BCPS maintains consistent costs for custodial supplies across all schools.**
- Commendation 4-E** **BCPS maintains clean schools while staffing custodial positions at or under the best practice.**
- Commendation 4-F** **BCPS has implemented effective energy management strategies and has installed energy efficient equipment.**
- Commendation 5-A** **The division has developed a good working relationship with County administration.**
- Commendation 5-B** **The finance office provides exemplary support for the MUNIS financial system**
- Commendation 5-C** **The division and local governing body agree on program supporting the school capital expenditure fund.**
- Commendation 5-D** **The school division has an integrated software platform.**
- Commendation 6-A** **School bus drivers and aides provide safe drop-off and pick-up for students at the school bus ramps.**
- Commendation 6-B** **BCPS has a Virginia Department of Education (VDOE) certified school bus driver trainer program and a DMV certified third-party tester.**
- Commendation 6-C** **BCPS provides vehicle maintenance training during the annual VDOE/VPT conference.**
- Commendation 7-A** **The division has planned a One-to-One initiative to start in 2015.**
- Commendation 7-B** **The division has established a high-speed, wide-area network (WAN) with the capability to expand.**

- Commendation 7-C** The school division has chosen a highly rated enterprise solution for its helpdesk software.
- Commendation 8-A** BCPS has chosen the best purchasing cooperative for school nutrition operations.
- Commendation 8-B** The division has implemented an efficient and effective approach to capturing inventory.

The following recommendations are included in the report:

- Recommendation 1-1** Provide for an annual self-evaluation of the school board.
- Recommendation 1-2** Re-organize the division administrative staff.
- Recommendation 1-3** Improve decision making process and the communications strategies regarding decisions.
- Recommendation 1-4** Develop a comprehensive administrative procedures manual to guide the implementation of board policies.
- Recommendation 1-5** Establish a regular process to evaluate and communicate progress on the comprehensive plan.
- Recommendation 2-1** Reorganize the instruction department, create an assistant superintendent of instruction, and reduce the three coordinator positions to two.
- Recommendation 2-2** Develop and gain approval for annual departmental goals and program budgets.
- Recommendation 2-3** Develop an annual, detailed instruction department budget that clearly defines annual, regular spending as well as any new or one-time planned expenditures.
- Recommendation 2-4** Review the need for and current status of School Leadership Teams.
- Recommendation 2-5** Develop job descriptions for each position and an evaluation structure for central office support staff.
- Recommendation 2-6** Create a structure for program monitoring plans that identify annual or required tasks.
- Recommendation 2-7** Reduce the administrator position at Eagle Rock Elementary School to a half-time position.
- Recommendation 2-8** Develop and implement processes to manage, review, revise, and monitor curriculum based on student performance data.
- Recommendation 2-9** Develop a plan to address record storage needs for the division.

- Recommendation 2-10** Create a short- and long-term plan to recruit and retain qualified bi-lingual and ESL teachers and support staff.
- Recommendation 2-11** Develop and prepare an annual gifted program report for the board and the community.
- Recommendation 3-1** Move the payroll function to the Finance Department and provide cross training.
- Recommendation 3-2** Develop a plan to create and approve job descriptions.
- Recommendation 3-3** Develop a human resources procedures manual.
- Recommendation 3-4** Develop plans for recruiting staff, especially hard to staff programs and bilingual staff.
- Recommendation 3-5** Develop a series of HR-provided professional development programs.
- Recommendation 3-6** Conduct a wage and staffing review with both peer and neighboring divisions.
- Recommendation 4-1** Use multiple methodologies to project enrollments.
- Recommendation 4-2** Examine closing 1-2 elementary schools as part of a long-range facilities master plan strategy.
- Recommendation 4-3** Write and implement a policy requiring the development of a ten-year facility master plan.
- Recommendation 4-4** Purchase and utilize work order software to track work order completion rate and worker productivity.
- Recommendation 4-5** Determine the productivity level of the maintenance workers and then staff the maintenance department appropriately.
- Recommendation 4-6** Implement all recommendations contained in the *2012 Energy Conservation and Efficiency Study*.
- Recommendation 5-1** Provide summary expenditure and revenue information as well as fund balance information for school board review.
- Recommendation 5-2** Remove the textbook fund from the Regular Operating and Self-Sustaining funds.
- Recommendation 5-3** Provide managers with budgets related to their area of responsibility.
- Recommendation 5-4** Present significant budget changes to the school board.
- Recommendation 5-5** Revert to “School Funds On-Line” for the purpose of accounting for school student activity funds.
- Recommendation 5-6** Provide additional revenue details for discrete self-sustaining funds.

- Recommendation 5-7** Adopt a budget preparation calendar that accommodates a wider range of engagement.
- Recommendation 5-8** Develop and implement a zero-base budgeting process.
- Recommendation 5-9** Develop an annual budget format for public review.
- Recommendation 5-10** Perform an audit of the MUNIS system to insure that the platform is operating as expected.
- Recommendation 5-11** Insure that all MUNIS operating procedures are properly documented and published.
- Recommendation 6-1** Provide all transportation department employees with a written job description.
- Recommendation 6-2** Hire three additional, full-time substitute school bus drivers and review the high absenteeism of the school bus drivers.
- Recommendation 6-3** Develop key performance indicators and document and annually report activities and progress.
- Recommendation 6-4** Develop standards for evaluating the potential for outsourcing transportation operations.
- Recommendation 6-5** Review and revise bus routes with excessive ride-time.
- Recommendation 6-6** Reduce the current deadhead mileage and conduct an annual review.
- Recommendation 6-7** Develop a written procedure for reviewing and evaluating the VDOE annual Warnings Report.
- Recommendation 6-8** Purchase and implement a Vehicle Maintenance Information System (VMIS) for the shared Botetourt County and School Division vehicle garage.
- Recommendation 6-9** Hire a full-time position for the transportation garage to implement and maintain the Vehicle Maintenance Information System (VMIS).
- Recommendation 6-10** Maintain no more than a 25 percent spare bus ratio.
- Recommendation 6-11** Develop and implement a regular bus replacement schedule to ensure a safe and reliable fleet.
- Recommendation 6-12** Eliminate excess white fleet sedans.
- Recommendation 7-1** Appropriately assign technology support and add two new staff members.
- Recommendation 7-2** Form a technology committee with broad-based membership.
- Recommendation 7-3** Install an ActivBoard in all rooms where it will have instructional value.

- Recommendation 7-4** **Develop a comprehensive disaster recovery plan.**
- Recommendation 7-5** **Contract with vendors to provide an electronic inventory and information file.**
- Recommendation 7-6** **Implement a five-year replacement plan for LAN access switches.**
- Recommendation 7-7** **Create a secure facility to house all mission critical hardware and software.**
- Recommendation 7-8** **Implement a single central server for the division help desk.**
- Recommendation 7-9** **Create a comprehensive Request for Proposal (RFP) for technology goods and services.**
- Recommendation 8-1** **Generate and disseminate monthly MPLH reports for cafeteria managers along with senior management in order to improve food preparation efficiency.**
- Recommendation 8-2** **Develop, adopt, and train staff in formal procedures for school nutrition operations.**
- Recommendation 8-3** **Develop and implement a formal plan for reducing the deficit financial position of the school nutrition program.**
- Recommendation 8-4** **Create a mission statement and strategic plan for child nutrition services.**
- Recommendation 8-5** **Create and submit a detailed budget for child nutrition on an annual basis while analyzing the actual versus budget for both revenue and expenditures on a monthly basis.**
- Recommendation 8-6** **Incorporate a more open process of menu planning with cafeteria staff and allow for student input to improve the planning and student participation.**
- Recommendation 8-7** **Conduct a review of the benefits for outsourcing the school nutrition program.**
- Recommendation 8-8** **Consider creating centralized kitchens at two of the division’s schools in order to be more cost efficient with food and staff time until student participation rates are improved.**
- Recommendation 8-9** **Implement, train, and monitor a required process for cash drawer counts and deposits.**
- Recommendation 8-10** **Define a coding system for free, reduced, or full-priced meals and print student rosters to retain at each point-of-sale register.**
- Recommendation 8-11** **Implement aggressive incentives for students to participate in the breakfast and lunch programs offered in the division.**
- Recommendation 8-12** **Add more nutrition education instruction at all schools.**

The commendations and recommendations are presented to the division for review and consideration. Some recommendations will require additional spending from the division while others provide opportunities for cost savings. There may be issues or considerations that make implementation of some recommendations difficult or impossible. Those decisions rest with the Board.

FISCAL IMPACT

The savings, costs, and net savings total for the recommendations are shown below.

RECOMMENDATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Savings	\$ 469,558	\$ 1,422,355	\$ 1,422,355	\$ 1,422,355	\$ 1,422,355
Costs	\$ (1,798,488)	\$ (446,363)	\$ (451,363)	\$ (451,363)	\$ (451,362)
NET SAVINGS TOTAL	\$ (1,328,930)	\$ 975,992	\$ 970,992	\$ 970,992	\$ 970,993

I.0 DIVISIONAL ADMINISTRATION

A division's governance structure, staff management, and planning process provide the foundation for effective and efficient education of students. The board and superintendent function as a leadership team to meet student needs. The board sets goals, objectives, and policies for school division operations and approves the plans and funding needed to achieve the division's goals and objectives. The superintendent manages division operations and recommends the staffing levels and amount of resources necessary to carry out the board goals and directives developed through the planning process. This section assesses the effectiveness and efficiency of these functions in the Botetourt County Public Schools in the following areas:

- 1.A. Division Management
- 1.B. Procedures
- 1.C. Planning and Evaluation

OVERVIEW

The Botetourt School Division is located in the mountainous area of western Virginia immediately to the north of Roanoke. The county is primarily rural with three incorporated towns and numerous unincorporated municipalities. Historically school facilities were located in each community. In 1959 the high schools were consolidated into two, with Lord Botetourt High School in the southern portion of the county and James River High School in the north. In addition to the two high schools the Division operates seven elementary schools, two middle schools, a technical education center, and a stem academy. The total enrollment as of the 2013-14 school year is 4,856.

The division Mission Statement and goals are:

Mission Statement:

It is the mission of Botetourt County Public Schools to ensure that all students participate in quality learning experiences necessary to grow, to adapt and to meet the challenges of responsible citizenship in a changing world.

The 2009-2015 Comprehensive Plan outlines the following goals:

- ♦ *Maintain academic excellence for all students*
- ♦ *Provide safe, supportive and nurturing learning environments*
- ♦ *Employ a knowledgeable and competent workforce*
- ♦ *Maintain community investment in schools*
- ♦ *Sustain effective and efficient systems management*

CHAPTER SUMMARY

The Botetourt County Public Schools is governed by a five member board and managed by an appointed superintendent with the assistance of his leadership team. This section focuses on the division's governance and management along with the development of the comprehensive improvement plan and the associated organizational structures. The administration of the division has developed a positive culture within the county that is reflected in a general feeling that things are on the right track. This

section reflects the data collected by MGT that the division is currently providing a good program for students that is well accepted by the numerous communities throughout the county. To move to the next level, and become outstanding, some changes will need to occur. This section includes both commendations and recommendations for change.

Commendations are included regarding:

- Commendation 1-A** **The Botetourt County School Division has developed a consistent and predictable process for the development and dissemination of materials necessary for the conduct of business-like school board meetings.**
- Commendation 1-B** **The Botetourt County School Division is commended for the outstanding reputation that has been established throughout the County and the support for school programs this has achieved.**
- Commendation 1-C** **The Botetourt County School Division has developed a consistent process for the review and update of policies on a regular basis. The policy manual is up to date and easily accessible.**
- Commendation 1-D** **The Botetourt County School Division is commended for the development of a comprehensive plan.**

The following recommendations are included in the section:

- Recommendation 1-1** **Provide for an annual self-evaluation of the School Board**
- Recommendation 1-2** **Re-organize the division office staff as shown in Exhibit 1-3 below.**
- Recommendation 1-3** **Improve decision making process and the communications strategies regarding decisions.**
- Recommendation 1-4** **Develop a comprehensive administrative procedures manual to guide the implementation of Board policies.**
- Recommendation 1-5** **Establish a regular process to evaluate and communicate progress on the comprehensive plan.**

I.A. DIVISION MANAGEMENT

State laws controlling the governance and operation of schools in Virginia are found in Title 22.1 of Virginia State Statutes. These laws give the School Board broad powers to adopt policies, fix contracts, approve the appointment of personnel, develop a budget for further review and approval by the county, and other actions designed to ensure secure, safe, and proper schools for Botetourt County.

Exhibit 1-1 provides information regarding the five member School Board.

EXHIBIT 1-1
BOTETOVRT COUNTY PUBLIC SCHOOLS
2014-15 SCHOOL YEAR

NAME	TITLE	DISTRICT	TERM EXPIRES	LENGTH OF SERVICE AS OF END OF 2014-15
Ruth E Wallace	Chair	Amsterdam	2017	13 yrs
Kathy Graham Sullivan	Vice-Chairman	Buchanan	2017	17 yrs
Michael Beahm	Member	Valley	2015	20 yrs
Scott Swortzel	Member	Blue Ridge	2015	7 yrs
John Alderson	Member	Fincastle	2015	3 yrs

Source: Botetourt County Public Schools, 2014.

State laws controlling the governance and operation of schools in Virginia are found in Title 22.1 of Virginia State Statutes. These laws give the School Board broad powers to adopt policies, fix contracts, approve the appointment of personnel, develop a budget for further review and approval by the county, and other actions designed to ensure secure, safe, and proper schools for Botetourt County.

The Botetourt County Board of Education holds regular meetings on the 2nd Thursday of each month and on even-numbered months they hold a work session on the 4th Thursday in the division office board room. Special meetings are called, as needed. The regular agenda includes the following agenda items:

1. Meeting Opening
2. Approval / changes to the agenda
3. Consent agenda
4. Hearing of citizens and delegations
5. Board reports
6. Superintendent reports
7. Instruction and recognitions
8. Unfinished business
9. New business
10. Board updates
11. Executive session (as needed)
12. Adjournment

FINDING

The Botetourt County School Board has adequate time and background materials to conduct their business in a professional manner each month. The superintendent, in consultation with the board chair, develops an agenda and background information for each agenda item, as necessary. This information is provided to board members ahead of time so it can be studied before the meeting. Unless there is an emergency, issues are placed on the agenda as discussion items prior to coming before the Board for action. This practice allows the school board to study the issues and deliberate at some length before acting and creates stability in the decision making process.

COMMENDATION 1-A:

The Botetourt County School Division has developed a consistent and predictable process for the development and dissemination of materials necessary for the conduct of business-like school board meetings.

FINDING

While Board Policy AFA calls for an annual board self-evaluation, the board has not conducted this on a regular basis. While some board members report participation in informal feedback and they participate in a variety of training programs, there is no formal process. The division has a culture of evaluating personnel and programs and the board annually evaluates the superintendent. Conducting the self-evaluation process will allow the Board to make planned improvements, including adding some board training or adjustments in board policies or activities.

RECOMMENDATION 1-1:

Provide for an annual self-evaluation of the School Board.

Providing feedback, both formally and informally, is one of the “basics” in any improvement process. Structured feedback in the form of an evaluation instrument can supplement honest ongoing dialogue and discussion.

Governing boards in any organization can improve their performance through a formal self-evaluation in addition to an informal feedback process. In addition, by conducting an annual evaluation, the board models for their organization the importance of the evaluation process. As a result, both the board and the organization develop a culture of participation in improvement cycles. Better organizations and improved performance are the end result. The Board in Botetourt may want to develop their own structure and format for self-evaluation. There are examples available from other states that may prove helpful in that development. The websites below provide forms and suggestions from Maryland, Oregon, and North Dakota:

<http://www.montgomeryschoolsmd.org/uploadedFiles/boe/about/board-of-education-self-evaluation.pdf>

http://www.osba.org/Resources/Article/Board_Operations/Board_Self_Evaluation.aspx

<http://ndsba.org/resources/form.schoolboardsselfevaluation.pdf>

Exhibit 1-2 is another example of a self-assessment instrument. This one is used by some boards to evaluate each meeting, as opposed to an overall evaluation of the board. The BCPS board may find it helpful to explore and then determine which approach would be most helpful for their work.

EXHIBIT 1-2
SAMPLE BOARD SELF ASSESSMENT INSTRUMENT

Meeting Evaluation		
<i>DIRECTIONS: By evaluating our past meeting performance, we can discover ways to make future meetings shorter and more productive. Check each item "Adequate" or "Needs Improvement". If you check "Needs Improvement", please include suggestions for improvement.</i>		
Adequate	Needs Improvement	
_____	_____	Our meeting was businesslike, results-oriented and we functioned like a team.
_____	_____	Our discussion was cordial and well balanced (not dominated by just a few members).
_____	_____	We confined our discussion to agenda items only.
_____	_____	Our agenda included positive issues as well as problems.
_____	_____	We discussed policy issues rather than day-to-day management issues.
_____	_____	We followed parliamentary rules and consulted legal or professional counsel when needed.
_____	_____	The president or chairperson controlled and guided the meeting.
_____	_____	We dealt successfully with controversial items and attempted to develop solutions acceptable to all members.
_____	_____	Everyone contributed to the meeting.
_____	_____	All members were prepared to discuss material that was sent to them in advance.
_____	_____	Reports were clear, well prepared and provided adequate information for decision making.
_____	_____	Printed materials given to us were easy to understand and use.
_____	_____	Our meeting room was comfortable and conducive to discussion and decision making.
_____	_____	All members were in attendance and on-time - - and the meeting began and concluded on time.
_____	_____	For committees and ad hoc groups: There was adequate reason for us to meet.
My best suggestion for improving our next meeting is...		

Source: Created by MGT of America, 2014.

FISCAL IMPACT

This recommendation can be implemented by the Board through a process to identify their needs for self-assessment and determine the best process. The time required is estimated at 1-2 hours.

FINDING

The division board, administration and staff have developed a positive environment throughout the communities they serve. Interviews with community groups indicate that while there are concerns over possible upcoming fiscal issues, the general feeling is that the schools are providing a quality instruction for all students. The public is particularly proud of recent test scores, the availability of a variety of programs for students, and the quality of the staff. **Exhibit 1-3** below provides an overview of comments consistently heard from interviews with stakeholders.

EXHIBIT 1-3 BOTETOURT COUNTY PUBLIC SCHOOLS COMMUNITY COMMENTS

- ◆ Division provides a pro-active vision for student instruction
- ◆ Division provides a wide variety of opportunities for students
- ◆ Division performs well academically
- ◆ Division has excellent staff
- ◆ STEM program is outstanding
- ◆ Botetourt Schools are seen around the region as a positive place to be
- ◆ Community has a genuine sense of an excellent school system
- ◆ Everything points to the school division doing an excellent job

Source: Compiled by MGT of America, 2014.

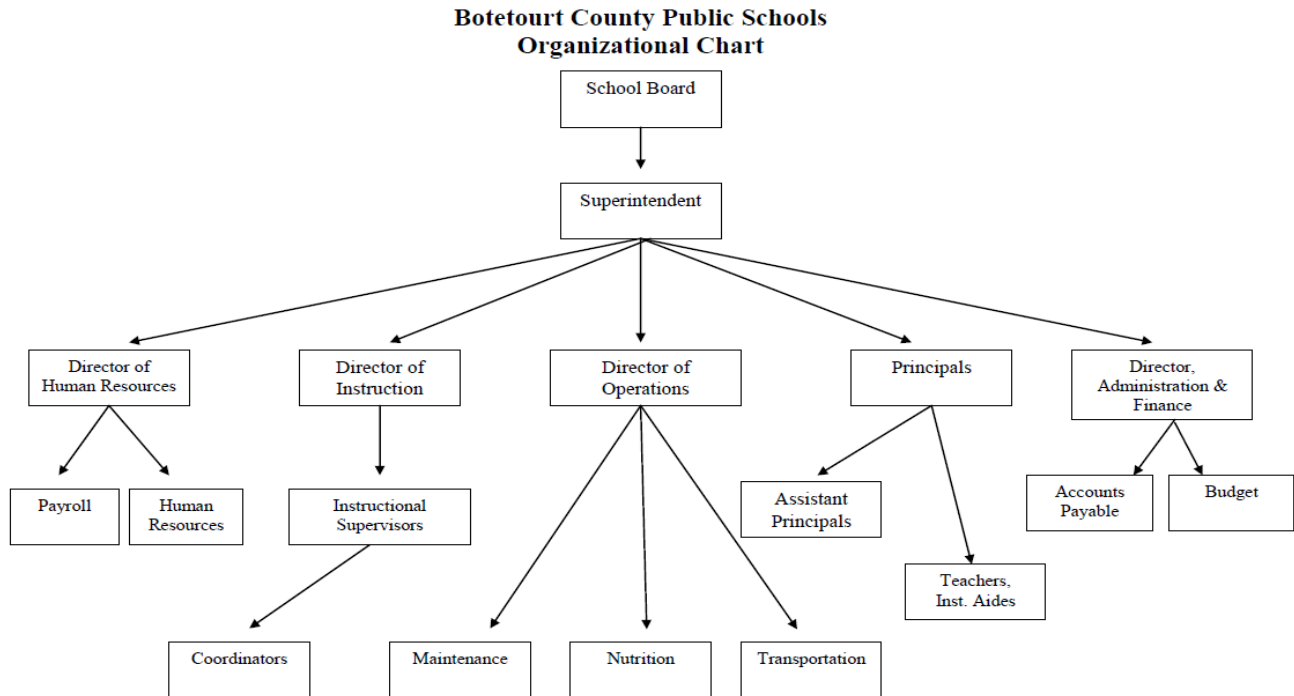
COMMENDATION 1-B:

The Botetourt County School Division is commended for the outstanding reputation that has been established throughout the County and the support for school programs this has achieved.

FINDING

The Board has delegated responsibility to the Superintendent for the day to day operations of the division. Interviews and focus groups with board and staff indicate that the Superintendent has been delegated significant responsibility and carries out this responsibility in a professional manner. The division office staff is organized as shown in **Exhibit 1-4** below.

EXHIBIT 1-4
BOTETOURT COUNTY PUBLIC SCHOOLS
ORGANIZATIONAL CHART
2014-15 SCHOOL YEAR



Revised: July 1, 2014

Source: BCPS Administration, 2014.

In addition to the superintendent the division office includes four full time director positions all of whom report directly to the Superintendent. The thirteen principals also report directly to the Superintendent resulting in a total of 17 direct reports. In addition to the positions shown on **Exhibit 1-2**, the division employs a retired administrator on a part time basis to serve in a consulting role.

The existing organizational chart also shows that there is no clear “next in command” or “acting superintendent” if the superintendent is not available for decisions. Having several people with the same job title (e.g., “Director”) may accurately represent the organizational structure and relationships, but leaves the decision-making responsibility unclear. The Board has unofficially identified who makes decisions in certain areas. The Directors of Finance, Instruction, and Human Resources have been charged with the responsibility to conduct certain pieces of business. However, there is no clear “next” should the superintendent be unavailable.

Exhibit 1-5 below provides a comparison with peer divisions.

EXHIBIT 1-5
BOTETOURT COUNTY PUBLIC SCHOOLS
DIVISION OFFICE REPORTS COMPARISON

DIVISION	ASST SUPT / DIRECTOR LEVEL STAFF*	SUPERINTENDENT DIRECT REPORTS
BOTETOURT	4	17
CAROLINE	7	6
KING GEORGE	**	8
MECKLENBURG	**	9
ORANGE	**	11
ACCOMACK	3	4
WYTHE	3	4

*Botetourt does not include transportation, nutrition, maintenance which are not director level positions

**no 2013-14 organizational chart available

Source: Developed by MGT from data from peer divisions, 2014.

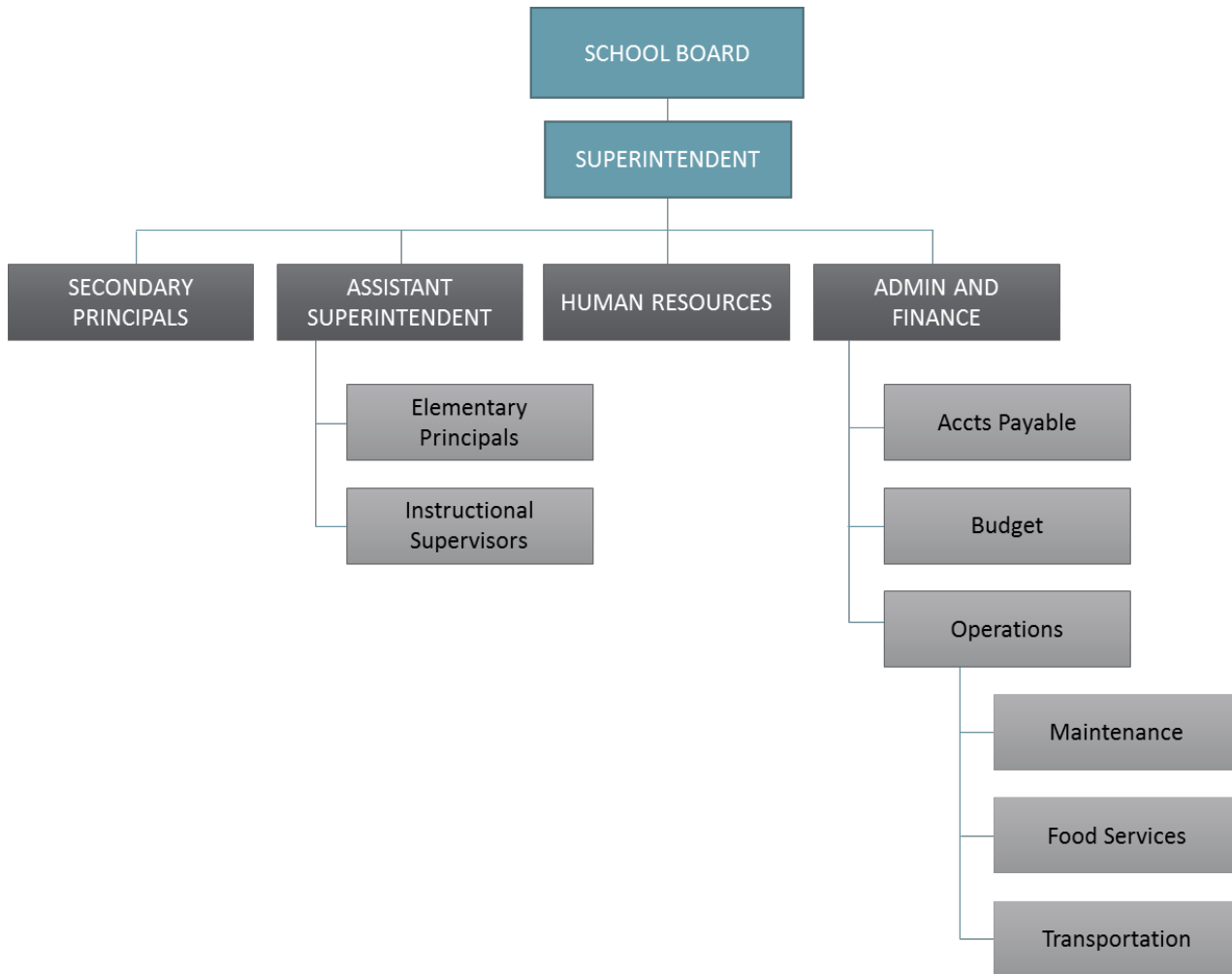
The Botetourt Division Superintendent has significantly more direct reports than those in peer divisions. Interviews with division staff indicated that the responsibilities of overall division operations combined with the number of reports has resulted in minimal time being available for supervisory activities of administrative staff.

RECOMMENDATION 1-2:

Re-organize the division office staff as shown in Exhibit 1-6.

This organizational structure eliminates the part-time advisor position and re-names the director of Instruction to that of Assistant Superintendent for instruction to define succession. In addition, it splits the principal reports between the Superintendent and Assistant Superintendent thereby reducing the number of direct reports to the Superintendent. Finally, the proposed structure changes the Director of Operations to a Supervisor of Operations who reports to the Director of Finance.

EXHIBIT 1-6
 BOTETOURT COUNTY PUBLIC SCHOOLS
 RECOMMENDED ORGANIZATIONAL CHART



Source: Created by MGT, 2014.

FISCAL IMPACT

The change from a director to an assistant superintendent position will require a salary increase of \$10,966 but will be offset by the reduction of \$17,922 due to the change from Director of Operations to Operations Supervisor, resulting in a net savings of \$6,956. This savings will be increased due to the elimination of the part-time advisor position. The amount of the contract with the part-time advisor is unknown and has not been shown in this fiscal impact statement.

RECOMMENDATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Change in Administrative Origination	\$6,956	\$6,956	\$6,956	\$6,956	\$6,956

FINDING

Results of staff interviews and focus groups indicates that there is no established decision making process. Many staff feel that the decision making process in the division is top down with minimal opportunity for discussion. This has often resulted in misunderstandings and some degree of dissension. Examples of recent decisions where some staff indicated it was implemented with little input include:

- ◆ Laptop initiative
- ◆ Team Botetourt
- ◆ Plan for facility improvements
- ◆ Budget development

RECOMMENDATION 1-3:**Improve decision making process and the communications strategies regarding decisions.**

Develop strategies to improve communications and decision making among the division office, departments and the schools. Improving communications requires continuous efforts among all parties but can go a long way toward improving the culture within the division. A culture of trust, openness, and regular dialogue needs to be emphasized at all opportunities. A part of the solution to the communication strategy will be the implementation of the organizational changes recommended above but the on-going strategy will require development. The decision making process should include all division level staff and principals and include activities that will ensure regular communications regarding school improvement throughout the division. In addition, the decision making structure will need to define at which level decisions are to be made. This will provide the framework for all levels of the administrative staff to understand what their role is in school improvement efforts and how success will be determined. Sample activities may include:

- ◆ strategic and long-range plan development;
- ◆ identification of data necessary to ensure that decisions are based upon accurate and complete information;
- ◆ effective community involvement;
- ◆ preparing the team to function effectively, including identification and treatment of dysfunctional activities and establishing effective internal communications;
- ◆ strategies for the specific and purposeful abandonment of obsolete, unproductive practices and programs;
- ◆ means for monitoring the division's organizational climate

As an integral part of a decision making process many school systems have developed a decision making matrix. The development of a matrix in Botetourt County could help with the understanding of the process which in turn helps with the trust and openness issues discussed above. **Exhibit 1-7** provides an example of such a matrix.

EXHIBIT 1-7
SAMPLE DECISION MAKING MATRIX

DECISION MAKING TOPICS	School Board	District Admin.	District Level Committees	Building Admin.	Building Leader Team	Building Level Committees
VISION AND GOALS District Action Plan & Strategic Plan	Adopt	Recommend & Implement	Identified Task Forces Study, Develop and Implement		Review	
School Program Improvement Process and Accountability	Review	Supervise		Recommend & Implement	Develop, Adopt & Implement	Identified Task Forces Implement
Staff Development Program	Adopt	Supervise	Staff Develop Committee Recommend & Implement	Supervise	Review & Implement	
Policy and Procedures	Study & Adopt	Recommend & Implement		Implement	Study & Implement As Needed	Department/Team Study & Recommend
Joint Powers Agreements	Review & Adopt	Recommend & Implement	Task Force Study As Needed	Supervise	Review & Implement	Department/Team Study & Recommend As Needed
CURRICULUM/ INSTRUCTION Curriculum Revisions	Adopt	Supervise	Curric Comm Study & Develop. Curric Advisory Council Recommends	Supervise	Review & Implement	
Graduation, Course and Grade Level Requirements	Adopt	Supervise & Recommend	Curric Comm Study & Develop. Curric Advisory Council Recommends	Supervise	Review & Implement	
Program/Curriculum Additions	Review & Adopt		Curric Comm Study & Develop. Curric Advisory Council Recommends	Supervise	Review & Implement	
Non-Salary General Fund Allocations	Adopt Thru Budget	Develop		Supervise	Determine & Implement	
Capital Fund Expenditures	Adopt Thru Budget	Study & Recommend		Supervise	Determine & Implement	
Curriculum Cycle	Adopt Plan	Supervise & Recommend	Curric Comm Implement	Supervise		
AOM/Standardized Testing	Review	Supervise	Curric Comm Study	Supervise & Review	Implement	
School Calendar	Review & Adopt	Recommend	Committee Develops			
Daily School Schedule		Approve		Supervise & Review	Study & Develop	
BUDGET Calendar and Assumptions	Adopt	Recommend & Implement	Task Force Study			
Five Year Capital Plan	Adopt	Recommend & Implement		Review	Study & Develop	
Long Range Projections	Review	Develop & Implement		Review		

EXHIBIT 1-7 (CONTINUED)
SAMPLE DECISION MAKING MATRIX

DECISION MAKING TOPICS	School Board	District Admin.	District Level Committees	Building Admin.	Building Leader Team	Building Level Committees
Annual Levy	Adopt	Recommend & Implement	Task Force Study As Needed			
Budget Documents		Develop & Implement		Supervise		
Prices and Fees	Adopt	Recommend		Supervise & Implement		
Solicitation Approval of Bids/Quotes	Adopt	Recommend & Implement				
Annual Budget (including Reinvestments/Reductions)	Review & Adopt	Recommend & Implement	Task Force Study As Needed	Supervise & Implement	Develop	
Levy Referendum	Review & Adopt	Recommend & Implement	Task Force Study & Develop As Needed		Study As Needed	
PERSONNEL Admin Hiring and Termination	Approve	Recommend	Committee Study As Needed			
Teacher Hiring and Termination	Approve	Recommend		Recommend	Committee Study As Needed (Hire Only)	
Support Staff Hiring and Termination	Approve			Recommend	Committee Study As Needed (Hire Only)	
Work Agreements	Approve	Implement	Comm Study & Recommend	Review & Implement		
Admin. Supervision	Supervise	Supervise & Implement	Comm Study & Recommend			
Teacher Supervision			Peer Mentor Comm Implement	Supervise & Implement		
Support Staff Supervision				Supervise & Implement		
Contracted Services/Agreements	Adopt	Recommend & Implement	Study	Study		
School Board Election Process	Adopt	Implement				
Procedures & Policy	Adopt	Recommend & Implement	Study	Supervise & Implement		
BUILDING/GROUNDS Non-Salary General Fund Allocations	Adopt Thru Budget	Develop				
Capital Fund Expenditures	Adopt Thru Budget	Study & Recommend		Determine		
Health and Safety Codes/Laws		Supervise & Implement	Health & Safety Committee Review	Determine		
Maintenance Cycle		Study & Develop				
Long Range Facility Plan	Adopt Thru Budget	Study, Develop & Implement				

EXHIBIT 1-7 (CONTINUED)
SAMPLE DECISION MAKING MATRIX

DECISION MAKING TOPICS	School Board	District Admin.	District Level Committees	Building Admin.	Building Leader Team	Building Level Committees
Building Referendum	Review & Adopt	Recommend & Implement	Task Force Study & Develop As Needed			
COMMUNITY EDUCATION Advisory Council	Approve	Recommend	Study As Needed			
Budget	Adopt					
Staff	Approve	Recommend	Advisory Council Study As Needed			
Program	Approve As Required	Recommend & Implement	Advisory Council Study & Approve			
FOOD SERVICE Budget	Adopt			Supervise & Implement		
Program				Supervise & Implement		Committee Study & Develop As Needed
TRANSPORTATION Budget	Adopt	Recommend & Implement				
Work Agreements	Adopt	Recommend & Implement	Comm Study & Recommend			
Policy/Procedures	Study & Adopt			Implement		

Source: Alexandria School District 206. Compiled by MGT, 2014.

FISCAL IMPACT

This recommendation can be implemented by the Superintendent as part of the regular communication process on an on-going basis.

I.B. PROCEDURES

A division's policies and procedures constitutes the means by which an organization can communicate expectations to its constituents. In addition, adopting policy and establishing related procedures provide the mechanisms for:

- ◆ establishing the School Board expectations and what may be expected from the Board;
- ◆ protecting the School Board and administration;
- ◆ establishing an essential division between policy making and administration roles;
- ◆ creating guidelines within which people operate;
- ◆ providing reasonable assurances of consistency and continuity in decisions;
- ◆ providing legal basis for the allocation of funds, facilities and other resources;
- ◆ facilitating and guiding the orientation of the School Board members and employees; and
- ◆ sharing division expectations with the public and encouraging citizen involvement within structured guidelines.

Policies, reveal the philosophy and position of the school board and well-developed procedures are stated clearly enough to provide for executive or staff direction and implementation of those policies.

FINDING

Policies in the Botetourt County Public Schools are maintained in the superintendent's office and are available to the public on the division website. The policy manual is composed of thirteen sections. **Exhibit 1-10** below shows the policy manual sections.

EXHIBIT 1-10 BOTETOVRT COUNTY PUBLIC SCHOOLS ORGANIZATION OF POLICY HANDBOOK

SECTION	TITLE
A	Foundations and Basic Commitments
B	School Board Governance and Operations
C	General School Administration
D	Fiscal Management
E	Support Services
F	Facilities Development
G	Personnel
H	Negotiations
I	Instructional Program
J	Students
K	School-Community Relation
L	Education Agency Relations

Source: Botetourt County Public Schools Website, 2014.

The BCPS policy manual contains the policies and procedures that govern the division. Like many school divisions, BCPS subscribes to the policy manual support provided by the Virginia School Boards Association (VSBA). This service regularly reviews state and federal legislation and updates policies based on new or changing laws. Divisions can add local policies, as needed, to those provided by VSBA.

A review of the policy manual shows that policies are complete and are reviewed on a regular basis. The date of adoption and subsequent revisions are provided with each policy and all policies were found to have been reviewed within the past three years.

COMMENDATION 1-C:

The Botetourt County School Division has developed a consistent process for the review and update of policies on a regular basis. The policy manual is up to date and easily accessible.

FINDING

Once the school board develops policies, it is incumbent on the superintendent to direct the creation and implementation of efficient, effective procedures. While procedures have been developed informally within various departments, there is no system of administrative procedures in place to guide the day to day operations of each department or a process for the development of such procedures.

Staff interviews indicate confusion over the source and timing of procedures. They are not always clear and many staff report not understanding the procedures that are adopted.

RECOMMENDATION 1-4:

Develop a comprehensive administrative procedures manual to guide the implementation of Board policies.

FISCAL IMPACT

Due to the current workload of division administrative staff, it will be difficult to implement this recommendation by assigning the workload to in-house staff. The initial effort will require gathering the current myriad of departmental informal procedures, a review of board policy, and the formation of department-level committees. This will likely require the assistance of a consultant to jump-start the process. Subsequent updates can be assigned to department level staff.

The one-time cost for consultant help is estimated to be \$20,000.

RECOMMENDATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Hire a consultant to codify administrative procedures	(\$20,000)	\$0	\$0	\$0	\$0

I.C. PLANNING AND EVALUATION

Comprehensive school improvement planning is one of the key components of division board and administrative functions. The provision of the best programs possible for students within the financial constraints of the community is the primary goal of most school divisions throughout the United States. The division improvement plan must be supportive of the objectives of the school improvement plan and must, at a minimum, support the state goals and objectives for education that are identified in the Virginia State Statutes. School divisions need to develop long range improvement plans and then allocate resources in accordance with that plan. It is important that all stakeholders in the division have input into the plan and are provided with information regarding the implementation, the on-going activities, and the results.

FINDING

The Botetourt School Division has developed a comprehensive plan intended to guide instructional, administrative, and operational planning. The plan includes the following goals and outlines the strategies, resources required, responsibility, on-going status, and assessment methodology.

1. *Maintain academic excellence for all students*
2. *Provide safe, supportive and nurturing learning environments*
3. *Employ a knowledgeable and competent workforce*
4. *Maintain community investment in schools*
5. *Sustain effective and efficient systems management*

Exhibit 1-11 provides an example of the planning structure for Goal 2, above.

EXHIBIT 1-11
 BOTETOURT COUNTY PUBLIC SCHOOLS
 COMPREHENSIVE PLAN
 GOAL 2

GOAL 2: PROVIDE SAFE, SUPPORTIVE AND NURTURING LEARNING ENVIRONMENTS							
Objective 2.1: To enhance student and staff demonstration of core values and citizenship skills							
	Strategies	References and/or Resources	Title/Department Responsibility	Status			Method of Assessment
				D—Developing	I—Implementing		
				09-11	11-13	13-15	
2.1.1	Embed character education across all grade levels and content areas	-BCPS Policy Manual -Professional Core Knowledge Map	-School Board Office Instructional Staff -School Administrators	I			-Character Counts! leadership training meetings -Character Education school activity log
2.1.2	Support schools in developing schoolwide effective discipline models	-BCPS Policy Manual -Professional Core Knowledge Map -Virginia Department of Education resources	-School Board Office Instructional Staff -School Administrators	D			-School Crime and Violence Reports Comprehensive -School Improvement data -School generated discipline reports -School wide discipline plans

2.1.1 Teacher training was held each six weeks and activities logs were to be submitted by each school. This summer, Character Counts activities were embedded into curriculum guides in grades K-5. Other district efforts that supported character education included participation in the Roanoke Valley’s Rachel Challenge program and activities during Red Ribbon Week, Disability History and Awareness Month and Autism Awareness Month.

2.1.2 All elementary administrators and select central office staff attended a VDOE sponsored training on effective schoolwide discipline practices. It was concluded that current data does not support the immediate need for developing a specific schoolwide discipline model.

EXHIBIT 1-11 (CONTINUED)
 BOTETOURT COUNTY PUBLIC SCHOOLS
 COMPREHENSIVE PLAN
 GOAL 2

GOAL 2: PROVIDE SAFE, SUPPORTIVE AND NURTURING LEARNING ENVIRONMENTS							
Objective 2.2: To ensure staff and student safety on school campuses and during the course of all school activities							
	Strategies	References and/or Resources	Title/Department Responsibility	Status			Method of Assessment
				D—Developing	I—Implementing	S—Sustaining	
				09-11	11-13	13-15	
2.2.1	Provide professional development and safety training for bus drivers	-Driver inservice training (8 VAC 20-70-360)	-Supervisor of Transportation	I			-Driver surveys -Driver evaluations -Incident Data
2.2.2	Install video surveillance system on all school campuses	-School Safety Plan	-Director of Operations	I			-Maintenance records
2.2.3	Update surveillance systems on all buses	-School Safety Plan -Virginia Association for Pupil Transportation	-Supervisor of Transportation	I			-Student referrals -Incident data
2.2.4	Install automatic tire chains on all buses	-Virginia Association for Pupil Transportation	-Supervisor of Transportation	I			-Bus maintenance records
2.2.5	Recruit and retain qualified bus drivers and support staff	-Requirements for bus drivers (8 VAC 20-70-280)	-Supervisor of Transportation	I			-Driver evaluations -Driver surveys
2.2.6	Continue professional development component of driver safety training	NAPT, VAPT VACORP Insurance representative	Supervisor of Transportation Principals/Asst. Prin. Outside resources	I S			Incident Data Driver Evaluations

2.2.1 Driver In-service and Safety Training is provided each semester, first in August prior to start up, and in January of February of the second semester. Two hours of safety training per semester is required by Virginia Code 8 VAC 20-70-630.

2.2.2 Installation of digital cameras on all routed buses will be completed by school year 2011-12. Partial implementation during school year 2010-11 reduced incidents and referrals significantly on bus routes with surveillance cameras.

2.2.3 Currently, one-third of our bus fleet is equipped with automatic tire chains. Automatic chains provide extra traction during emergency weather conditions, but they also expedite the opening of schools when isolated secondary roads are snow or ice covered for extended periods. 2.2.5 The transportation department maintains an ongoing recruitment effort, utilizing onsite banners and online job postings. The transportation staff provides CDL training and testing for applicants on a quarterly schedule. Bus drivers and transportation staff are retained by competitive wages, benefits, and a perfect attendance bonus for drivers.

2.2.6 Safety and Professionalism is expected, reviewed, and evaluated throughout the school year. In addition to our safety curriculum and local resources, resources are available from our professional organizations, Virginia Association for Pupil Transportation and National Association for Pupil Transportation.

Source: Botetourt County Public Schools.

COMMENDATION 1-D:

The Botetourt County School Division is commended for the development of a comprehensive plan.

The plan includes each of the board established goals and provides direction for implementation.

FINDING

While the plan is comprehensive, discussions with staff and community during the onsite visit indicate that overall communication of the plan, including updates, has been sporadic. Many staff know the plan exists, but cannot refer to specifics and therefore do not know how the plan does - or should - impact their daily work or long-term activities. There are strategies within the plan that call for communication of various activities, but the results are not regularly reported, showing progress or the need for different or additional strategies to accomplish the goal. In addition, although each goal area includes some evaluation plans, little was available regarding a regular process for evaluating the effectiveness of the plan. Each of the goal areas provide a method of assessment but there is little evidence that these

methodologies are regularly implemented. Staff could often point to informal discussions and anecdotal evidence but not to formal assessments or reporting of progress on the plan.

RECOMMENDATION 1-5:

Establish a regular process to evaluate and communicate progress on the comprehensive plan.

The structure for communication of the plan should include the following components:

- ◆ Regular updates at board meetings
- ◆ Regular discussion at principals' meetings
- ◆ Discussion of the comprehensive plan with parent organizations
- ◆ Communications included within the strategies of each goal

The structure for assessing the effectiveness of the plan should include the following components:

- ◆ Regular review of the assessment methodologies included in the long range plan
- ◆ Alignment of school improvement plans with the comprehensive plan
- ◆ Staff training in program evaluation and prioritization
- ◆ Resources needed
- ◆ Alignment with student achievement
- ◆ Recommended changes

FISCAL IMPACT

This recommendation can be implemented by the Superintendent and Division Office Administrators as part of their on-going communication activities.

2.0 EDUCATIONAL SERVICE DELIVERY

This chapter presents the findings, commendations, and recommendations for the Botetourt County Public Schools (BCPS) related to the delivery of educational services. Educational services include programs designed to support instruction and enhance the learning of all students. Student learning is the goal for all school divisions. This chapter reviews division activities that can impact that goal.

The sections of the chapter include:

- 2.A. Organization and Management
- 2.B. School Administration and Decision-Making
- 2.C. Curriculum Policies and Management
- 2.D. Special Programs
- 2.E.a. Special Education
- 2.E.b. Bilingual Education / ESL
- 2.E.c. Gifted and Talented Education

OVERVIEW

Botetourt County Public Schools (BCPS) is the 50th largest division in Virginia, with 4,856 students enrolled in 2013-14. The school division encompasses all of Botetourt County which is located in southwestern Virginia, near the city of Roanoke and Virginia Polytechnic Institute and State University.

BCPS is governed by a five-member Board of Education which selects the superintendent. The Board and central administration have been relatively stable over the last several years. The mission and philosophy are public documents, posted on the division's website.

It is the mission of Botetourt County Public Schools to ensure that all students participate in quality learning experiences necessary to grow, to adapt and to meet the challenges of responsible citizenship in a changing global society.

The division has seven elementary schools to provide instruction for grades kindergarten through fifth; two middle schools to serve grades 6 through 8; and two high schools to serve grades 9 through 12. The division also operates one Technical Education Center and one STEM-H Academy that opened in 2013-14.

Exhibit 2-1 shows enrollment and attendance from 2010-11 through 2014 school years. As shown, enrollment has been decreasing since 2011-12 but attendance rates have remained steady.

EXHIBIT 2-1
BOTETOURT COUNTY PUBLIC SCHOOLS
ENROLLMENT AND ATTENDANCE
2010-11 THROUGH 2014

SCHOOL YEAR	ENROLLMENT ¹	ATTENDANCE RATE (%)
2010-11	4,952	96
2011-12	4,997	96
2012-13	4,905	96
2013-14	4,793	N/A

¹Includes K-12, special education, and post graduate, but excludes pre-kindergarten.

Source: VA Superintendent's Annual Report. September 30 Membership for each year 2010-2014.

Compiled by MGT, 2014.

Exhibit 2-2 shows the graduation and dropout rates for BCPS and the peer divisions for the class of 2013. BCPS had a higher graduation rate than its peers and a lower dropout rate than any of them except Orange County. BCPS exceeds the state averages. Data shown are for the class of 2013, the last year for which data are available.

EXHIBIT 2-2
BOTETOURT COUNTY PUBLIC SCHOOLS AND PEER DIVISIONS
GRADUATION AND DROPOUT RATES, CLASS OF 2013

DIVISION	VIRGINIA ON-TIME GRADUATION RATE	DROPOUT RATE
Botetourt County	95.6	2.5
Accomack County	86.1	7.5
Caroline County	86.2	10.2
King George County	90.9	7.4
Mecklenburg County	87.8	9.7
Orange County	91.6	2.1
Powhatan County	82.0	5.4
Wythe County	85.9	9.9
Peer Average	88.4	7.5
State Average	88.9	6.2

Source: Virginia Department of Education, 2014.

Conditions in Botetourt County of importance to this review include:

- ◆ Enrollment has continued to decline since 2011-12.
- ◆ The number of English Language Learners in the division is increasing, although slowly and not at all schools.
- ◆ Interest in high-tech, college, and career programs is increasing across the division.

CHAPTER SUMMARY

In preparing this section, MGT of America, Inc., reviewed extensive documents provided by the division, and interviewed division administrators, school board members, principals, teachers and staff. Additionally, data were collected through the Virginia Department of Education website, the BCPS website, the Auditor of Public Accounts website, and the Virginia State Statutes.

The following commendations are included in the section:

- | | |
|-------------------------|---|
| Commendation 2-A | The division provides 21st Century student learning opportunities at the high school level. |
| Commendation 2-B | The division provides paid training time for special education instructional assistants. |
| Commendation 2-C | The division has created valuable partnerships to support special education program areas. |

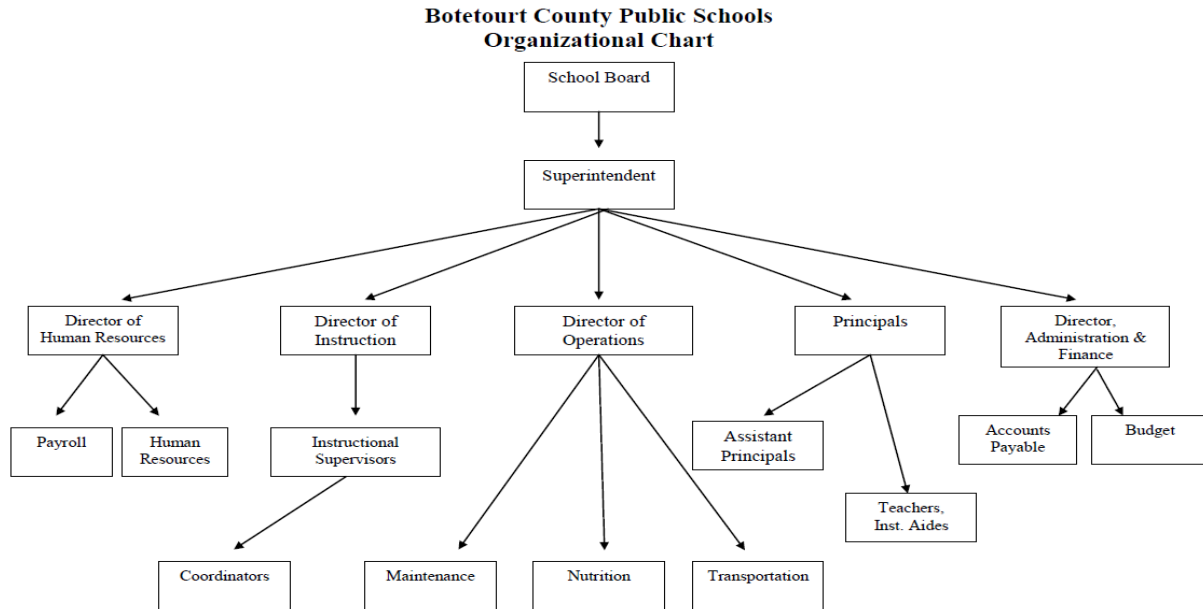
The following recommendations are included in the section:

- | | |
|----------------------------|--|
| Recommendation 2-1 | Reorganize the instruction department, create an Assistant Superintendent of Instruction, reduce from three coordinator positions to two. |
| Recommendation 2-2 | Develop and gain approval for annual departmental goals and program budgets that are aligned with division targets and are clear to all staff. |
| Recommendation 2-3 | Develop an annual, detailed instruction department budget that clearly defines annual, regular spending as well as any new or one-time planned expenditures. |
| Recommendation 2-4 | Review the need for and current status of School Leadership Teams. |
| Recommendation 2-5 | Develop job descriptions for each position and an evaluation structure for central office support staff. |
| Recommendation 2-6 | Create a structure for program monitoring plans that identify annual or required tasks on a calendar and outline annual and long-range goals for the program or curricular area(s). |
| Recommendation 2-7 | Reduce the administrator position at Eagle Rock Elementary School to a half-time position. |
| Recommendation 2-8 | Develop and implement processes to manage, review, revise, and monitor curriculum based on data from student performance and staff input. |
| Recommendation 2-9 | Identify the records that must be regularly accessed and remove all non-essential records to a new secure storage area in an off-site location. |
| Recommendation 2-10 | Create a short- and long-term plan to recruit and retain qualified bi-lingual and ESL teachers and support staff. |
| Recommendation 2-11 | Develop and prepare an annual gifted program report for the board and the community. |

2.A ORGANIZATION AND MANAGEMENT

The instruction department in BCPS is under the supervision of the Director of Instruction who reports directly to the superintendent. Based on the division organizational chart, the Director supervises the Instructional Supervisors who provide supervision to Coordinators, as shown in **Exhibit 2-4**.

EXHIBIT 2-4
BOTETOURT COUNTY PUBLIC SCHOOLS



Revised: July 1, 2014

Source: BCPS, 2014.

FINDING

The department staff includes the Director of Instruction and an administrative assistant, four instructional supervisors, three of whom have multiple content or instructional areas of responsibility and one who directs the special education program. The special education supervisor is responsible for directing the work of two special education coordinators. Each coordinator is responsible for specific program areas, e.g., K-12 low incidence programs. There is also a Career and Technical Education (CTE) Coordinator who reports to the Director of Instruction and supervises CTE. The areas of focus for each instruction department staff member are shown in **Exhibit 2-5**, including whether they support general education (GE) or special education (SE).

EXHIBIT 2-5
 BOTETOURT COUNTY PUBLIC SCHOOLS
 INSTRUCTION DEPARTMENT ASSIGNMENTS
 2014-15

POSITION	GENERAL ED. / SPECIAL ED.	TASKS
Director of Instruction	GE/SE	Professional Development (PK-12) Gifted Instruction Registration Guide School Counseling (6-12) English (6-12) Summer school (6-12) Foreign Language Homeless Education SOQ/SOA Report CSIP STEM-H Lead Title II Comprehensive Plan Management of Student Records
Instructional Supervisor – Instruction and Technology	GE	Social Studies (6-12) Mathematics (K-12) STEM-H – Engineering Library Media Services (K-12) Technology Staff Supervision (ITRT and Technicians) Inventory (Technology)
Instructional Supervisor	GE	Homeschool Education Science (K-12) STEM-H – Health Sciences Testing Textbooks School Counseling (PK-5)
Instructional Supervisor	GE	English, Reading, Writing (K-5) Kindergarten Registration, Screening PALS Summer School (K-5) Title I and Title III VPI Fine Arts (K-12) Social Studies (K-5) ESL Program Character Counts (PK-12)
Coordinator	GE	Career and Technical Education

EXHIBIT 2-5 (CONTINUED)
 BOTETOURT COUNTY PUBLIC SCHOOLS
 INSTRUCTION DEPARTMENT ASSIGNMENTS
 2014-15

POSITION	GENERAL ED. / SPECIAL ED.	TASKS
Instructional Supervisor – Special Education	SE	Annual Plan CPMT Federal VIB and Preschool Funds Special Education Program Monitoring (PK-12, all disability categories; local and regional) Regional Special Education Program Foster Care OSHA Blood borne Pathogen Training and Monitoring School Health Advisory Board School Nurses Section 504- Division Coordinator
Coordinator	SE	Program Monitoring (Low Incidence Disabilities PK-12) Assistive Technology Autism Specialist Homebound Instruction Private Placements Testing – VAAP Transition Planning
Coordinator	SE	Program Monitoring (High Incidence Disabilities PK-12) ECSE Coordinator Eligibility Compliance IEP Online Intensive Reading Intervention Contact Special Transportation Testing – VGLA, VMAST, VSEP Family Assessment Planning Team

Source: BCPS department, compiled by MGT, 2014.

As shown, the staff in this department support many curricular areas and specialized student needs. Data gathered from interviews conducted during the onsite visits indicate that site staff understand that these positions have multiple responsibilities for supporting various areas. Many of those interviewed said that they all “wear many hats.”

FINDING

The Instruction department should be led by an Assistant Superintendent and the department should be reorganized and reduced by one coordinator position. The CTE coordinator position should be combined with the principal for the Botetourt Tech Center. In addition, the program responsibilities for the instructional supervisors should be reviewed, more clearly defined, and realigned so that there are clear expectations regarding their work.

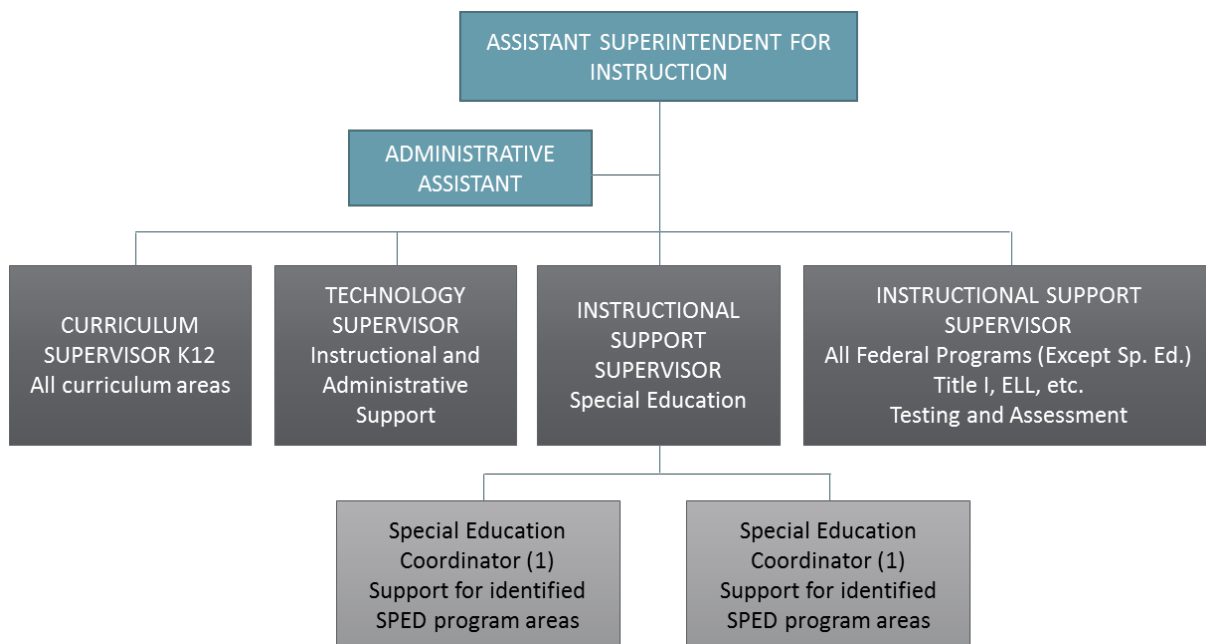
RECOMMENDATION 2-1:

Reorganize the instruction department, create an Assistant Superintendent of Instruction, reduce the three coordinator positions to two.

The proposed organizational structure for the Instruction department is shown in **Exhibit 2-6**. As shown, there is an Assistant Superintendent of Instruction who oversees all areas. This recommendation requires the reorganization of the instruction department. The Assistant Superintendent for Instruction would directly supervise four supervisors, but the role of those staff would be altered: one would support all K-12 curriculum areas, including the alignment of state and division SOLS and texts and other resources; one would supervise the important changes in technology, supporting both instructional areas and administrative systems; one would supervise special education; and one would supervise various instructional support programs, including Title I and other federal programs, and division social service programs, including student health. The special education supervisor would directly supervise two coordinators.

This departmental alignment has the potential to streamline the work, clarify responsibilities, and enable staff to focus on a clear number of tasks.

EXHIBIT 2-6
PROPOSED INSTRUCTION DEPARTMENT ORGANIZATIONAL CHART



Source: MGT, 2014.

This alignment of instruction may provide the department an opportunity to clarify roles and responsibilities and align the work in support of instruction.

FISCAL IMPACT

Implementing this recommendation will result in a net reduction of 1 FTE in the department. The one-year costs savings would be \$103,349 (salary for coordinator of \$79,000 + benefits (\$24,349) = \$103,349). The five year cost savings would be \$516,745 (\$103,349 x 5 = \$516,745).

RECOMMENDATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Reduce the number of instructional coordinators	\$103,349	\$103,349	\$103,349	\$103,349	\$103,349

FINDING

There is no instruction department plan that includes short- or long-term goals. There is a division strategic plan, but it does not adequately define the work of this department. Over the last several years, the department has implemented new programs, including a one-to-one technology rollout at high schools and a new lesson plan structure at all schools, and new text resources in support of curriculum. There was no plan that organized these activities or even predicted them. Additionally, there was no structure to assess whether programs met identified needs, were aligned with other programs, and were implemented well.

Departments that do not clearly define goals and communicate planned activities for support staff are more likely to have site-based staff resist or be unclear about plans or decisions. It is important for the instruction department staff to understand what their work is and how they are to monitor the impact of their work. It is equally important that site staff know what is planned, how it is going to happen, and how it fits into the long-range goals.

RECOMMENDATION 2-2:

Develop and gain approval for annual departmental goals that are aligned with division targets and are clear to all staff.

The division must have a plan for the department that is both comprehensive and aligned. Such plans would typically include the following elements:

- ◆ Needs assessments and data
- ◆ Goals
- ◆ Timelines
- ◆ Budgets
- ◆ Technology
- ◆ Implementation and training
- ◆ Monitoring of evidence of implementation – evaluation of teacher/adult behavior
- ◆ Monitoring of evidence of impact – evaluation of student achievement
- ◆ Facility implications or needs
- ◆ Special population impact or issues

The department should create both a long-term structure and provide annual updates that are reviewed through the division budget and planning processes. The instructional and site staff should be involved in both the preparation of these plans and the annual review and updating so that they and others are clear what “success” would look like, based on an adopted and clearly defined set of department goals. Without clear goals, it is difficult to hold the department and individual staff members responsible.

FISCAL IMPACT

The development of the long-range plan should be the responsibility of the Assistant Superintendent of Instruction in collaboration with the instruction department and the superintendent. The plan may take several months to develop, refine, and finalize. Once approved, the annual review should be part of the regular work cycle for the department to identify planned projects and approaches to supporting instruction, present the planned projects for review/approval of the superintendent and/or board (depending on the work task) in the spring during budget development. This annual work should be inclusive of all areas in the department and no new initiatives/activities should be “launched” that have not gone through this annual review process. The agreed-upon activities should be made clear to all site-based staff through division communication channels that describe annual goals, planned activities, and responsible staff.

FINDING

There is no clear budget structure for the department. The division has a “self-sustaining textbook fund” that was shown with \$825,000. Self-sustaining funds were described as, “programs which are not carried in the regular school budget” and derived from various sources, including federal and regional funds. However, there were also line items in the 2014-15 operating budget for elementary and secondary textbooks of \$218,901 each. It was unclear whether the division was planning to spend \$436,000 or \$825,000 or a combination of the two, because there was no written plan.

MGT was not able to locate an instruction department program budget that defined resources based on the program or content areas or the tasks of supporting curriculum and instruction. Department staff charged with supervising a content or program area, e.g., counseling or fine arts, could not identify the funds available to support those programs.

RECOMMENDATION 2-3:

Develop an annual, detailed instruction department budget that clearly defines annual, regular spending as well as any new or one-time planned expenditures.

FISCAL IMPACT

The development of the department budget should be the responsibility of the Assistant Superintendent of Instruction in collaboration with the instruction department and the superintendent. The budget should be based on the short- and long-range plan developed and adopted annually and should clearly reflect the spending priorities established by the division in support of student learning. The budget development process is estimated to take 12 hours as part of the annual cycle of work review and evaluation.

FINDING

School leadership teams (SLT) seem to exist at all schools, but the purpose, and the instruction department’s role relative to the site teams is unclear. There was no mention of the SLT structure in any of the site improvement plans reviewed and school staff did not describe SLTs during onsite interviews. Instruction Department staff have been assigned to schools and have created a monthly schedule of site visits to coincide with the SLT meetings, but the role or function of the instruction department staff member was not clear.

RECOMMENDATION 2-4:**Review the need for and current status of School Leadership Teams.**

A school leadership team structure can be used to support the work of a school, as a forum for issue identification and solution finding, and for communication. There is a significant body of research and practice around using a team structure to support the important work that schools are doing to improve teaching and learning. Adding district instruction department staff as members of school-based teams may provide a valuable support, adding content expertise or skills. District staff can also serve a communication and liaison role with school-based teams. To be effective, an SLT structure needs to be defined and supported and integral to the on-going work at the school.

The School of Education at the College of William and Mary has developed a guide that could be useful: *Strategies for Creating Effective School Leadership Teams*.

<http://education.wm.edu/centers/ttac/documents/packets/strategiesforCreatingEffectiveSchoolLeadershipTeams.pdf>

FISCAL IMPACT

This recommendation should be implemented by the superintendent in collaboration with the assistant superintendent of instruction and school administrators. The review should identify needs and current status as well as role or responsibility of instruction department staff, as appropriate. Developing an effective leadership team model takes time and commitment from site and district staff and should be part of the district's comprehensive plan for improving teaching and learning. The time needed for the review is estimated at eight hours. The time needed to develop and implement a school leadership team structure is more extensive. It should be done by a team of teachers and administrators over an extended period.

FINDING

None of the positions in the instruction department have job descriptions. **Exhibit 2-5** shows the list of content or instructional program areas for each of the instructional supervisors and special education coordinators.

As shown, each instruction department staff member has several areas of work, e.g., IEP Online, Special Transportation, English (6-12) etc. and some kind of role to play, but there are no job descriptions to define the work, the training/experience required or the structure of the position. Additionally, there is no evaluation system for staff in these roles. There is a teacher evaluation structure and form and one for principals, but not for this type of unique role. This makes evaluating the person very difficult. School divisions should have identified job descriptions for each type of position and structures in place to enable central office support staff to be evaluated based on the expectations for their work in the area(s) assigned to them.

RECOMMENDATION 2-5:**Develop job descriptions for each position and an evaluation structure for central office support staff.**

Having clear job descriptions helps an organization differentiate expectations and levels of responsibility and authority between an Instructional Supervisor and a Coordinator. Job descriptions are especially important when hiring new staff to ensure common understanding of roles.

FISCAL IMPACT

This recommendation can be implemented by the existing instructional supervisors under the direction of the Assistant Superintendent of Instruction. The initial review and development should take 4-6 hours of staff time. Job descriptions for several states (e.g., North Carolina) are available online; several divisions, including Newport News, VA have also posted their job descriptions. These can serve as good starting points from which adjustments can be made.

FINDING

The current instructional supervisor staff have been moved into their current positions as recently as July 2014. They have previously served as teachers and/or building administrators and now have been assigned to take on all the work under their name, as described in **Exhibit 2-5**. There are no task descriptions to either help define the work or hold them accountable for accomplishing it. Several of the work areas indicate that the tasks are shared with others – e.g., summer school and student records. If problems exist in any of these shared areas, it is unclear how the problems would be solved and who would be held accountable for solving – or not solving – them. Finally, it is unclear what someone is expected to be doing if they have an item assigned to them, e.g., counseling.

Does that mean that they:

- ◆ Directly supervise the counselors out in the schools? Evaluate them?
- ◆ Get to tell them what to do?
- ◆ Provide them with supplies or materials?
- ◆ Manage, provide, or monitor their professional development?
- ◆ Monitor the implementation of the division’s counseling program and curriculum?

Interviews conducted during the onsite visits showed that both district instructional staff members and site-based staff, including principals and teachers, were unsure of the role and responsibilities relative to the assignments. If you have social studies (6-12) on your list does that make you the “curriculum police” for social studies? Most educators believe that curriculum is best monitored by each building administrator as part of the evaluation of teachers, making the role of the instructional supervisors in BCPS not clear.

Finally, there are no written program schedules, no program budgets (e.g. music program budget), content area goals, or clear expectations for any area. Instructional supervisors that are new are often starting with a blank slate or only limited historical information regarding either successes or difficulties and, when they leave, there is no plan remaining to show what’s been done, what’s in progress, and what needs to be done in any area. School divisions should have written program monitoring expectations or activities to assist with accountability and succession planning.

RECOMMENDATION 2-6:

Create a structure for instructional program monitoring plans that identify annual or required tasks on a calendar and outline annual and long-range goals for each program or curricular area(s).

FISCAL IMPACT

This recommendation can be accomplished with existing instructional supervisor staff working with the Assistant Superintendent of Instruction and should take 12 hours as part of the annual department planning.

2.B. SCHOOL ADMINISTRATION AND DECISION-MAKING

Schools are the centers for student learning and therefore need the best possible teaching and support staff and administration, adequate financial support to conduct business, appropriate technology, and both the authority and the responsibility for decision-making. Schools need to be safe and orderly and provide an environment conducive to learning and school staff should expect to be regularly gathering information about the impact of their work and creating plans to improve. The planned work at the schools should be clearly aligned to division mission and goals and should be regularly reviewed and updated as needs are monitored and adjusted.

In Botetourt County, each school has a full time principal and larger schools have additional administrative staff. Teaching staff are assigned to each site based on projected enrollments and class size staffing formulas, defined in the spring and reviewed as school is starting in the fall.

Exhibit 2-7 displays the pupil-to-staff ratios for BCPS and the peer divisions for the 2012-13 school year. BCPS's pupil-to-teacher ratio, 13.13 to 1, was higher than the peer average, 12.9 to 1, by 0.2 student. This means that the "average" BCPS teacher had slightly larger class sizes than the "average" teacher in the peer divisions. BCPS's site administrative staff supported fewer pupils (274.4) than the peer average (289.8), which means that the average BCPS principal/assistant principal supervised a smaller number of students than in the peer divisions.

EXHIBIT 2-7
BOTETOURT COUNTY PUBLIC SCHOOLS AND PEER DIVISIONS
TEACHER AND ADMINISTRATOR RATIOS TO STUDENTS, 2012-13

DIVISION	TEACHER RATIO	ADMINISTRATOR* RATIO
Botetourt County	13.13	274.41
Accomack County	10.91	230.25
Caroline County	15.64	317.06
King George County	13.28	379.01
Mecklenburg County	12.40	287.51
Orange County	13.16	299.95
Powhatan County	13.27	325.4
Wythe County	15.64	252.03
Peer Average	12.89	289.76
SCHOOL DIVISION SUBTOTAL	12.84	288.68

*Administrators include Principals and Assistant Principals only

Source: Virginia Department of Education, 2014.

Note: Data extracted for 2012-13 because that is the last year data was available on the Virginia Department of Education website.

Exhibit 2-8 presents a comparison of administration spending and positions for the past three fiscal years. Based on the review, BCPS varies from +.10 to -.01 positions when compared to peer divisions and is currently lower (-1.10) compared to the most recent regional division average for administrative positions. As described earlier, the peer group includes divisions that resemble BCPS in various dimensions, the regional group includes neighboring divisions that may be in more direct competition for staff, including administrators. As shown, in 2010-11, the cost of administration in BCPS was 7.6

percent less than the peer divisions and 23.5 percent less than the nearby regional divisions. However, by 2013-14, the cost of administration (non-instructional) in BCPS exceeded the peer divisions by 9.35 percent and the nearby regional divisions by 4.87 percent. BCPS has fewer administrative positions than the regional peers.

EXHIBIT 2-8
BOTETOURT COUNTY PUBLIC SCHOOLS
COMPARISON OF ADMINISTRATION ONLY COST AND POSITIONS

	BCPS	PEER DIVISION AVERAGES	REGIONAL* PEER AVERAGES	BCPS COST/POSITIONS ABOVE (BELOW) PEER AVERAGE		BCPS COST/POSITIONS ABOVE (BELOW) REGIONAL AVERAGE		
				AMOUNT	PERCENT	AMOUNT	PERCENT	
Spending								
FY2010-11	\$222.50	\$240.81	\$290.85	-\$18.31	-7.60	-\$68.35	-23.50	
FY2011-12	\$277.67	\$291.66	\$300.48	-\$13.99	-4.08	-\$22.81	-7.59	
FY2012-13	\$327.70	\$299.68	\$312.47	\$28.02	9.35	\$15.23	4.87	
Positions								
FY2010-11	8.00	7.90	9.22	.10		-1.22		
FY2011-12	9.00	8.97	9.44	.03		-.44		
FY2012-13	9.00	9.01	10.10	-.01		-1.10		

* Regional peers are neighboring divisions that may be in direct competition for staff.

Source: Tables 13 and 18 of the Superintendent's Annual Report for Virginia. Compiled by MGT, 2014.

Exhibit 2-9 shows the administrator ratio by school in the Botetourt School Division. As shown below, Breckinridge Elementary School has one principal and an enrollment of 232 students. The elementary average ratio is 258:1, or 258 students per administrator, but the range at elementary schools is 148 students per administrator to 387 per administrator.

EXHIBIT 2-9
BOTETOURT COUNTY SCHOOLS
ADMINISTRATOR TO STUDENT RATIOS
2013-14

SCHOOL	ADMINISTRATORS (PRINCIPAL & VICE PRINCIPAL)	ENROLLMENT	RATIO
Breckinridge ES	1	232	232 / 1
Buchanan ES	1	263	263 / 1
Cloverdale ES	1	323	323 / 1
Colonial ES	2	424	212 / 1
Eagle Rock ES	1	148	148 / 1
Greenfield ES	1	387	387 / 1
Troutville ES	1	283	283 / 1
Elementary Total/Average Ratio	8	2,060	258 / 1
Read Mountain MS	2	717	359 / 1
Central Academy MS	2	458	229 / 1
Lord Botetourt HS	3	1,056	352 / 1
James River HS	2	565	283 / 1
Secondary Total/Average Ratio	9	2,796	311 / 1
Botetourt Tech Center	1	Included in home school enrollment	
STEM-H Academy	1	Included in home school enrollment	

Source: BCPS data, compiled by MGT, 2014.

FINDING

The number of school administrators and the student-to-administrator ratios compare reasonably with peer divisions and among schools, with the exception of Eagle Rock Elementary. Virginia SOQ standards for administrative time are as follows:

Principals in elementary schools, one half-time to 299 students, one full-time at 300 students; principals in middle schools, one full-time, to be employed on a 12-month basis; principals in high schools, one full-time, to be employed on a 12-month basis;

With a full time administrator and a total enrollment of 148, the student-to-administrator ratio at Eagle Rock is over 40 percent less than the division average and nearly 50 percent less than the peer average. Although having a small ratio may be advantageous in terms of knowing students and families, few divisions have the resources to support this model.

RECOMMENDATION 2-7:

Reduce the administrator position at Eagle Rock Elementary School to a half-time position.

The reduction of 0.5 FTE administrative positions will result in a student-to-administrator ratio more in line with the other schools and within peer divisions. School divisions often combine half-time administrators with other positions within the school and/or division-wide administrative positions.

FISCAL IMPACT

\$61,818 savings, including salary and benefits.

The reduction of 0.5 FTE administrative position will result in an annual savings of \$61,818 (0.5 FTE administrator salary \$45,000 + 0.5 benefits \$16,818 = \$61,818). The estimated savings over five years would be \$309,090.00 (\$61,818 x 5 years= \$309,090).

RECOMMENDATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Reduce the number of administrators by 0.5 FTE	\$61,818	\$61,818	\$61,818	\$61,818	\$61,818

Each school has a School Improvement Plan (SIP) that defines goals and activities for the year described in a structure that is used across the division. The *Plan for School Improvement (PSI)* includes a list of possible data sources along with guiding questions for data analysis, blank forms to use as a template, and an annual timeline beginning in July-August with meetings to review data with division and principal and includes plan development activities with staff before school and plan monitoring by the school. There is also a structure for “Progress monitoring discussions regarding PSI implementation” differentiated by priority status:

- ◆ Priority 1 Schools: Monthly
- ◆ Priority 2 Schools: September, November, February, April
- ◆ Priority 3 Schools: September, November, Mary

The document does not identify criteria for the school priorities nor does it define with whom the “progress monitoring discussions” are held. However, the final direction for completing the PSI indicates that the plan needs to be “presented to the Division Instructional Team.”

There are four goals included in nearly all plans. The plans identify responsible staff and proposed budgets. **Exhibit 2-10** is an excerpt from one school’s plan.

EXHIBIT 2-10
 BOTETOURT COUNTY PUBLIC SCHOOLS
 SCHOOL IMPROVEMENT PLAN EXAMPLE

xxx Elementary School Comprehensive School Improvement Plan 2013-2014

Goal 1: Maintain academic excellence for all students								
Objective 1.2: To close the achievement gap for all student groups identified in <i>Elementary and Secondary Education Act</i>.								
Objective 1.2S: To close the achievement gap in Gap Groups as compared to all students across content areas.								
	Strategies	References and/or Resources	Title/Department	Status			Method of Assessment	Budget
				D—Developing I—Implementing S—Sustaining				
				11-12	12-13	13-14		
1.2.1	<i>All teachers will analyze student achievement data from a variety of sources to reflect on instructional strategies, identify gaps, create small groups, and target instruction.</i>	Interactive Achievement Fountas & Pinnell LLI, SRA, Wilson Classroom assessments PD-Math coach	All XXX Elementary Teachers Principal			D	Departmental meetings Review of lesson plans/groups Analysis results	

Source: BCPS Instruction department. Compiled by MGT, 2014.

Discussions with site staff during the onsite visit indicated that schools have some flexibility in spending their budgets and making decisions, but that textbooks and professional development funds are managed centrally by the instruction department. The budget and planning for staffing appear to be based on sound financial practices that are understood across the division.

2.C. CURRICULUM POLICES AND MANAGEMENT

Curriculum is the “what” in education. It defines what it is that students should know and be able to do, to what degree of competence, and by when. The management of curriculum, therefore, includes developing clear learning objectives for each subject for each grade and determining how and when the learning is going to be measured and reported.

For each curricular area, the review, revision, and adoption process is typically the same:

- ◆ Review existing framework
- ◆ Identify any state SOL-required changes
- ◆ Revise framework and present for board approval
- ◆ Review state textbook/materials and division materials, including number of resources and condition
- ◆ Identify needs for text and other resources, develop budget, and present for board approval through the regular budget process
- ◆ Provide ongoing support, including professional development, technology assistance, coaching, review, and revision to curriculum documents, as needed.

BCPS Board Policy IF requires that “curricula shall meet or exceed the requirements of the Virginia State Statutes and regulations of the Virginia Board of Education and, at a minimum, shall be aligned to the Standards of Learning.” BCPS is meeting these requirements.

FINDING

In BCPS, the development of curriculum is the responsibility of the Instruction department. As defined in **Exhibit 2-5**, each of the three Instructional Supervisors oversee one or more content areas. MGT did not locate a description of what was expected relative to the role of overseeing a content area and neither site nor division staff could articulate clear expectations.

Teachers and site administrators need to be involved in these processes. Data about student success under old curricula and prospective success under new curricula need to be considered. The type of resources needed – print, digital, etc. – need to be considered. This is an important process, worthy of significant staff engagement, but most divisions take on 1 major (e.g., English/Language arts or mathematics that affects all grade levels) and 1-2 minor areas (e.g., world languages or CTE that affects only secondary schools) per year. Dividing the curriculum content areas and diffusing responsibility and accountability for curriculum development across several people may not be helpful.

The Instruction department provided a copy of the planned curriculum revision schedule for summer 2014 – summer 2023. The document is a working draft, developed by the department, and was described as “not yet shared or approved by the administrative team or teachers.” Based on the document, curriculum development occurs in the summer, as each set of subjects are listed as summer of each year. It is unclear if curriculum review activities occur during the school year or only during the summer.

As shown in **Exhibit 2-11**, planned activities include the following:

S = new standards

B1 = Book Alignment, Year 1
 B2 = Book Alignment, Year 2
 M = Mini review

As shown, it appears that both math and reading were under “mini-review” in the summer of 2014. Given the significance of these two core curriculum areas, it seems unusual for a division to undertake the review and revision of both areas in the same year, much less just over the summer. The review for reading extended from the summer of 2014 to 2015, but since new state standards for math are expected in 2016 and new standards for reading are expected in 2017, it is unclear why the division would be convening curriculum teams in the preceding summers. Curriculum review and revision on a 5- to 7-year schedule makes good sense for middle and high school content staff. However, for elementary teachers, such a review/revision schedule, especially when it includes entire new text series, means that a new content arrives each year with little or no time to learn, understand, and develop deep understandings before the next areas “lands.”

EXHIBIT 2-11
 BCPS CURRICULUM PROPOSED DEVELOPMENT SCHEDULE
 2014-2023

SUBJECT	SUMMER 2014	SUMMER 2015	SUMMER 2016
Math K-5	M		S
Math 6-8	M		S
Math 9-12	M		S
Reading K-5	M	M	
Reading 6-8	M	M	
Reading 9-12	M	M	
K-2 Science / Social Studies	B1 (Science)	S (Social Studies) / B2 (Science)	
Science 3-5	B1	B2	
Science 6-8	M		
Science 9-12	M		
Social Studies 3-5		S	
Social Studies 6-8		S	
Social Studies 9-12		S	
Foreign Languages		B1	B2
Fine Arts K-12	M		

Source: BCPS Instruction department, 2014.

RECOMMENDATION 2-8:

Develop and implement processes to manage, review, revise, and monitor curriculum based on data from student performance and staff input.

It is essential that the instruction department be transparent and clear about planned curriculum changes, new adoptions of textbooks, professional development, and other support. Planned activities – especially new initiatives – for each area on the list in **Exhibit 2-5** should be described, developed, and reviewed to ensure that they can be accomplished. Division instructional staff should clarify who is involved, what they are doing, and how curriculum decisions will impact teachers and schools.

Additionally, the department should actively solicit both input to shape the processes and ongoing feedback throughout the implementation. Teachers must know how they can be involved in defining the changes, when to expect changes, and how the impact of those changes will be measured and monitored.

The following questions should be considered when implementing new programs:

- ◆ Does it fit with division mission and long-range goals?
- ◆ Is it a “best practice” or research-based approach?
- ◆ Has it been reviewed/recommended by implementers?
- ◆ Is there budget capacity?
- ◆ Is it sustainable? How? Cost?
- ◆ What are the likely consequences of adoption/implementation?
- ◆ What is the plan for training and support over time?
- ◆ What are the expected impacts? How will we know if this was a good idea?

FISCAL IMPACT

A thorough review of student achievement data and staff perceptions is needed to implement this recommendation. The initial review will require a dedicated work effort, but much of the needed information already exists and will need to be brought to the table for comprehensive review. This recommendation is connected to **Recommendation 2-1** and can be accomplished with existing instructional supervisor staff working with the Assistant Superintendent of Instruction over several months with a goal of having planning documents for the next division budget and planning cycle. Estimated hours to complete this task are 40-60.

FINDING

There are outstanding program opportunities for students in this division, especially at the high school. The division uses a portion of a county building to house a STEM-H program that offers outstanding career course work in science, technology, engineering, mathematics and health. Although the program is not yet certified as one of the “Governor’s Schools,” it is in its second year and has more than eighty students enrolled. Some students in both health and pre-engineering are completing their Year 3 coursework, having had opportunities to begin taking classes at their home high schools. The division is supporting this program by providing transportation from the high schools to the STEM-H site, ensuring high quality instructors, and access to state-of-the-art facilities, including labs.

The Botetourt Technical Center offers a variety of programs, including high-tech courses and courses that lead to industry certification and well-paying jobs. Staff at the Center are experienced in their respective fields and provide outstanding learning experiences for students in well-equipped facilities.

Identified students can attend the Roanoke Valley Governor’s School (RVGS). The Governor’s Schools presently include summer residential, summer regional, and academic-year programs serving more than 7,500 gifted students from all parts of the Commonwealth. The program is designed to give gifted students academic and visual and performing arts opportunities beyond those normally available in the students’ home schools. Students are able to focus on a specific area of intellectual or artistic strength

and interest and to study in a way that best suits the gifted learner’s needs. Each program stresses non-traditional teaching and learning techniques.

COMMENDATION 2-A:

The division provides 21st Century student learning opportunities at the high school level.

2.D. SPECIAL PROGRAMS

All school divisions are expected to provide special programs in support of students with different learning needs, including those who need support for English as a second language and those who need differentiated, specialized education. Such programs may operate within the general education classrooms or in separate, pull-out activities.

There are three special programs typically found in Virginia schools – Limited English Proficient, Special Education, and Title I. Students qualify for these programs by meeting certain criteria, as in the case of the Limited English Proficient (LEP) programs and programs supporting students with disabilities, typically funded and authorized under the Individuals with Disabilities Education Act (IDEA), Part B.

The Limited English Proficient (LEP) program is funded through federal support. It provides support for teacher trainings, materials, professional development, and parent support.

IDEA Part B is the federal law that supports special education and related services for children with identified disabilities ages two through 21. Although these are federally-funded programs, they are administered through VDOE which 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. Students identified in this program have an individual educational program that is developed with the family and implemented by the schools.

The students served in the economically disadvantaged program, more commonly known as Title I, receive services based on the school they attend. A school qualifies to have a Title I program based on the percent of students who qualify for free or reduced price meals. The program serves any student in that school who is in need of remedial support, regardless of whether they qualify for reduced price meals. BCPS had the highest number of disabled students, but the second lowest number of economically disadvantaged students, as shown in **Exhibit 2-12**. BCPS was in the bottom half for divisions relative to the number of students with limited English proficiency.

EXHIBIT 2-12
BOTETOURT COUNTY PUBLIC SCHOOLS AND PEER DIVISIONS
PERCENT ENROLLMENT IN SPECIAL PROGRAMS 2013-14

DIVISION	TOTAL ENROLLMENT	ENROLLMENT					
		SPECIAL EDUCATION		ENGLISH AS A SECOND LANGUAGE (ESL)		GIFTED AND TALENTED	
		N	%	N	%	N	%
Botetourt County	4,856	704	14	40	1	1,011	21
Accomack County	5,247	695	13	932	18	3,450	66
Caroline County	4,326	614	14	66	2	2,249	52
King George County	4,634	453	10	27	1	1,453	31
Mecklenburg County	5,181	539	10	78	2	2,746	53
Orange County	4,261	457	11	133	3	1,928	45
Powhatan County	4,323	457	11	20	0	782	18
Wythe County	4,326	445	10	10	0	2,275	53
Peer Average	4,623	523	11	181	4	2,126	46

Source: Virginia Department of Education, 2014.

2.D.a. SPECIAL EDUCATION

The special education program in BCPS provides services to qualified students, including preschool starting at age three and transition services to support students through age 21. The program is under the direction of an Instructional Supervisor, with two Special Education Coordinators, as shown in Exhibits 2-4 and 2-5, and an administrative assistant. Site-based staff include special education teachers for students of varying needs, psychologists, and speech/language pathologists. The division contracts out for occupational and physical therapy (OT/PT) visual and hearing support services. In addition to services provided by the division, there are some regional programs housed in the division and the division also sends students to regional programs outside of the division.

The special education program is under the Instruction department, which provides opportunities for general and special education staff to work together. All professional development courses and programs, regardless of sponsorship, are open to all staff. Special education teachers have access to the same technology resources and tools as general education teachers.

FINDING

Special education instructional assistant (IA) contracts include paid time for training. Instructional assistants are important members of the special education instructional staff. They support instruction through various activities, including greeting students as they get off the bus, facilitating learning in the classrooms, supporting the student in transitions from classroom to restrooms to lunch, etc. The needs of students in special education vary widely and in order to be ready for students beginning the first day of school, the division has added two paid days before school starts to provide division and site-based training. Additionally, the IAs have access to an online course that is required by the state.

COMMENDATION 2-B:

The division provides paid training time for special education instructional assistants.

FINDING

The division has developed strong local partnerships that support student programs and enhance division-provided staffing. As shown in **Exhibit 2-12**, the special education population in BCPS is 14 percent, significantly larger than the peer average of 11 percent. This means that there are more students who qualify and need services in Botetourt than are typically found in other divisions.

Department staff have created partnerships to extend support to their students. The autism grant with Virginia Commonwealth University in Richmond provides research and leadership for this important area of service. In addition, the division has an agreement with the Virginia Tech Carilion School of Medicine and Research Institute to provide a psychology fellow every six months. This agreement allows the fellow to gain important experience and the division to gain the services of a qualified provider at no cost. It also provides division staff access to important consultative services from a highly trained doctor.

COMMENDATION 2-C:

The division has created valuable partnerships to support special education program areas.

FINDING

Special Education records are located in the division's vault, but the space is not adequate and not secure. Federal rules dictate the records that must be maintained for each student referred and placed into a special education program. Student records must be maintained, based on the required retention schedule.

Special education and division staff identified concerns regarding the secure storage and management of student records, including those for special education. A review of the vault during the onsite visit identified materials, including records that were not required to be secured, decorations, and other miscellaneous items stored there. The vault door was open and not supervised directly.

Divisions that do not have secure records storage and management systems risk data being lost or accessed for inappropriate use.

RECOMMENDATION 2-9:

Identify the records that must be regularly accessed and remove all non-essential records to a new secure storage area in an off-site location.

The vault at the division office should be used for storage of regularly accessed student or other division records. Those items should be maintained in the vault with the vault door closed/locked except when staff are accessing the records.

Other records planned for destruction on a timeline or not regularly accessed are still important and need to be maintained in a safe and orderly system. Storage for non-essential documents can be accomplished through two approaches. The division could identify and create a secured storage area for non-essential records in a section of an existing warehouse or a school that has space. The space would need to be secure, preferably with no windows. Alternatively, the division could contract with a records storage company for a fee of \$0.30- \$0.40/box/month. The records would be stored in an off-site location and could be accessed through a document scanning service which costs \$0.30 - \$0.40/document. With either approach, the division would need to create a management system to identify which records are located in each area and an inventory plan to manage record storage, retention, and destruction on schedule and prevent inappropriate and illegal access.

FISCAL IMPACT

The planning to address this recommendation can be accomplished with the special education staff identifying student records and the business office staff identifying division fiscal records that need immediate and timely access. Those records need to be separated from the non-essential records and should be placed into fire-proof file cabinets and stored in the existing vault. Fire-proof cabinets, if needed, are \$2,000 for four drawers, estimated at 20 cabinets for a total of \$40,000. The cost is shown in one year, but could be spread over several years. This work is estimated at 40-60 hours.

Non-essential records and those scheduled for destruction should be moved to a secure area in another building or could be housed by a contracted vendor, depending on the approach identified to best meet the division's needs. The cost for using division storage space would include any additional locks or security cameras. The cost for contracted space is based on the number of items to be stored at \$0.40/box/month. The work for this portion is dependent on the approach selected.

RECOMMENDATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Purchase 20 fireproof file cabinets for student records @ \$2,000.	(\$40,000)	\$0	\$0	\$0	\$0

2.D.b. BILINGUAL EDUCATION / ESL

In Botetourt County, the needs for bilingual education and ESL are growing slowly. As shown in **Exhibit 2-12**, there were 40 students in the ESL program in 2013-14 and the percent of minority students in the county nearly doubled in the three years, 2010-11 to 2013-14.

Exhibit 2-13 displays the ethnicity of the student body in BCPS and the peer divisions for the 2010-11 and 2013-14 school years. During both the 2010-11 and 2013-14 school years, BCPS's enrollment was primarily non-minority. Similarly, the peer divisions had a predominately non-minority enrollment. Only Accomack and Mecklenburg counties had minority majorities, and even these divisions were close to 50:50. For 2013-14, BCPS only had 2.5 percent African American enrollment, well below the peer division average of 23.2 percent. Over half of the divisions had African American enrollments larger than 20 percent, and other minority enrollment was greater than 10 percent in half of the peers.

EXHIBIT 2-13
BOTETOURT COUNTY PUBLIC SCHOOLS AND PEER DIVISIONS
STUDENT ETHNICITY PERCENTAGES, 2010-11 AND 2013-14

DIVISION	STUDENT DEMOGRAPHICS							
	2010-11				2013-14			
	WHITE	AFRICAN AMERICAN	OTHER	TOTAL MINORITY	WHITE	AFRICAN AMERICAN	OTHER	TOTAL MINORITY
Botetourt County	95	1	3	5	92	2	6	8
Accomack County	43	38	19	57	41	37	21	59
Caroline County	55	33	12	45	55	30	14	45
King George County	69	22	9	31	67	21	12	33
Mecklenburg County	49	45	6	51	49	44	7	51
Orange County	71	16	14	29	71	15	14	29
Powhatan County	86	8	6	14	87	7	6	13
Wythe County	92	5	3	8	92	5	4	8
Peer Average*	66	24	10	34	65	23	12	35

* Average does not include Botetourt County

Note: Percentages may not equal 100 percent due to rounding.

Source: Virginia Education Information System website, 2014.

The ESL program is under the supervision of one of the Instruction department Supervisors, as shown in **Exhibit 2-5**. Students receive their core instruction in the general education classroom with ESL teachers providing supplementary assistance. There are two full-time ESL teachers, one who works at both the elementary and the middle school and another at the high school level, and one part-time teacher. The program is based on the World Class Instructional Design and Assessment (WIDA) Consortium proficiency standards adopted by the Virginia Board of Education and the 2012 Amplification Standards. The program of instruction is a content-based ESL program that is delivered in pull-out settings. Services are concentrated at the elementary school with the largest population. There are also services provided at the middle and high schools where those students attend. There is no bi-lingual education in the division.

The division uses the small Title III budget (\$3,657) to support the needs of these learners at each site based on school improvement plans and assessment data. Funds are used for parent engagement, including workshops and training, as well as translation of materials and interpreting services at school events. They are also used to purchase supplemental reading and mathematics materials that provide heavy academic vocabulary instruction and employ a variety of visual aids and manipulatives. Funds are also used to purchase technology hardware, such as iPads, software, and apps to support the ESL students in acquiring content and academic language. Local funds are used to supplement the Title III budget to provide additional interpreting at parent-teacher conferences and to support the home visits conducted annually by program staff.

FINDING

The division has had difficulty attracting ESL and bi-lingual teachers. Site and district administrators indicated that the population was growing and the need would increase into the future.

There are no written plans to address the need for qualified teachers and bi-lingual support staff. Although teachers and administrators in the division acknowledge the growing need, there is no plan to address it.

RECOMMENDATION 2-10:

Create a short- and long-term plan to recruit and retain qualified bi-lingual and ESL teachers and support staff.

Although the division currently has a relatively small population and therefore small program in support of non-English speaking children and their families, the population is growing and the needs will continue to increase. The HR department should work with program staff to create short- and long-term plans for reaching out, recruiting, and retaining both professional and support staff.

FISCAL IMPACT

This recommendation can be accomplished through collaboration between the ESL staff and the HR director as part of **Recommendation 3-4**.

2.D.c. GIFTED AND TALENTED EDUCATION

The program for gifted and talented students includes support at all levels, K-12. The program is based on a board-approved five-year plan for services from 2012-17. The plan outlines referral and testing procedures as well as services planned for students in different grade level bands. Additionally, the plan outlines the professional development for both program staff and general education teachers.

The gifted program staff includes seven teachers who work at elementary schools, two teachers who work at the middle schools, and two teachers who work at the Technical Center and STEM-H Academy.

FINDING

There is no annual review and reporting regarding the success and needs of the gifted program. Documents provided for MGT included the plan and the curriculum and a list of names of members of the Gifted Advisory Committee. The list includes three dates, but there is no other information to indicate how often the group meets, how it is organized, what the group does, or how its work fits into other division planning.

The adopted gifted plan indicates that the gifted program will be evaluated annually, as described below:

Botetourt County Public Schools' Gifted Program undergoes an annual review to determine its effectiveness. The annual review addresses identification procedures, equitable representation of population, and student academic growth. Data sources for the analysis may include:

- ◆ Student, staff, and parent surveys
- ◆ Academic grades
- ◆ Student growth measures
- ◆ Division assessment results
- ◆ SOL results

- ◆ Classroom observations
- ◆ Referral results
- ◆ Parent feedback from Gifted Advisory

MGT reviewed information based on these planned activities to review program effectiveness. The division provided a one-page summary, *Update of Local Gifted Plan*, which identified the accomplishments of 2012-13 and listed the “Work in Progress.” The division provided a parent survey with 146 responses. Survey questions reviewed program offerings at elementary, middle and high school levels and provided opportunities for open-ended comments. Quantitative responses tended to be more positive than negative; qualitative responses ranged widely from concerns about program offerings in general to specific needs for individual children. There were no data from student or staff surveys, no information about classroom observations that had been conducted, no data from referral results, and no feedback from the Gifted Advisory Committee.

The Gifted Program lacks an annual report to the board or the community. Based on many comments in the parent survey, this is a successful program. However, without annual reporting to the division and the community, the success is unknown and the needs for improvement are not addressed.

RECOMMENDATION 2-11:

Develop and prepare an annual gifted program report for the board and the community.

The program staff should be regularly gathering evidence of program implementation and evidence of program impact, based on the adopted Gifted Plan. Using the already-identified list of data sources, staff could work with the Gifted Advisory Committee to establish annual targets or data points and then monitor and report progress to the board and community.

FISCAL IMPACT

This recommendation can be accomplished by the Instruction department staff member assigned responsibility for the Gifted Program and should take 6-10 hours to complete annually. There is already a Gifted Advisory Committee that appears to have broad-based membership. This committee could be charged with setting goals, reviewing data about progress, and approving an annual report that includes evidence of implementation and impact, outlines new or continuing needs, including budget, and proposes activities for the following year. This report should be part of the annual Instruction department review and planning process.

3.0 HUMAN RESOURCES

This chapter presents the findings, commendations, and recommendations for the Botetourt County Public Schools (BCPS) regarding the human resources (HR) activities conducted by the division.

The sections of the chapter include:

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

OVERVIEW

Human resources administration comprises processes that are planned and implemented to establish an effective system of human resources, and to foster an organizational climate that encourages the accomplishment of educational goals and meets the needs of school board employees. Key human resource processes include recruiting, selecting, training, evaluating, and retaining staff.

Human resources is a critical function within any school division. Typically, more than 80 percent of the overall budget is spent on people – teachers, administrators, and support staff – and recruiting, hiring, and supporting those people are important tasks to ensure that the division is accomplishing its mission of supporting student learning.

In Botetourt County Public Schools, the human resources department supports human resource activities as well as payroll activities. The staff includes a director who supervises both areas, an administrative assistant to the director, a payroll specialist and two clerical staff who support various portions of both human resources and payroll activities. The conditions in Botetourt County of importance to this review include:

- ♦ Stability in the human resource department staff over the last seven years.
- ♦ The new Virginia Retirement System (VRS) structure that created a “hybrid” system in addition to the existing structure.

CHAPTER SUMMARY

In preparing this chapter, MGT of America, Inc., reviewed extensive documents provided by the division, and interviewed all human resources staff, school board members, principals, and teachers. Additionally, data were collected through the Virginia Department of Education website, the BCPS website, the Auditor of Public Accounts website, and the Virginia State Statutes.

The following commendations are included in the section:

- | | |
|-------------------------|--|
| Commendation 3-A | The HR department utilizes best practices such as cross training. |
| Commendation 3-B | The implementation of the “self-serve” section for employees provides outstanding service and saves employee time and division resources. |
| Commendation 3-C | Early Retiree Incentive Program revisions have increased efficiency and effectiveness of this resource while reducing costs (also referred to as the “Early Retirement Incentive Program”). |
| Commendation 3-D | Online software tools (AESOP and SchoolStream) are effective and efficient. |

The following recommendations are included in the section:

- | | |
|---------------------------|--|
| Recommendation 3-1 | Move the payroll function and the position of payroll supervisor to the Finance Department and provide cross training with other finance department staff. |
| Recommendation 3-2 | Develop a plan to create and approve job descriptions. |
| Recommendation 3-3 | Develop a human resources procedures manual that complements human resources policies. |
| Recommendation 3-4 | Develop plans for recruiting staff, especially hard to staff programs – special education and CTE – and Hispanic and/or Spanish-speaking, to work in Botetourt County in both professional and support staff positions. |
| Recommendation 3-5 | Develop a series of HR-provided professional development programs that are provided annually to all staff groups. |
| Recommendation 3-6 | Conduct a wage and staffing review with both peer and neighboring divisions at least every two years. |

3.A. ORGANIZATION AND MANAGEMENT

The Botetourt County Public Schools (BCPS) has a human resources (HR) department which is organized to provide support for the hiring, support, and retention of all employees, both professional and classified. The department supports not only the various human resource activities, but also the payroll functions for the division. The HR department includes six staff members: HR director, administrative assistant, payroll supervisor, two HR department clerks who support both HR activities and payroll, and the main office receptionist.

Information gained from interviews during the onsite visit indicated that the department is well-thought of by both staff and administrators. The department is perceived as helpful and available to assist employees.

FINDING

The HR department operates with a small staff that work to manage personnel issues both proactively and as needed. The Director is involved in the hiring of all staff, from initial interviews through presentation to the board for approval. The administrative assistant is relatively new to the position. Her work supports all department functions, including setting up new employees for initial processing with background checks. The two clerks support the substitute system, Aesop, monitor teacher licensure, leave without pay, and benefits.

The process for hiring and paying staff needs to be carefully managed and supported. In BCPS, the HR Director effectively manages the entire hiring process. She is involved in the screening, selection, interviews, and hiring decisions. The HR staff manage the intake process, ensuring that new employees have all the required documentation for their role, including background checks, medical checks, certification or other licensure, etc. These are all HR functions that are appropriately managed and implemented by department staff.

COMMENDATION 3-A:

The HR department utilizes best practices such as cross training.

The two clerks are cross trained, which allows for effective performance of required functions when the other clerk is absent.

FINDING

The volume of work conducted by the payroll supervisor exceeds staffing standards and the HR department does not have adequate resources to support the payroll function.

The payroll supervisor manages the payroll process, with some limited assistance from one of the HR clerks, and connection to the finance department. Information from staff interviews and observations during the onsite visit demonstrated that responsibilities for each person were clear and the work was being accomplished efficiently for the human resources activities, but less so for the payroll activities.

Payroll functions are associated with both finance and human resource areas. Which department payroll falls under is based on the company's internal structure and management choices. Because payroll is a financial function, most accounting departments prefer to see payroll administration within the accounting department. But some human resources departments handle payroll processing within their department and have accounting cut the checks. Structuring a payroll department depends on the overall size of the company and the amount of employees the company keeps on staff. The payroll department calculates payroll based upon submitted time cards or regular salary and makes adjustments for overtime, vacation and sick pay or added bonuses and commissions. The payroll staff must calculate retirement benefits, medical insurance payments and other benefits that come out of the employee's paycheck.

According to the Association of School Business Officials, International (ASBO), payroll standards are defined in the HR Management area under personnel and benefits administration (See: http://asbointl.org/asbo/media/documents/Resources/ASBO_Professional_Standards.pdf). The ASBO

standards make clear that HR needs to coordinate the management of personnel to provide “seamless integration with payroll and other functions.” ASBO does not provide a recommendation about whether payroll should be located in HR or finance, but they make it clear that “seamless integration” is needed.

For BCPS, the HR Director oversees the payroll supervisor. Some work tasks connect to the finance department, but the position is disconnected and has no back-up should the payroll supervisor be absent. The payroll supervisor is currently processing nearly 800 employees each month, including all benefits and leave requests. Standard staffing ratios reviewed by MGT ranged from 1:250 employees to 1:500 employees. (See survey from Willis Company in 2009: <http://smallbusiness.chron.com/payroll-department-size-20786.html>.) Discussions with staff during the onsite visit identified concerns with the volume of work during initial payroll set up at the start of each year and issues regarding back-up staff. These concerns are well supported based on staffing standards.

No other HR department staff member is trained to provide continuity of payroll services. The other HR staff do not have the time or the payroll and financial background training or knowledge to cross train for the payroll work. There is also no written description of payroll procedures to support a new staff person moving into the position.

RECOMMENDATION 3-1:

Move the payroll function and the position of payroll supervisor to the Finance Department and provide cross training with other finance department staff. Develop desk procedures for the payroll position.

The division needs to implement this recommendation as soon as possible to ensure that this critical function is supported and continuously available. The finance and HR departments should develop a plan to support the training of the finance staff to support payroll functions. It is recommended that the payroll supervisor and the other finance department staff process payroll together for several months and then develop some rotation to ensure that both are able to handle the work efficiently. The location of the current staff could be maintained, as needed, but the work needs to transition immediately.

FISCAL IMPACT

This recommendation can be implemented by the Directors of Human Resources and Financial Services, the payroll supervisor, and one finance department staff. The need for additional payroll staff should be considered only after the transition to the finance department has been in place for several months. The number of staff needed to manage payroll is partially dependent on the amount of automation in place. With the use of MUNIS, the additional support and the cross training of finance staff, increased payroll staff may not be needed. However, as is true for all staffing decisions, the division should review the staffing for payroll on an annual basis and as additional programs or activities are considered including changes in benefit packages.

FINDING

The HR department has no job descriptions for any of its positions. HR positions are identified by title on an Excel spreadsheet. The division as a whole has no comprehensive set of job descriptions. There are a few job descriptions that have been recently created, mostly based on a need to advertise for position vacancies.

Job descriptions are useful for all employees so they know what is expected of them and how they will be evaluated. Job descriptions can also be of value to employers. Creating a job description often

results in a thought process that helps determine how critical the job is, how this particular job relates to others and identifies the characteristics needed by a new employee filling the role.

A job description typically outlines the necessary skills, training and education needed by a potential employee. It will spell out duties and responsibilities of the job. Once a job description is prepared, it can serve a basis for interviewing candidates, orienting a new employee and finally in the evaluation of job performance. Using job descriptions is part of good management.

BCPS has been creating job descriptions when they are needed. MGT reviewed job descriptions for custodians, bus drivers, and cafeteria staff, but no other job descriptions were available.

RECOMMENDATION 3-2:

Develop a plan to create and approve job descriptions.

The division should plan to develop and adopt job descriptions for each position to assist in the hiring and evaluation of staff. The division could ask instructional administration staff and operations managers to develop these descriptions or they could access other school divisions or states and use their documents as starting points.

For example, Newport News, VA school division has a complete set of job descriptions on their website: <http://sbo.nn.k12.va.us/hr/jobs/descriptions.html>. The Tulsa, OK School District has made their job descriptions available: http://www.tulsaschools.org/5_Careers/job_descriptions_main.asp. The state of North Carolina has published job descriptions for education that could be adapted for use in Virginia. <http://www.ncpublicschools.org/work4ncschools/employment/jobdescrip/>.

FISCAL IMPACT

This recommendation can be implemented over the next 24 months by the HR Director. Using existing staff in all departments and/or job descriptions from other resources, such as those mentioned above, this task is estimated at 40 hours.

3.B. POLICIES AND PROCEDURES

The establishment of policies and procedures that set forth obligations, standards of behavior, and document disciplinary procedures, is the industry standard for human resource management. Human resources policies and procedures in a school division allow it to be clear with employees regarding such things as the fundamental knowledge of employment in the division, the expectations from the school board, and the expectations of its employees. Human resources policies and procedures define acceptable and unacceptable behaviors and the consequences of those behaviors.

The establishment of policies and procedures helps the school division demonstrate that it meets requirements for diversity, ethics and training, as well as its commitments extending from employee relation to regulations and school board governance. Well-developed school board policies in the human resources section of the policy manual, supported by specific procedures, are not only very effective in building a school division culture that is conducive to work, but also important in building one that effectively supports teaching and learning.

FINDING

BCPS has developed a “self-serve” section where employees can gain access to a variety of support materials and data, including access to employment and payroll forms and information. Since all employees are now enrolled in automatic payroll deposits and no physical checks are printed, employees who need a copy of their check can access this service at any time. This self-serve feature has not only significantly reduced the staff time previously spent accessing and providing this service, but has also positively improved employee access to these resources.

COMMENDATION 3-A:

The implementation of the “self-serve” website section for employees provides outstanding service and saves employees time and division resources.

FINDING

Virginia has created a program to allow retired employees an opportunity to return to work in a school division as substitutes under the Retirement Service Program. The program in BCPS, described under board policy GCBC-BR4, was adopted in April 1987 and has been amended several times over the years, most recently in September 2014.

The policy describes the eligibility, compensation, application process, and responsibilities of program participants. The original policy allowed retirees to earn up to 20 percent of their annual salary for the next seven years following retirement. That policy was also open to any retiree, including the superintendent, and regardless of their recent evaluations. The recently adopted policy makes the superintendent ineligible, requires length of service in Botetourt and the Virginia Retirement System, and only allows staff to earn up to 20 days per year at their last “per diem” rate for up to five years.

Many school divisions struggle to find skilled substitutes to fill positions and typically do not have anyone qualified to substitute for a school principal. Allowing skillful, experienced retirees who meet identified criteria to provide these services is a “win-win” for everyone, especially when the costs are in-line with the cost for other substitutes and the program is monitored by the HR department. Participants in the program are able to see and “claim” substitute positions from Aesop before other substitutes and are often highly requested by teachers. Retired principals serve as substitutes for administrators who are attending training or out on extended leave.

COMMENDATION 3-B:

BCPS has increased the efficiency and effectiveness of their substitute employees while reducing costs through the Botetourt Retirement Service Program (also referred to as the “Early Retirement Incentive Program”).

FINDING

During onsite interviews, staff described multi-step, multi-person procedures for documenting new hires. The steps described were not identically described by the staff charged with that work. MGT found no evidence of an HR procedures manual to complement the personnel policies.

Divisions need clearly defined policies and procedures to ensure that both the division and the employees are clear about how work is to be done. The lack of clear procedures describing how employee salaries are established puts the division at risk of appearing arbitrary or capricious. HR staff need to have their procedural work outlined sequentially to describe tasks that are daily, weekly,

annual, etc. Without these steps documented, the division loses valuable time and efficiency should an employee leave and take that “corporate knowledge.”

RECOMMENDATION 3-3:

Develop a human resources procedures manual that complements human resources policies.

This recommendation could be accomplished by creating an internal procedures manual for the HR department. The procedures should include all regularly scheduled tasks for the department.

In addition, the division may want to consider adding a specific superintendent regulation (-SR) to the board policies. The regulation could define the process for placing newly hired support employees on the salary schedule, including review regarding the potential employee’s previous work, training, etc. and a review of existing staff to ensure that employees are provided equal pay for similar work.

FISCAL IMPACT

This recommendation can be implemented by the Director of Human Resources and HR department staff. Staff should be asked to document their regular tasks in order to develop the procedures manual. Given the small staff and the workload, this process could extend over 12-15 months.

3.C. RECRUITMENT, HIRING, AND RETENTION

The business of recruiting high-quality teachers is very competitive. With the advent of federal standards under *No Child Left Behind* and teachers recognizing that they are in demand, they look for places to work that offer both support mechanisms to help them successfully meet the challenges of the classroom and other benefits, such as financial support to continue their education, competitive salaries, and health and retirement benefits.

Attracting teacher candidates to a smaller or rural school division presents a unique set of challenges, but also offers positive opportunities that should be emphasized in all recruitment activities. Researchers expressed such opportunities as they studied effective recruitment strategies for rural school divisions. They suggested:

“To recruit rural teachers, administrators must target candidates with rural backgrounds or with personal characteristics or educational experiences that predispose them to live in rural areas. The emphasis on background and experience is crucial for racially or culturally distinct communities. Selling points in recruitment efforts are the benefits of teaching in rural school, such as fewer discipline problems, less red tape, more personal contact, greater chance for leadership, small class size, individualized instruction, greater student and parent participation, and greater teacher impact on decision making.”²

Botetourt County is a large geographic area located in the southwestern side of the state in the Roanoke Valley. It is close to the city of Roanoke and close to Virginia Polytechnic Institute and State University (Virginia Tech). New teachers come from across the state, but many of them are returning BCPS students coming back to the county to teach. BCPS is in competition for support staff with neighboring counties and the city of Roanoke, since they are within easy driving distance. BCPS is in competition

² *ERIC Digest* # ED438152, 1999 ERIC Clearinghouse on Rural Education and Small Schools, Charleston, WV

with other divisions across the state for professional staff. Many divisions offer similar small town, rural environments.

FINDING

BCPS uses online software tools to support HR functions for hiring of new staff and managing substitutes for staff absences. Interview data with staff and administrators showed significant support for both systems.

The SchoolStream® (see <http://www.ssk12.com/>) online application system is managed by HR staff. It is an efficient and effective approach to the application process. Several new staff described it as, “so easy and quick.” The system allows all applicant materials to be electronic, reducing paperwork in the HR office and for the candidates.

The Aesop® online substitute system is managed by two HR staff who upload new substitutes into the system, monitor the use of the retirees, and review the monthly substitute records signed by each principal and sent to HR for payroll processing. Despite early concerns about possible staff misuse of the system, including concerns that sick leave requests would increase. MGT found no evidence to support such concerns.

COMMENDATION 3-C

Online software tools (Aesop and SchoolStream) are effective and efficient.

FINDING

BCPS has no budget for recruiting, makes no recruiting presentations, currently has many applicants for each position, and is able to hire experienced, qualified staff for all or most positions. As reported during the onsite visitation, the HR department has had difficulty finding staff to fill some Career and Technical and special education positions.

As shown in **Exhibit 3-1**, of the seventy-eight (78) BCPS staff that were reported leaving on the 2014-15 Master Tracking document, the largest group resigned (35 percent), and the next largest group retired (21 percent).

EXHIBIT 3-1
BOTETOURT COUNTY MASTER TRACKING 2014-15
N= 78

CATEGORY	NUMBER / %	
Resignation	27	35%
Retirement	16	21%
Transfer	12	15%
Reassignment	11	14%
Released	3	4%
Licensure	2	3%
Non-Renewal	2	3%
Extended	1	1%

Source: BCPS data, compiled by MGT, 2014.

These staff leaving data indicate that there will be a need for staff recruiting. It is clear that student demographics are changing in Botetourt and there is a small, but growing, Hispanic community. Data also includes a continuing need for high quality special education and career and technical staff into the future.

RECOMMENDATION 3-4

Develop plans for recruiting staff, especially hard to staff programs – special education and CTE – and Hispanic and/or Spanish-speaking, to work in Botetourt County in both professional and support staff positions.

Botetourt County needs to conduct outreach to greater Virginia and other areas to attract and recruit high quality staff for both professional and support positions. Although the need is relatively small at the moment, BCPS should develop a plan to define activities that could be implemented in the future.

FISCAL IMPACT

This recommendation can be implemented within existing resources in Years 1 and perhaps 2, but recruiting activities may need to be enhanced in future years, depending on staffing needs. Time and travel expenses to attend local job fairs are already budgeted and could be used in Years 1 and 2. The estimated costs are based on travel to career or job fairs in the region for 1-2 people per year. The division will need to review comprehensive data, including retirements, applicants, needed skillsets, and other issues in order to determine recruiting activities or locations.

RECOMMENDATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Allocate budget for recruiting hard to staff positions	\$0	\$0	(\$5,000)	(\$5,000)	(\$5,000)

3.D. STAFF DEVELOPMENT

Schools exist to facilitate student learning. Ongoing professional staff development for all personnel is essential to enhancing improved teaching and student learning. Professional staff development should be a continuous, developmental process ultimately based on staff needs. The VDOE requires all full-time employees of school divisions to receive 180 professional development points in a five-year period³.

Professional development for instructional and administrative personnel can have a profound impact on student achievement. Although this research is dated, recent reviews have pointed to similar data. Some characteristics of effective professional development, as identified by the Council for School Performance (1998)⁴ are:

- ◆ Long-term programs are embedded throughout the school year.
- ◆ Program offerings provide active learning activities such as demonstration, practice, and feedback.

³ http://www.doe.virginia.gov/teaching/licensure/renewal_glance.pdf

⁴ Council for School Performance. (1998). *Staff development and student achievement: Making the connection in Georgia schools*. Atlanta: School of Policy Studies, Georgia State University.

- ◆ Collaborative study of student learning via professional learning communities is an integral part of the program.
- ◆ Administrative support for continuing collaboration to improve teaching and learning is apparent.

Professional development programs should be designed and implemented for one of four major purposes:

- ◆ Awareness/Exploration: Describes professional development activities that address those first stages of concern/interest/understanding regarding an innovation.
- ◆ Skill-Building Activities: Describes activities designed to help participants build and apply specific instructional skills; generally, these activities are assumed to include follow-up coaching and support.
- ◆ Program Improvement: Improved performance requires both individual and team development coupled with systematic change. Program improvement occurs when individuals or teams engage in a continuous, collaborative, problem-solving process. The process involves reflection and refocusing instructional practice to improve student learning.
- ◆ Strategic Planning/Systems: Effective professional development and change initiatives must acknowledge that complex, interdependent relationships exist among the various aspects of an educational system. All professional development activities must share common elements; a comprehensive approach to change that facilitates effective operation and integration of all components of the system.

In Botetourt County, most of the professional development activities are provided and managed by the Instruction department. The HR department manages the tracking of the required hours to maintain certification requirements, as defined by VDOE.

FINDING

The HR department provides intake training for staff. The initial staff training includes policies and procedures, access to materials, and support systems, but does not include career planning, retirement, or other HR areas.

RECOMMENDATION 3-5

Develop a series of HR-provided professional development programs that are provided annually to all staff groups.

The HR department has information that could be useful to employee groups, including employee expectations/requirements, retirement planning, benefit planning, etc. The division has identified professional development days on their calendar and has created online learning opportunities for staff. The HR department could develop a series of brief, informational training sessions on a variety of HR-related topics to be delivered to each staff group on an annual basis. Topics could be identified by the department or by each staff group.

FISCAL IMPACT

This recommendation can be implemented by the Director of HR and HR staff over 10-12 months. The HR department could identify any areas for mandatory, all staff training and develop those programs

first. Further staff development programs should be developed to address either mandatory or discretionary training areas.

3.E. COMPENSATION AND CLASSIFICATION SYSTEMS

One of the keys to being competitive in recruitment efforts is salary. According to a research review published by the Education Commission of the States (ECS) 2008⁵, salary increases and financial incentives can play significant roles in teacher recruitment and retention. It also found evidence that the relative difference between salary levels in neighboring school divisions is more important to teachers than absolute salary or even the salary differences in their own division. Having an attractive salary and incentives is the deciding factor for accepting a teaching position with a school division.

There are no unions in Virginia and therefore no union contracts or union-negotiated salaries. However, each division creates a salary schedule and a system for compensation.

The BCPS policy and procedure manual includes section GC: Professional Staff and Policy GCBA: Staff Salary Schedules. It also includes section GD: Support Staff, however there is no matching subsection for support staff salary schedules.

Based on interviews with professional, support staff, and administrators conducted during the onsite visit, there is a lack of clarity about salary placement for support staff. The division provided MGT copies of the placement for current staff, including the number of contract months, hours, and days and a chart showing the contract amount for each position based on a salary step. **Exhibit 3-2** shows an excerpt from the document provided MGT with the described position information.

EXHIBIT 3-2
BOTETOURT COUNTY PUBLIC SCHOOLS
POSITION AND GRADE ASSIGNMENTS
2014-15

Administration		
SB Admin: Board Clerk	12 months, 8 hours, 260 days	SBAD BDCL 260/8 110
SB Admin: Budget/Finance	12 months, 8 hours, 260 days	SBAD BUFI 260/8 111
SB Admin: Payroll/Benefits	12 months, 8 hours, 260 days	SBAD PABE 260/8 112
SB Admin Asst: Accounts Payable	12 months, 8 hours, 260 days	SBAA AP 260/8 120
SB Admin Asst: HR/LI	12 months, 8 hours, 260 days	SBAA HRLI 260/8 121
SB Admin Asst: Payroll/Benefits	12 months, 8 hours, 260 days	SBAA PABE 260/8 122
SB Assistant: Human Resources	12 months, 8 hours, 260 days	SBAS HR 260/8 130

Source: BCPS HR Department. Compiled by MGT, 2014.

⁵ Education Commission of the States. *Improving Teacher Quality*. 2008. Other studies provide evidence that working conditions may ultimately be more important to teachers than compensation.

From the documents provided, it is clear that staff salaries and placement on the schedule is well-defined for existing support staff. What is not clear is how newly hired support staff are placed onto these schedules relative to the existing staff. Unlike the procedures defined for professional staff, MGT was not provided any documentation that describes the process for placement of support staff.

FINDING

Recruiting and hiring of staff is often seen as the most important work done by the HR department. The work is made easier when people want to come to the area or have incentives to come to the area. Incentives to come to the area could include various items, including salaries, small class sizes, support from administration, etc.

Exhibit 2-7 of this report displays the pupil-to-staff ratios for BCPS and the peer divisions for the 2012-13 school year. BCPS's pupil-to-teacher ratio, 13.13 to 1, was higher than the peer average, 12.9 to 1, by 0.2 students. This means that the "average" BCPS teacher had slightly larger class sizes than the "average" teacher in the peer divisions. BCPS's site administrative staff supported fewer pupils (274.4) than the peer average (289.8), which indicates that BCPS dedicated fewer positions to administrative staff, relative to its size, than the peer divisions. However, the pupil-to-teacher ratio for the peer average was brought down by Accomack County; Accomack has a ratio of about 11 students to one teacher. Excluding Accomack, Botetourt had the second lowest ratio of students to teachers in the peer group.

BCPS's site administrative staff supported fewer pupils (274.4) than the peer average (289.8), which indicates that BCPS administrators typically need to know and deal with fewer students than administrators in the peer divisions.

Exhibit 3-3 displays the number of instructional personnel and the average salaries for BCPS and the peer divisions for the 2011-12 and 2012-13 school years. Data for this exhibit were reported by divisions to the Virginia Department of Education, with the last available data from 2012-13.

BCPS had the second highest number of instructional personnel among the peer divisions for both the 2011-12 and the 2012-13 school years. In 2012-13, the average salary for BCPS was a little over \$1,000 more than 2011-12. The BCPS average teacher salary was nearly \$3,000, or 7 percent, above the average teacher salary for the comparison divisions in 2012-13. Many comparison divisions experienced a reduction in the number of instructional personnel, as well as an increase in the average teacher salary, as compared to the previous year.

Although BCPS may be in competition for professional staff with divisions across the state, they are also at risk of losing quality professional staff if county salaries are not competitive with other, neighboring divisions. As shown in **Exhibit 3-3**, in 2012-13, Roanoke County's average instructional salary was higher than that in BCPS. The salary average for Roanoke City was more in line with the peer average.

EXHIBIT 3-3
 BOTETOURT COUNTY SCHOOLS AND PEER DIVISIONS
 FULL-TIME EQUIVALENT (FTE) INSTRUCTIONAL PERSONNEL AND AVERAGE SALARY,
 2011-12 AND 2012-13

DIVISION	2011-12		2012-13	
	NUMBER OF FTE INSTRUCTIONAL PERSONNEL	AVERAGE SALARY	NUMBER OF FTE INSTRUCTIONAL PERSONNEL	AVERAGE SALARY
Botetourt County	436.39	\$49,186	424.17	\$50,467
Accomack County	491.82	\$40,017	493.94	\$41,782
Caroline County	332.35	\$43,725	300.24	\$50,826
King George County	316.25	\$48,400	328.00	\$46,625
Mecklenburg County	352.00	\$49,122	399.75	\$43,539
Orange County	396.04	\$46,807	384.56	\$50,349
Powhatan County	354.55	\$48,899	347.70	\$51,014
Wythe County	357.79	\$46,289	353.40	\$48,554
Peer Average	371.54	\$46,180	372.51	\$47,527
Roanoke City				\$47,362
Roanoke County				\$50,885

Note: Data extracted for 2012-13 because that is the last year data was available on the Virginia Department of Education website.

Source: Virginia Department of Education, 2014.

No wage comparison or staff salary reviews conducted by the division were available for review by the onsite team. The data provided did not include any analysis of the relative position of BCPS compared to peer or local comparison divisions. It is important for school divisions to understand their competition relative to like peer groups and neighboring divisions so that they can develop recruiting plans and salary strategies and attract and retain quality staff.

RECOMMENDATION 3-6:

Conduct a wage and staffing review with both peer and neighboring divisions at least every two years.

The division should gather annual wage and salary data for the peer divisions and for local competition in order to understand how to best position the division to recruit and retain quality staff. At a minimum, the divisions needs to understand both starting salary data and any supplements or enticements being offered by peers and neighboring divisions.

FISCAL IMPACT

This recommendation can be implemented by the Director of Human Resources biannually using state data. It is estimated to take 10-12 hours.

4.0 FACILITIES USE AND MANAGEMENT

This chapter presents the findings, commendations, and recommendations for the facilities use and management functions of Botetourt County Public Schools (BCPS).

The sections of the chapter include:

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

OVERVIEW

Facilities use and management includes the planning, construction, maintenance, cleaning, and energy efficient operation of all facilities in the division. More specifically, this area covers the following:

- ◆ Planning and design of schools based on the educational programs and the facility standards established by the division;
- ◆ Routinely assessing the maintenance needs of the facilities and implementing maintenance procedures to ensure the proper operation of those facilities;
- ◆ Oversight of the training of custodians and ordering of cleaning supplies;
- ◆ Managing energy use to ensure efficient operation of the facilities.

BCPS operates the facilities listed **Exhibit 4-1**.

EXHIBIT 4-1
BOTETOURT COUNTY PUBLIC SCHOOLS
DIVISION FACILITIES
2014-15

FACILITY NAME	ACREAGE	AREA GROSS SQUARE FEET
<i>Elementary Schools</i>		
Breckinridge	15.51	52,478
Buchanan	20.00	54,366
Cloverdale	18.03	45,304
Colonial	10.36	47,256
Eagle Rock	30.00	45,000
Greenfield	33.28	74,663
Troutville	20.00	56,074
Total ES	147.18	375,141
<i>Middle Schools</i>		
Central Area Middle	27.80	79,000
Read Mountain Middle	22.52	102,000
Total MS	50.32	181,000
<i>High Schools</i>		
James River High	32.09	133,203
Lord Botetourt High	31.33	152,306
Botetourt Technical Education Center	10.00	52,600
Total	73.42	338,109
<i>Other</i>		
Administration Building	7.50	9,320
Bus Garage		11,248
Maintenance Shop		2,400
Total	7.50	22,968
Grand Total	278.42	917,218

Source: Botetourt County Public Schools, 2014.

CHAPTER SUMMARY

In preparing this section, MGT of America, Inc., reviewed extensive documents provided by the division, interviewed division staff directly involved with facility use and management functions, and visited all of the division's building sites. Additionally, data were collected through the Virginia Department of Education website, the BCPS website, the Auditor of Public Accounts website, and the Virginia State Statutes.

The following commendations are included in the section:

Commendation 4-A	The organization of the maintenance crews increases efficiency, effectiveness and a positive work culture.
Commendation 4-B	Facility user fees are based on actual costs to the division.
Commendation 4-C	BCPS and Botetourt County are working cooperatively to share resources.
Commendation 4-D	BCPS maintains consistent and reasonable costs for custodial supplies across all schools.
Commendation 4-E	BCPS maintains clean schools while staffing custodial positions at or under the best practice.
Commendation 4-F	BCPS has implemented effective energy management strategies and has installed energy efficient equipment.

The following recommendations are included in the section:

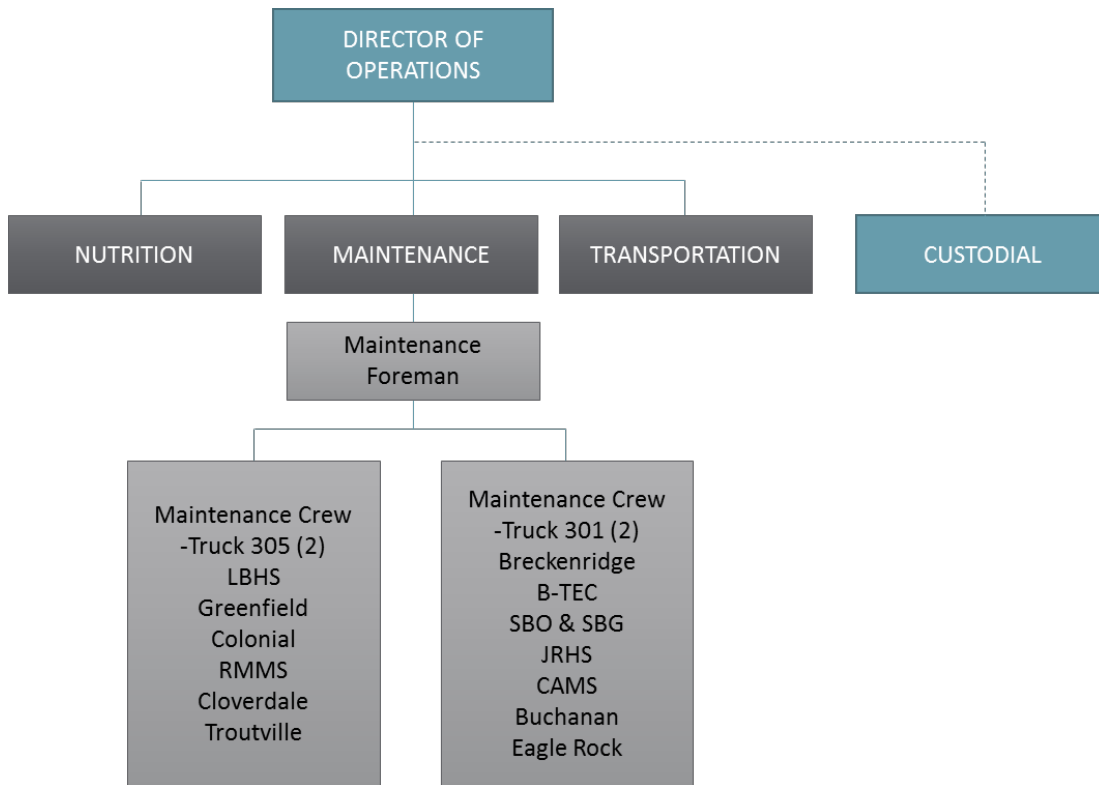
Recommendation 4-1	Use multiple methodologies to project enrollments.
Recommendation 4-2	Examine closing 1-2 elementary schools as part of a long-range facilities master plan strategy.
Recommendation 4-3	Write and implement a policy requiring the development of a ten-year facility master plan.
Recommendation 4-4	Purchase and utilize work order software to track work order completion rate and worker productivity.
Recommendation 4-5	Determine the productivity level of the maintenance workers and then staff the maintenance department at a level to allow the implementation of work order completion goals and a preventive maintenance program.
Recommendation 4-6	Implement all recommendations contained in the <i>2012 Energy Conservation and Efficiency Study</i>.

4.A. ORGANIZATION AND MANAGEMENT

The facility use and management functions for BCPS are organized under the Director of Operations and include planning, design, construction, maintenance, cleaning, and energy management. The responsibility for the planning, design, and construction functions are shared between the Superintendent, the Director of Administration and Finance, and the Director of Operations, with the Superintendent overseeing areas like site selection and prioritization of projects, the Director of Administration being responsible for financial and demographic planning, and the Director of Operations acting as the Clerk of the Works for major design and construction projects.

The Director of Operations directly oversees the maintenance, cleaning, and energy management of the division's facilities. The organizational chart for these functions is presented in **Exhibit 4-2**.

EXHIBIT 4-2
BOTETOURT COUNTY PUBLIC SCHOOLS
FACILITIES USE AND MANAGEMENT – ORGANIZATION CHART
2014-15



Source: Botetourt County Public Schools, 2014.

The responsibilities for each Facilities Use and Management position are:

Director of Operations

- ◆ Oversees all areas of maintenance
- ◆ Develops Capital Improvements Projects (CIP) document
- ◆ Acts as Clerk of the Works on all construction projects
- ◆ Trains and assists in hiring of custodians
- ◆ Oversees Transportation and Nutrition departments

Maintenance Foreman

- ◆ Prioritizes and assigns daily work assignments for maintenance crews
- ◆ Orders tools and materials for maintenance crews

- ◆ Provides energy management for all buildings

Maintenance Crew

- ◆ Perform maintenance work orders
- ◆ Operates maintenance equipment
- ◆ Applies pesticide
- ◆ Performs asbestos abatement
- ◆ Drives buses as needed

The four maintenance workers are divided into two crews, each crew sharing one truck. Each crew is assigned responsibility for half of the facilities, with one crew being focused on the north end of the division and the other crew being focused on the south end.

FINDING

The maintenance crews are organized geographically to increase efficiency. Each of the two maintenance crews has responsibility for routine work orders for half of the division's facilities based on location; one crew covers the south end and one covers the north end. Each crew responds to emergency work orders as directed by the Maintenance Forman or Director of Operations.

By assigning the maintenance crews to the facilities in a geographical location, the division minimizes travel times for the maintenance workers and thereby increases efficiency. In addition, the maintenance workers are able to become familiar with the facilities in their area, and be more effective when diagnosing a maintenance issue and implementing the repair solution. By working at the same schools on a regular basis, maintenance workers have a positive working relationship with the school staff which helps create a "team" culture and increase accountability.

COMMENDATION 4-A:

The organization of the maintenance crews increases efficiency, effectiveness and a positive work culture.

4.B. PLANS, POLICIES AND PROCEDURES

School buildings should support the educational goals of the division and enhance the educational experience of students. High performing school facilities require effective board policies, data driven and inclusive planning, and clearly defined procedures.

PLANNING

The division has not had any significant construction projects since 2008 when it renovated James River High School. The original scope of work was for the addition of a new gymnasium, but after a design process that included community input, the scope was widened to include other areas for a more comprehensive project.

Other projects currently in planning or being contemplated include a new science wing for Lord Botetourt High School, which has been designed, and a new elementary school to replace Colonial Elementary, for which a site has been purchased. While the division does not have any formally stated planning procedures, the planning for the above projects did involve staff and to some degree the community. The projects were need-based either on the condition of the buildings or on the number of students that needed to be served.

POLICIES

The BCPS School Board has established policies regarding the use and management of facilities. The board policies include;

- ◆ Facilities Development
- ◆ Facilities Planning
- ◆ Playground Equipment
- ◆ Installation of Playground Equipment
- ◆ Educational Facilities Specification
- ◆ Energy Conserving Construction
- ◆ Energy Management
- ◆ Accommodation for the Disabled
- ◆ Construction Planning
- ◆ Public Dedication of New Facilities
- ◆ School Names
- ◆ Dedicating Areas of School Facilities or Grounds
- ◆ Retirement of Facilities
- ◆ Buildings and Grounds Inspection

PROCEDURES

The division has established procedures to implement some of the policies regarding facilities use and management. The policy regarding “Buildings and Grounds Inspection” requires inspections of the facilities at regular intervals, and the Director of Operations performs these inspections on an annual basis. The results of these inspections are used to develop a five-year Capital Improvements Plan (CIP) which is required by the policy on “Facility Planning”. The “Facility Planning” policy also requires the development of five-year enrollment projections under the direction of the superintendent.

FINDING

BCPS has established a policy regarding the fees charged for the use of school facilities by non-division entities which is based on actual costs. Each year the division’s on-call architectural/engineering (AE) firm updates the overhead costs associated with the operation of the division’s buildings. This analysis takes into account the cost of utilities, wear and tear on the facilities, insurance, and staffing. This analysis becomes the basis for fees charged to outside groups for using school facilities.

Exhibit 4-3 lists the fee schedule for use of facilities. Category I users are groups associated with schools or local government, including student groups, county parks and recreation users, fire, police and rescue groups. There is no fee for Category I. Category II users include other Botetourt County users, not specifically identified in Category I. Category III users include groups charging admission, fees, or accepting donations.

EXHIBIT 4-3
BOTETOURT COUNTY PUBLIC SCHOOLS
FACILITY USE FEE SCHEDULE
2014

AREA OF FACILITY	CATEGORY II	CATEGORY III
Forum/Auditorium	\$150	\$300
Cafeteria w/o Kitchen Use	\$125	\$225
Cafeteria w/ Kitchen Use	\$150	\$300
Auxiliary Gym	\$125	\$225
Main Gym	\$150	\$300
Classroom*	\$30	\$60*
Ball Field	\$75	\$150
Track	\$75	\$150

Source: Botetourt County Public Schools, 2014.

COMMENDATION 4-B:

Facility user fees are based on actual costs to the division.

FINDING

BCPS develops five-year enrollment projections on an annual basis using a modified cohort survival methodology. These projections of Average Daily Membership (ADM) are used to calculate projected State revenue. The division uses data from the following sources to estimate the school-age population.

- ◆ Weldon Cooper Center for Public Service (<http://www.coopercenter.org/demographics/school-age-population-estimates>)
- ◆ Comparison of kindergarten registration for August enrollment that takes place in February (da.10c)
- ◆ Comparison of live birth data from the Virginia Department of Health (VDH) to kindergarten enrollment five years later (da.10d)
- ◆ Compiled US Census data related to population and demographic shifts (da.10e)
- ◆ ADM historical trends (da.10f)

The projections are calculated by tracking live births to kindergarten enrollments five years later, and then following kindergarten enrollments as they advance from grade to grade, year by year. The final projections, which focus on the total number of ADM for the division, are adjusted based on recent history and the state projections.

Exhibit 4-4 shows the March actual ADM data, the annual change percentage, the Virginia Department of Education (VDOE) enrollment projections, the state consultant's (Weldon Cooper Center for Public Service) projections, and the actual counts. As the exhibit shows, the division's projections are the most accurate and average within 0.7 percent of actual. These data do not extend beyond 2014.

EXHIBIT 4-4
BOTETOURT COUNTY PUBLIC SCHOOLS
COMPARISON OF ENROLLMENT PROJECTIONS WITH ACTUAL ADM
FY 2007-14

YEAR	MARCH 31 ADM	ANNUAL CHANGE	VDOE PROJECTION	% DIFF. OF ADM	WELDON COOPER	% DIFF. OF ADM	BCPS PROJECTION	% DIFF. OF ADM
FY07	4,867	1.3%	4,885	0.37%	N/A		4,800	-1.4%
FY08	4,921	1.1%	4,935	0.28%	N/A		4,825	-2.0%
FY09	4,864	-1.2%	4,961	1.99%	N/A		4,875	0.2%
FY10	4,978	2.3%	5,008	0.60%	N/A		4,825	-3.1%
FY11	4,944	-0.7%	5,062	2.39%	6,634	34%	4,925	-0.4%
FY12	4,984	0.8%	5,110	2.53%	6,790	36%	4,900	-1.7%
FY13	4,876	-2.2%	5,038	3.32%	6,694	37%	4,950	1.5%
FY14	4,777	-2.0%	5,056	5.84%	6,515	36%	4,825	1.0%
Average		-0.5%		2.17%		36%		-0.7%

Source: Botetourt County Public Schools and MGT of America, 2014.

**RECOMMENDATION 4-1:
Use multiple methodologies to project enrollments.**

The consulting team cannot fault the one-year accuracy of the division's enrollment projections, they are within a best practice standard. However, the methodology used is limited in its ability to track in and out migration, enrollment anomalies, and has not been proven accurate on five-year projections.

The division would be better served by projecting enrollments using multiple methodologies that will account for the multiple influences on enrollments. At a minimum, the division should use a standard cohort survival method and possibly some or all of the following;

- ◆ Annual percentage change
- ◆ Linear regression
- ◆ Students per household

FISCAL IMPACT

This recommendation should be implemented by the Director of Administration and Finance and would take approximately eight hours.

FINDING

BCPS has excess capacity at the elementary level and enrollment projections from VDOE show declining enrollment. The FY14 VDOE projection, as shown in **Exhibit 4-3**, was 5,056. The projection for FY 15 is 4,662 and for FY16 is 4,557.

BCPS had a capacity study completed for the 2013-14 school year by division staff. The methodology for calculating the capacity of each school used a "Program Capacity" which assigns the maximum number of students per classroom based on the type of program in each classroom. To obtain a building capacity, the total of the classroom capacities is multiplied by a utilization factor of 85 percent, which accounts for the uneven distribution of students across grade levels, courses and programs. The program capacity is divided into the current enrollment to determine the facility utilization. The results of the capacity study are shown in **Exhibit 4-5**.

EXHIBIT 4-5
BOTETOURT COUNTY PUBLIC SCHOOLS
CAPACITY STUDY RESULTS
2013-14

SCHOOL	FALL MEMBERSHIP	BUILDING CAPACITY	PROGRAM CAPACITY	2013-2014 % UTILIZATION OF SCHOOL
<i>Elementary Schools</i>				
Breckinridge	232	424	360	0.64
Buchanan	263	533	453	0.58
Cloverdale	323	459	390	0.83
Colonial	424	590	502	0.84
Eagle Rock	148	342	291	0.51
Greenfield	387	587	499	0.78
Troutville	283	509	433	0.65
Total/Average ES	2,060	3,444	2,928	0.70
<i>Middle Schools</i>				
CAMS	458	755	642	0.71
RMMS	717	1,125	956	0.75
Total/Average MS	1,175	1,880	1,598	0.74
<i>High Schools</i>				
JRHS	565	910	774	0.73
LBHS	1,056	1,350	1,148	0.92
Total/Average HS	1,621	2,260	1,922	0.84

Source: Botetourt County Public Schools, 2014.

As **Exhibit 4-5** shows, the division has excess capacity at the elementary and middle grade groupings using the 85 percent utilization factor. However, the consulting team would recommend using different utilization factors at each grade grouping to reflect the actual logistics applicable to each grade grouping. A 95 percent utilization factor at the elementary level reflects the uneven distribution of students across grade levels. At the middle school and high school levels, utilization factors of 85 percent and 75 percent respectively, reflect how classes are scheduled and the fact that these scheduling constructs lead to unutilized classrooms at different times of the school day. **Exhibit 4-6** shows the effect of applying these alternate utilization factors.

EXHIBIT 4-6
BOTETOURT COUNTY PUBLIC SCHOOLS
ALTERNATE FACTOR CAPACITY ANALYSIS
2013-14

SCHOOL	FALL MEMBERSHIP	BUILDING CAPACITY	PROGRAM CAPACITY	2013-2014 % CAPACITY OF SCHOOL	MGT 95%/85%/75% CAPACITY	MGT UTILIZATION
<i>Elementary Schools</i>						
Breckinridge	232	424	360	0.64	403	0.58
Buchanan	263	533	453	0.58	506	0.52
Cloverdale	323	459	390	0.83	436	0.74
Colonial	424	590	502	0.84	561	0.76
Eagle Rock	148	342	291	0.51	325	0.46
Greenfield	387	587	499	0.78	558	0.69
Troutville	283	509	433	0.65	484	0.59
Total/Average ES	2,060	3,444	2,928	0.70	3,272	0.63
<i>Middle Schools</i>						
CAMS	458	755	642	0.71	642	0.71
RMMS	717	1,125	956	0.75	956	0.75
Total/Average MS	1,175	1,880	1,598	0.74	1,598	0.74
<i>High Schools</i>						
JRHS	565	910	774	0.73	683	0.83
LBHS	1,056	1,350	1,148	0.92	1,013	1.04
Total/Average HS	1,621	2,260	1,922	0.84	1,695	0.96

Source: MGT of America, 2014.

Using either of the capacity and utilization models, it is clear that the division has excess capacity at the elementary and middle school levels.

If the division maintains this excess capacity over several years, and enrollments do not increase, the division is then maintaining facilities that are not wholly or partially needed. The maintenance of excess facilities drains valuable resources away from other needs.

It is not an uncommon occurrence for divisions to find themselves with declining enrollments and excess space. Depending on the demographic characteristics of the division, solutions can involve adjusting attendance boundaries, changing grade groupings, and/or closing schools.

RECOMMENDATION 4-2:

Examine cost of excess capacity at elementary schools and consider closing 1-2 elementary schools as part of a long-range facilities master plan strategy.

The division has excess capacity at the elementary schools which represents an unnecessary expenditure. Based on the division's enrollment history and short term projections, which show a declining enrollment, the division should examine a strategy to close one or two elementary schools. This exercise should be part of a long range facility master planning study, so that all relevant factors are

taken into account and all community stakeholders have an opportunity to provide input. When determining the best solution to deal with the problem of excess space, it is critical to closely examine all factors involved. Sometimes divisions look only at the school with the lowest utilization and/or the school with the smallest enrollment when making the decision. The best solutions come from examining all factors including:

- ◆ Facility condition
- ◆ Educational suitability
- ◆ Enrollment and utilization
- ◆ Distance from other facilities (taking into account both miles and time)
- ◆ Geographic location to students
- ◆ Change in transportation costs
- ◆ Demographic trends

FISCAL IMPACT

The fiscal impact of implementing this recommendation could result in an on-going savings to the division if the decision is made to close a school. The savings would be based on costs saved related to operating the school, maintenance, utilities, insurance, as well as salaries for support and administrative staffing.

MGT has calculated that the average cost of operating an elementary school in the division is approximately \$680,000 per year. While this recommendation does not predict the number of schools the division may decide to close, the fiscal impact is based on closing one school. Since there are many decisions related to closing a school that would require planning, the recommendation shows the fiscal impact beginning in Year 2.

RECOMMENDATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Close one elementary school	\$0	\$680,000	\$680,000	\$680,000	\$680,000

FINDING

BCPS does not have a policy requiring a long range facilities master plan. The division does require the Director of Operations to develop a five-year CIP but this document is not a comprehensive master plan. It is a schedule of needed projects and the projected budgets over a five year planning period. A comprehensive long range facilities master plan would include the following elements:

- ◆ Analysis of the facility implications of current and future educational programs and delivery methods,
- ◆ Long range enrollment projections and implications for attendance zones,
- ◆ Facility assessments including the site and building condition, educational suitability, and technology readiness,
- ◆ A capacity and utilization analysis of each school,

- ◆ Community input on the facility needs and priorities,
- ◆ Multiple master plan scenarios or strategies to meet the division’s long range goals,
- ◆ Long range plan identifying projects, budgets, schedule and implementation plan.

The lack of a comprehensive long range facility master plan increases the difficulty of pro-active facility decision making, leading to a delay in realizing needed improvements that will create and maintain 21st Century educational facilities. In addition, the lack of a structured community input process during the planning, robs the division of the opportunity to build public support from community stakeholders and county governing authorities. This lack of support leads to a lack of funding for implementing the needed improvements.

RECOMMENDATION 4-3:

Write and implement a policy requiring the development of a ten-year facility master plan.

A ten-year facility master plan would contain, at the least, the elements listed in the finding above and be prepared by an outside consultant(s). The division may be able to assemble the data for some of the master plan elements, but should have an outside consultant manage the master planning process to minimize the additional work load on staff, and to introduce an objective third party into the process. An objective third party consultant can help to build consensus and transparency into a planning process which is typically sensitive and political.

The master planning process should specifically address the issue of excess capacity as well as the need for new schools.

FISCAL IMPACT

The fiscal impact of implementing this recommendation will be the one-time cost of the facility planning consultant fees, which would be approximately \$120,000, depending on the level of involvement of the division staff and the scope of work.

RECOMMENDATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Require ten-year facility master plan	(\$120,000)	\$0	\$0	\$0	\$0

4.C. MAINTENANCE OPERATIONS

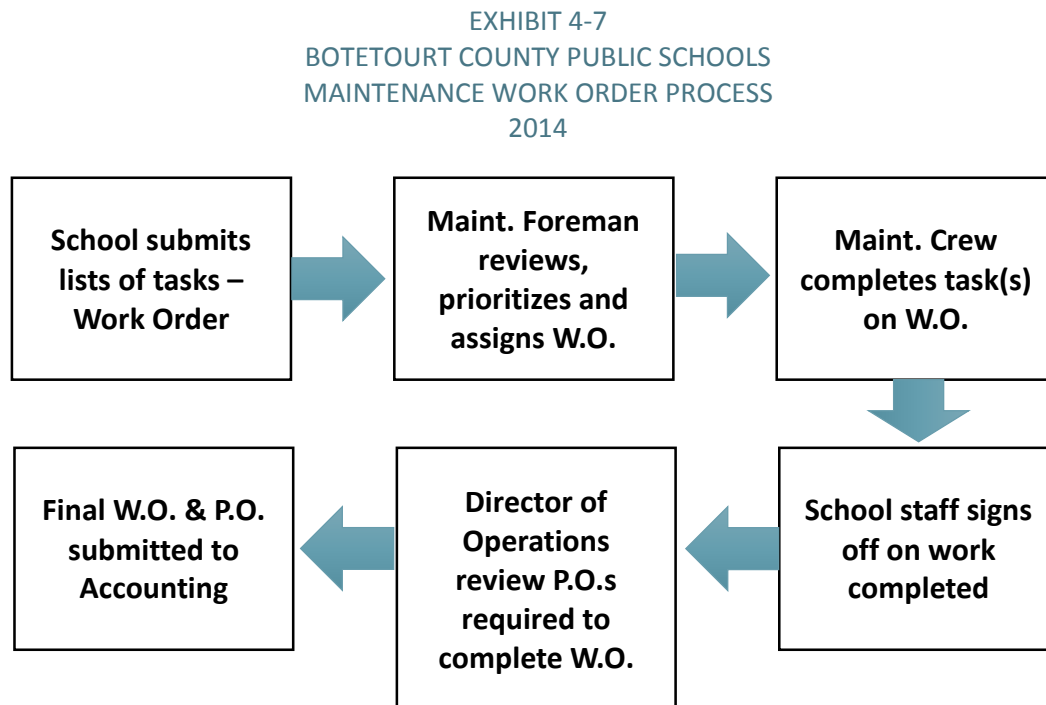
The maintenance operations of a school division are responsible for maintaining facilities that are safe and provide a supportive learning environment as defined by the division’s standards for 21st Century schools. Typical standards for today’s schools require appropriate heating, ventilating, cooling, lighting, and acoustical performance throughout the buildings, as well as the effective operation of special equipment in spaces such as food service, gymnasiums, and computer labs.

Routine maintenance tasks are performed by the maintenance crews on an on-going basis in response to work orders submitted by a school’s principal and/or head custodian (building manager). Principals are requested to submit work orders every two weeks to the Maintenance Department. The work orders are reviewed and prioritized by the maintenance foreman. Each of the two maintenance crews

have specific schools assigned to it, and visit the schools on a regular cycle, completing all or most of the work orders that have been issued, then moving on to the next school.

It should be noted that BCPS uses the term “work order” differently than is typical for most school division maintenance departments. The BCPS work order, that is issued every two weeks, will contain multiple tasks of all trades, unlike typical work orders that have only one task and are trade specific. In addition, the work orders are submitted, issued, and tracked manually, without the aid of any software program.

Exhibit 4-7 presents a flow chart of the BCPS work order process.



Source: Botetourt County Public Schools and MGT of America, 2014.

FINDING

The BCPS maintenance department is not using work order software to track work order completion rates and staff productivity. Presently, work orders (or lists of needed repairs) are submitted to the maintenance department by principals via email every two weeks. The maintenance foreman provides each crew with hardcopy work orders to complete. Each crew submits completed, hardcopy work order forms back to the foreman, these are reviewed by the foreman and the Director of Operations.

The lack of a work order software program and the bundling of multiple tasks into one work order limit the ability of maintenance management to track how long it takes to complete specific work order tasks and to determine the level of staff productivity.

A review of completed work orders for the weeks of September 9th and September 15th indicated that the two-man maintenance crews are either not recording all their tasks or are not being highly productive. It should be noted that the maintenance staff are required to drive school buses on an as-

needed basis, and the days buses were driven are recorded on the work orders. **Exhibit 4-8** lists a sample of tasks completed during this time.

EXHIBIT 4-8
BOTETOURT COUNTY PUBLIC SCHOOLS
SAMPLE OF COMPLETED MAINTENANCE WORK ORDERS
WEEKS OF SEPT. 9TH AND 15TH, 2014

CREW	DATE	SITE	WORK COMPLETED
301	9/10/2014	B-Tech	1. Repair broken water line on swamp cooler at greenhouse
			2. Move electrical cords to tire machine and alignment machine
301	9/12/2014	Eagle Rock	1. Change filters on water cooler
301	9/16/2014	CAMS	1. Replace lamps outside of door #1,#4, and #7
			2. Run test on generator and test 150 amp breaker
301	9/18/2014	Buchanan	1. Check gym for smoke smell
		B-Tech*	2. Replace leaking water heater in Auto Body shop
301	9/19/2014	Buchanan	1. Repair leaking toilet in teacher's bathroom
			2. Replace bad ballast on 1st grade hall in K-gr.
305	9/10/2014	RMMS	1. Sprayed yellow jackets with bucket truck
			2. Checked for other nests around building
305	9/11/2014	RMMS	1. Worked on serving line (rewired and new thermostat)
305	9/16/2014	Cloverdale	1. With Fire Marshall for walk through
			2. Checked speaker in E-9
			3. Checked on doors in kitchen, 8th grade, & gym
305	9/19/2014	Troutville	1. Repaired 2nd grade wash basin

*W.O. indicates one maintenance worker had to drive a bus in morning and/or afternoon.

Source: Botetourt County Public Schools. Compiled by MGT, 2014.

RECOMMENDATION 4-4:

Purchase and utilize work order software to track work order completion rate and worker productivity.

The implementation of a work order software program would require the division to restructure what is assigned to an individual work order; however this required change would enable the division to track work orders by date initiated, by trade, and by building. In addition, the productivity of the maintenance staff could be tracked based on how many work orders were completed and how many remain open on a monthly basis.

In addition, there are work order software programs that have inventory modules that enable the managing of parts and tools inventory. While the division does not inventory a lot of parts, it does warehouse sufficient parts and tools to warrant an annual inventory assessment.

FISCAL IMPACT

The fiscal impact of implementing this recommendation would be the cost of purchasing the work order software program and any necessary training. The cost of a software program and training would vary depending on the software's features and the number of staff to receive training, but a basic program that includes an inventory module and a preventive maintenance module, should cost approximately \$10,000 initially with approximately \$7,000 in annual renewal fees.

RECOMMENDATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Purchase work order software	(\$10,000)	(\$7,000)	(\$7,000)	(\$7,000)	(\$7,000)

FINDING

BCPS shares maintenance resources with the Botetourt County maintenance department. For instance, the county crews mow the yards surrounding the schools and uses BCPS equipment. BCPS provides free use of the school facilities to county entities and sells gasoline to the county for their vehicles at BCPS's cost. The county has installed elementary playgrounds and many outdoor facilities at the division's schools.

COMMENDATION 4-C:

BCPS and Botetourt County are working cooperatively to share resources.

FINDING

BCPS staffs the maintenance department well below national averages. The maintenance department maintains approximately 917,218 SF of buildings and 278 acres of land with five maintenance workers. This amounts to approximately 183,000 SF of building for each maintenance worker. According to the 2009 American School and University magazine survey, school division maintenance departments maintain, on average, approximately 90,000 SF of building per maintenance worker.

The consequence of staffing maintenance at a high ratio is the accumulation of deferred maintenance. Deferred maintenance leads to higher costs for a building owner as a condition worsens and affects other building systems. In addition, a high staffing ratio prohibits a maintenance department from implementing a proactive preventive maintenance program which also leads to higher long-term maintenance costs.

BCPS maintenance staff does perform some preventive maintenance tasks, but these are minimal, and are not done on a regular schedule. Preventive maintenance on the HVAC systems is performed by a contractor who has a maintenance contract with the division.

A best practice is to staff maintenance crews at a level which allows for a robust preventive maintenance program, and where routine maintenance tasks are completed within a given time period, and tasks such as painting are done on a recurring cycle based on the best industry standards.

RECOMMENDATION 4-5:

Determine the productivity level of the maintenance workers and then staff the maintenance department at a level to allow the implementation of work order completion goals and a preventive maintenance program.

Before changing the levels of maintenance staffing, the division should implement some productivity standards and determine if the staff is meeting those standards by using the work order software, referred to in **Recommendation 4-4**, to track work order completion rates. Once standards are established, and current staff productivity is measured, the Director of Operations will be able to recommend the appropriate level of staffing in order to meet work order completion goals and implement a preventive maintenance program.

FISCAL IMPACT

The fiscal impact of implementing this recommendation will be the cost of adding additional maintenance staff, if that is what is recommended after the productivity analysis is complete. Since the staffing ratio is very high at this time, it is assumed that additional staff will be needed. The fiscal impact is based on adding an additional crew of two maintenance workers.

The annual average salary for a maintenance worker is \$35,000 plus benefits equals \$48,774. If two workers are added, the total annual cost would be approximately \$98,000.00 ($\$48,774 \times 2 = \$97,488$).

RECOMMENDATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Add two maintenance staff	0	(\$98,000)	(\$98,000)	(\$98,000)	(\$98,000)

4.D. CUSTODIAL OPERATIONS

The custodial operations of a school division are responsible for maintaining clean facilities and performing routine tasks necessary for daily operations, such as unlocking the school in the morning. An efficient custodial operation will standardize the cleaning materials and methods used by custodians and ensure all staff are trained in the proper procedures.

FINDING

BCPS has an effective custodial supplies ordering process. The Director of Operations oversees the ordering of custodial supplies. Each school type has a standard for the quantity and type of supplies that it should need over the school year. The head custodian submits an inventory of existing supplies twice a year, and the Director orders the appropriate amount to meet the standard.

One consequence of not having a standard for the amount of custodial supplies to be used in a year, is a wide range in the cost for supplies by school. The consulting team has reviewed school divisions where the cost of custodial supplies has ranged from \$0.02 per SF to \$0.20 per SF where no standard is implemented.

Exhibit 4-9 details the cost of custodial supplies per SF by school for BCPS. As the data shows, the costs per SF are very consistent across all schools and are at reasonable cost levels.

EXHIBIT 4-9
 BOTETOURT COUNTY PUBLIC SCHOOLS
 COST OF CUSTODIAL SUPPLIES BY SCHOOL
 2013-14

SCHOOL	GROSS SF AREA	ANNUAL COST OF CUSTODIAL SUPPLIES	COST PER SF
<i>Elementary Schools</i>			
Breckinridge	52,478	\$ 2,480	\$ 0.05
Buchanan	54,366	\$ 2,903	\$ 0.05
Cloverdale	45,304	\$ 3,500	\$ 0.08
Colonial	47,256	\$ 2,152	\$ 0.05
Eagle Rock	45,000	\$ 2,115	\$ 0.05
Greenfield	74,663	\$ 4,914	\$ 0.07
Troutville	56,074	\$ 2,119	\$ 0.04
Total/Average ES	375,141	\$ 20,183	\$ 0.05
<i>Middle Schools</i>			
CAMS	79,000	\$ 4,452	\$ 0.06
RMMS	102,000	\$ 7,958	\$ 0.08
Total/Average MS	181,000	\$ 12,410	\$ 0.07
<i>High Schools</i>			
JRHS	133,203	\$ 6,167	\$ 0.05
LBHS	152,306	\$ 10,774	\$ 0.07
Total/Average HS	285,509	\$ 16,941	\$ 0.06

Source: Botetourt County Public Schools and MGT of America, 2014.

COMMENDATION 4-D:

BCPS maintains consistent and reasonable costs for custodial supplies across all schools.

FINDING

BCPS maintains clean schools while staffing custodial positions at or below best practice levels. Members of the consulting team visited all schools and facilities in the division at least once. All members of the consulting team reported that they found schools to be clean no matter what time of day a facility was visited. Reports from principals supported these observations.

MGT's best practice for custodial staffing is the product of more than twenty years of school division reviews and comparison with industry practices. The best practice formula prescribes one custodian per 21,000 SF of facility plus .5 FTE in an elementary school, .75 FTE in a middle schools, and 1.0 FTE in a high school. This formula recognizes the fact that head custodians are often tasked with duties in addition to cleaning. **Exhibit 4-10** shows the custodial staffing levels at BCPS in comparison with this best practice staffing level.

EXHIBIT 4-10
BOTETOURT COUNTY PUBLIC SCHOOLS
CUSTODIAL STAFFING IN COMPARISON TO BEST PRACTICE
2013-14

SCHOOL	GROSS SF AREA	FTE CUSTODIANS	GSF PER CUSTODIAN	MGT BEST PRACTICE	OVER/UNDER BEST PRACTICE
Elementary Schools					
Breckinridge	52,478	3.0	17,493	3.0	0.0
Buchanan	54,366	3.0	18,122	3.0	0.0
Cloverdale	45,304	3.0	15,101	2.5	0.5
Colonial	47,256	2.4	19,690	3.0	-0.6
Eagle Rock	45,000	3.0	15,000	2.5	0.5
Greenfield	74,663	4.0	18,666	4.0	0.0
Troutville	56,074	3.0	18,691	3.0	0.0
Total/Average ES	375,141	21.4	17,530	21.0	0.4
Middle Schools					
CAMS	79,000	4.0	19,750	4.5	-0.5
RMMS	102,000	5.0	20,400	5.5	-0.5
Total/Average MS	181,000	9.0	20,111	10.0	-1.0
High Schools					
JRHS	133,203	5.0	26,641	7.5	-2.5
LBHS	152,306	7.0	21,758	8.5	-1.5
Total/Average HS	285,509	12.0	23,792	16.0	-4.0

Source: Botetourt County Public Schools. Compiled by MGT, 2014.

COMMENDATION 4-E:

BCPS maintains clean schools while staffing custodial positions at or under the best practice.

4.E. ENERGY MANAGEMENT

Effective energy management is a critical strategy in keeping facility operating costs low while maintaining suitable educational environments. Energy efficiency and sustainability are key concepts that are widely accepted as fundamental in the design and operation of 21st Century schools.

BCPS contracted with *Cenergistic, The Energy Conservation Company*, in 2002 to develop a five year energy management plan. The consultant trained an energy manager to implement the plan and track energy use. The division no longer has the energy manager position, but has tasked the maintenance foreman with tracking energy use and monitoring the daily operation of the HVAC systems in the schools via a computerized maintenance management system (CMMS).

To save energy, the division has installed energy efficient or energy management equipment in the facilities. In addition, BCPS had an Energy Conservation and Efficiency Study performed in 2012 by a contracted engineering firm.

FINDING

BCPS has taken a proactive approach toward energy management. Since 2002 the division has implemented the following energy management measures:

- ◆ Conducted regular energy audits of the schools;
- ◆ Installed time clocks on water heaters, circulation pumps, signage, parking lot lights;
- ◆ Installed Computerized Maintenance Management System (CMMS) also known as Energy Management System at seven of the twelve schools;
- ◆ Installed setback timers at remaining schools;
- ◆ Implemented summer and holiday shut down cycles for HVAC equipment;
- ◆ Removed personal appliances from classrooms;
- ◆ Uses cold water compatible cleaning products;
- ◆ Installed high speed hand dryers;
- ◆ Converting magnetic light ballasts to energy efficient ballasts;
- ◆ Changing out T12 light fixtures with energy efficient T8 fixtures;
- ◆ Installed occupancy sensors in classrooms;
- ◆ Installing solar powered traffic warning lights;
- ◆ Installed energy efficient TPO roofs;
- ◆ Installed recycling dumpsters at all schools;
- ◆ Installed trash compactors at four schools;
- ◆ Installed 63 waterless urinals; and
- ◆ Converted School Bus Garage heating from oil to natural gas.

Exhibits 4-11 and 4-12 show the energy use in kilowatt-hours (KWH) of electricity and 100 cubic feet (CCF) of natural gas for the division's facilities for the calendar years of 2010-12. These exhibits show that overall, the division has reduced its energy use. While some of this reduction may be due to milder temperatures, the constant reduction, year over year, indicates higher energy efficiency.

EXHIBIT 4-11
 BOTETOURT COUNTY PUBLIC SCHOOLS
 ENERGY USE - ELECTRICITY
 2010-12 (CALENDAR YEARS)

SCHOOL	2010 KWH ELECTRICITY	2011 KWH ELECTRICITY	2012 KWH ELECTRICITY
Breckinridge	493,440	417,600	419,257
Buchanan	593,280	480,480	551,040
Cloverdale	424,627	417,800	385,600
Colonial	658,080	619,001	524,536
Eagle Rock	703,488	626,688	667,008
Greenfield	739,680	717,078	639,780
Troutville	821,400	1,029,695	684,448
CAMS	1,098,214	1,086,503	1,205,491
RMMS	1,144,778	1,120,010	1,100,910
JRHS	1,511,239	1,401,614	1,536,476
LBHS	2,101,298	1,975,019	1,980,438
B-TEC	330,448	357,360	349,920
SBO	140,400	115,320	107,400
Maintenance Shop	6,179	6,113	5,614
Transportation Ctr.	135,810	132,577	125,884
Total	10,902,361	10,502,858	10,283,802

Source: Botetourt County Public Schools. Compiled by MGT, 2014.

EXHIBIT 4-12
 BOTETOURT COUNTY PUBLIC SCHOOLS
 ENERGY USE – NATURAL GAS
 2010-12 (CALENDAR YEARS)

School	2010 CCF Natural Gas	2011 CCF Natural Gas	2012 CCF Natural Gas
Breckinridge	17,073	11,556	9,817
Buchanan	-	-	-
Cloverdale	11,827	11,159	11,048
Colonial	6,132	5,772	3,672
Eagle Rock	-	-	-
Greenfield	28,709	29,807	25,821
Troutville	-	-	-
CAMS	57,025	52,035	52,888
RMMS	34,684	27,831	30,238
JRHS	30,200*	22,200*	14,193*
LBHS	50,851	42,668	36,528
B-TEC	-	-	-
SBO	1,299	1,142	980
Maintenance Shop	1,749	1,729	1,605
Transportation Ctr.	123	99	303
Total	209,472	183,798	172,900

*Gallons of heating oil

Source: Botetourt County Public Schools. Compiled by MGT, 2014.

COMMENDATION 4-F:

BCPS has implemented effective energy management strategies and has installed energy efficient equipment.

FINDING

BCPS can realize additional energy savings. The *Energy Conservation and Efficiency Study* conducted for the division in 2012 looked at each building in the division and analyzed the following areas for potential energy efficiency upgrades:

- ◆ Building envelope,
- ◆ Heating, ventilation, and air conditioning systems,
- ◆ Electrical lighting and power systems

The analysis recommended specific improvements to the above systems, estimated the cost of the improvements, projected the energy savings on an annual basis, and calculated the payback period for each improvement. The total cost of the recommended improvements for all buildings was

approximately \$1,001,925 and the estimated annual energy savings was approximately \$149,092, which computes to an estimated pay-back period of 6.72 years.

RECOMMENDATION 4-6:

Implement all recommendations contained in the 2012 Energy Conservation and Efficiency Study.

The study is very detailed and contains specific equipment recommendations which should facilitate the implementation. The division may choose to not implement all recommendations but this decision making process should be exercised in conjunction with the consulting firm that authored the report.

The division should investigate the availability of low cost financing or grants from the utility companies that provide its power. A quick search of the Dominion Power website indicated the utility offers some equipment rebates.

FISCAL IMPACT

The fiscal impact of implementing this recommendation will be the cost of the improvements, (\$1,001,925) which will be offset by the energy savings \$149,092 over the pay-back period (6.72 years, projected). For year 1, the total cost shown reflects the cost of improvements. There are no energy savings for that year. The exact amount of energy conservation cost-saving or expenditure measures will be determined by which improvements the division chooses to implement and any offsets provided by the utility companies. Under the described estimates, the estimated five-year cost to the division would be \$405,925 (Year 1 costs (\$1,001,925) – Year 2-5 costs (\$149,000) x 4 = \$596,000).

RECOMMENDATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Implement energy conservation recommendations	(\$1,001,925)	\$149,000	\$149,000	\$149,000	\$149,000

5.0 FINANCIAL MANAGEMENT

School divisions must practice sound financial management to maximize the effectiveness of limited resources and to plan for future needs. Effective financial management ensures that internal controls are in place and operating as intended; technology is maximized to increase productivity, and that reports are generated that help management reach its goals.

This section presents findings, commendations, and recommendations related to five aspects of financial management of Botetourt County Public Schools (BCPS):

- 5.A. Organization, Management and Staffing
- 5.B. Financial Performance
- 5.C. Planning and Budgeting
- 5.D. Administrative Technology
- 5.E. Review and Evaluation of Contracting Process

OVERVIEW

School divisions in the Commonwealth of Virginia are fiscally dependent upon the local governing body for all appropriations. All local, state, and federal grant funds must be approved by the Botetourt 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. State statutes governing school appropriations mandate that all funds may be appropriated in either lump-sum or by major category. The adopted major categories include:

- ◆ Instruction
- ◆ Administration, Attendance and Health
- ◆ Pupil Transportation
- ◆ Operations and Maintenance
- ◆ School Food Services and Other Non-Instructional Operations
- ◆ Facilities
- ◆ Debt Service and Fund Transfers
- ◆ Technology
- ◆ Contingency Reserves

State regulations also allow for the accounting of a separate textbook fund, allowing for the carry-over of fund balances.

BCPS's fiscal year (FY) 2015 operating fund budget is \$48,276,695, an increase of \$246,999 or .5 percent over the approved FY 2014 appropriation, and an increase of \$774,916 or 1.5 percent greater than the FY 2013 appropriation. The operating fund is the primary source of ongoing school system operating expenses. Other funds, designated as "Self-Sustaining Funds," including Federal and Other Grants, Textbooks, School Nutrition and Roanoke Valley Regional Program, total an additional \$6,108,493 in directed programming for FY 2015.

Seven other divisions were selected as peer divisions for comparison purposes during this efficiency review: Accomack, Caroline, King George, Mecklenburg, Orange, Powhatan, and Wythe Counties. Additional divisions have been included in this financial review to present a regional comparison: the counties of Alleghany, Brunswick, Craig, Floyd, Franklin, Henry, Patrick, Pittsylvania, Roanoke and the cities of Roanoke, Covington, Danville, Martinsville, and Salem. Although many issues may be appropriate to compare with divisions of similar size or demographics, other issues – e.g., salaries – are more appropriately compared with regional competitors.

Conditions in Botetourt County of importance to this review include:

- ◆ Reduced state revenue resulting from declining student enrollment.
- ◆ The implementation of a new comprehensive resource management and accounting system, MUNIS, has affected accounting processes throughout the division, requiring significant staff time to learn and implement the new system. At the time of this review, the system has been fully implemented, but requires additional fine-tuning and reporting enhancements.
- ◆ Increased expenses related to employee benefits including increased health insurance and mandated state retirement costs.
- ◆ Limited compensation increases.
- ◆ Deferred maintenance of buildings and technology infrastructure.
- ◆ Limited local revenue growth due to a heavy reliance upon real estate taxes.

CHAPTER SUMMARY

In preparing this section, MGT of America, Inc., reviewed extensive documents provided by the division, and interviewed many individuals and groups of school division and county departments. Additionally, data were collected through the Virginia Department of Education website, the BCPS website, the Auditor of Public Accounts website, and the Virginia State Statutes.

Commendations are made in this section recognizing the division’s efforts in implementing the work-flow provisions of the MUNIS accounting system and for supporting financial staff in schools and departments by providing training, help desk assistance, and application support. The division works closely with the county’s administrative staff to anticipate and resolve local funding issues.

The following commendations are included in the chapter:

- | | |
|-------------------------|---|
| Commendation 5-A | The Superintendent and Director of Finance and Administration have developed a good working relationship between the division staff and County administration. As such, the division enjoys the benefits of lump-sum appropriations. |
| Commendation 5-B | The finance office provides exemplary support for the newly implemented MUNIS financial system to the departments and schools. |
| Commendation 5-C | The division has created an agreement with the local governing body to return two-thirds of any school fund balances to the school capital expenditure fund. |

Commendation 5-D **The school division recently implemented a state-of-the-art resource management system that fully integrates all accounting, purchasing and personnel functions within an integrated software platform.**

The BCPS financial management function could be improved by implementing several recommendations. Budget changes should be separately identified and summarized as cuts and additions and identified as initiatives, cuts, efficiencies or program changes, providing additional information to support leadership and board analysis and evaluation of the recommended budget.

The following recommendations are included in this section:

Recommendation 5-1	Provide summary expenditure and revenue information as well as fund balance information for school board review.
Recommendation 5-2	Remove the textbook fund from the Regular Operating and Self-Sustaining funds and show it as a completely discrete fund.
Recommendation 5-3	Provide managers with budgets related to their area of responsibility.t.
Recommendation 5-4	Present significant budget changes to the school board for consideration.
Recommendation 5-5	Revert to “School Funds On-Line” for the purpose of accounting for school student activity funds.
Recommendation 5-6	Provide additional revenue details for discrete self-sustaining funds that may include an anticipation of local funds or the use of fund balances.
Recommendation 5-7	Adopt a budget preparation calendar that accommodates a wider range of engagement and provides opportunities for prioritization of issues.
Recommendation 5-8	Develop and implement a zero-base budgeting process that delineates and prioritizes the true needs of the division.
Recommendation 5-9	Develop an annual budget format for public use that will provide all readers with easy access to the data.
Recommendation 5-10	Perform an audit of the MUNIS system to insure that the platform is operating as expected.
Recommendation 5-11	Insure that all MUNIS operating procedures are properly documented and published.

5.A. ORGANIZATION, MANAGEMENT, AND STAFFING

An effective fiscal operation provides accurate, complete, and timely information to the division management and school 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.

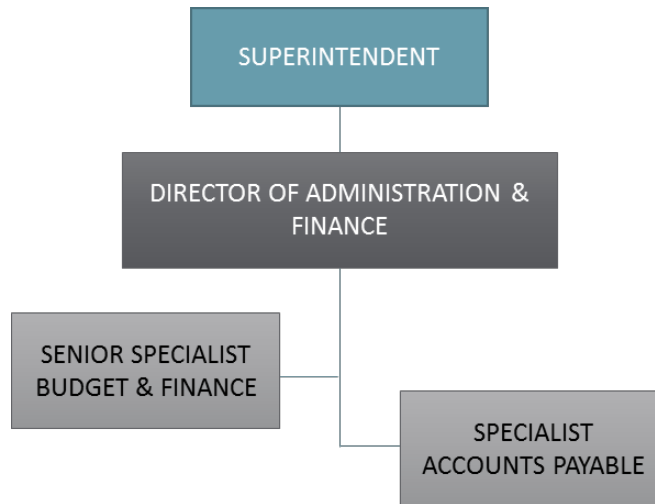
The division's financial operations are managed by the Director of Administration and Finance, who reports directly to the Superintendent. By school board policy DA, this position, as the "superintendent's designee", has been designated as the division's fiscal agent, given the authority to disburse funds on behalf of the school division. "The school board manages and controls the funds made available to it for the public schools and incurs costs and expenses." The finance department is responsible for the functions associated with accounting, reporting, accounts payable, fixed assets, purchasing, and budgeting functions.

The department is comprised of three individual positions including:

- ◆ Director of Administration and Finance – responsible for:
 - Bookkeeping
 - Code of Conduct/Student handbooks
 - Crisis Plan
 - Facility Use
 - Fundraising
 - Insurance (Property and Casualty)
 - SBO Forms
 - OMEGA &VDOE contact / SSWS Contact
 - Field Trip Requests
 - Management of Student records
- ◆ Senior Specialist, Budget and Finance – responsible for:
 - Monthly financial Statements
 - Requests for Reimbursements
 - SBO Invoices
 - Travel Reimbursement Requests
- ◆ Specialist, Accounts Payable-responsible for:
 - MUNIS/Accounts Payable

Exhibit 5-1 represents the current organizational relationships within the division’s Finance Office.

EXHIBIT 5-1
BOTETOURT COUNTY PUBLIC SCHOOLS
ORGANIZATIONAL CHART OF THE FINANCE OFFICE



Source: Botetourt County Public Schools, 2014.

FINDING

State statute provides for either lump-sum or categorical appropriation of funds from the county to the school division. The benefit of lump-sum appropriation is that it offers the division complete flexibility in meeting changing needs. If appropriated by category, divisions do not have flexibility to transfer funds from, for example, transportation to maintenance, even if such a transfer would be most effective in achieving division goals.

In Botetourt County, the County Supervisors approve the annual budget for the school division and the Treasurer’s office provides a lump-sum payment.

COMMENDATION 5-A:

The Superintendent and Director of Administration and Finance have developed a good working relationship between the division staff and County administration. As such, the division enjoys the benefits of lump-sum appropriations.

FINDING

The Accounts Payable Specialist has developed a detailed set of instructions to assist all users of the MUNIS system. The MUNIS system provides a specific work flow that dictates the processing of requisitions through payment. The system had been imposed upon all departments and schools for all provisioning needs.

The A/P specialist is extremely accommodating in assisting all users of the system. In addition, this individual manages the restrictive check processing module by preparing and administering the check writing Calendar. One limiting aspect of the MUNIS system is the restriction of only one user in the check writing process at a time. This presents a constraint upon school bookkeepers since all purchasing activities, including School Activity Fund Accounting, goes through the MUNIS system.

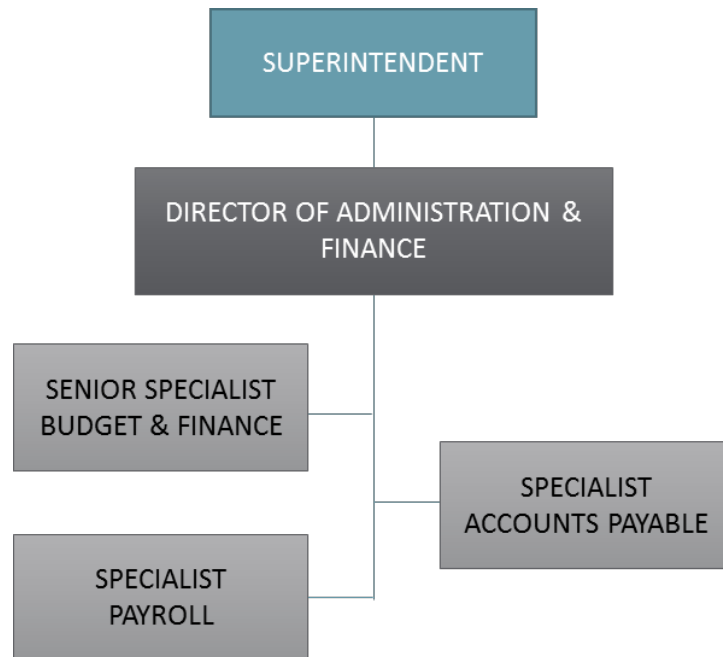
COMMENDATION 5-B:

The finance office provides exemplary support of the newly implemented MUNIS financial system to the departments and schools.

The proposed reassignment of the payroll clerk to the finance department will facilitate the direct flow of information of encumbered salaries to the budget oversight function. The added benefit will allow for the oversight of position control to ascertain the availability of funds prior to the assignment of an employment contract.

Exhibit 5-2 represents the finance office organizational chart, showing the proposed organization with the reassignment of payroll.

EXHIBIT 5-2
BOTETOURT COUNTY PUBLIC SCHOOLS
REVISED - ORGANIZATION CHART OF THE FINANCE OFFICE



Source: MGT, 2014.

5.B. FINANCIAL PERFORMANCE

School division financial management involves the effective use of limited resources to support student learning and achievement. The division is required to manage its financial operations in conformity with the regulations and requirements of the Virginia Board of Education, in conjunction with the Virginia Auditor of Public Accounts and the Virginia State Statutes, and to report data in compliance with the Uniform Financial Reporting Manual published by the Virginia Auditor of Public Accounts.

In practical terms, the fundamental part of making a budget useful is monitoring the progress of actual receipts and disbursements against budgeted – planned - figures. By monitoring 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.

Exhibit 5-3 compares BCPS per pupil disbursements for 2012-13 to the average of the seven peers and fifteen regional divisions. As the exhibit shows, BCPS's disbursements as follows:

- ◆ Total disbursement of \$10,416.96 is 5.17 percent greater than the peer average of \$9,905.18 and 15.46 percent less than the regional average of \$12,321.69;
- ◆ Disbursement for administration, attendance and health of \$494.51 is 30.69 percent greater than the peer average of \$378.39 but 9.67 percent less than the regional average of \$547.47;
- ◆ Disbursement for Instruction of \$7,588.84 is 5.67 percent greater than the peer average and 4.70 percent less than the regional average;
- ◆ Disbursement for transportation of \$635.90 is 7.64 percent less than the peer average and 8.65 percent less than the regional average; and
- ◆ Disbursement for debt service and transfers of \$304.36 is 116.06 percent greater than the peer average and 63.07 less than the regional average.

EXHIBIT 5-3
BOTETOURT COUNTY PUBLIC SCHOOLS
2012-13 DISBURSEMENTS PER PUPIL BY CATEGORY

PROGRAM	BCPS	PEER DIVISION AVERAGES	REGIONAL AVERAGES*	BCPS PER PUPIL COSTS ABOVE (BELOW) PEER AVERAGE		BCPS PER PUPIL COSTS ABOVE (BELOW) REGIONAL AVERAGE	
				AMOUNT	PERCENT	AMOUNT	PERCENT
Admin., Attendance & Health	\$494.51	\$378.39	\$547.47	\$116.1	30.69	-\$52.96	-9.67
Instruction	\$7,588.84	\$7,181.68	\$7,963.09	\$407.16	5.67	-\$374.25	-4.70
Pupil Transportation Services	\$635.90	\$687.86	\$695.43	-\$52.57	-7.64	-\$60.14	-8.65
Operations & Maintenance	\$906.97	\$858.98	\$1,126.07	\$47.99	5.59	-219.10	-19.46
School Food Services	\$416.22	\$414.08	\$526.84	\$2.14	0.52	-110.63	-21.00
Summer School	\$5.39	\$23.37	\$33.42	-\$17.98	-76.94	-\$28.03	-83.87
Adult Education	\$7.09	\$13.13	\$44.36	-\$6.04	-46.00	-\$37.27	-84.02
Pre-Kindergarten	\$35.98	\$127.91	\$149.54	-\$91.93	-71.87	-\$113.56	-75.94
Other Educational Programs	\$0.00	\$6.26	\$34.57	-\$6.26	-100.00	-\$34.57	-100.00
Facilities	\$22.31	\$72.64	\$376.69	-\$50.33	-69.29	-\$354.38	-94.08
Debt Service & Transfers	\$304.36	\$140.87	\$824.23	\$163.49	116.06	-\$519.87	-63.07
TOTAL DISBURSEMENTS	\$10,416.96	\$9905.18	\$12,321.69	\$511.78	5.17	-\$1,904.73	-15.46

*These school divisions are located geographically near Botetourt.

Source: Table 13 of the Superintendent's Annual Report for Virginia 2012-13, compiled by MGT, 2014.

Exhibit 5-4 presents a comparison of receipts by funding source for BCPS and the peer divisions. As shown, BCPS funds 37.78 percent of operating costs for the division from state funds, which closely matches the peer average of 41.86 percent. BCPS receives 43.69 percent of operating funds from the locality, as compared to the peer average of 36.22 percent. Federal funds for BCPS account for 4.62 percent of its revenue. The peer federal funds average is 8.97 percent. On the other hand, Botetourt County Public Schools is not eligible for significant Title I funds as it does not represent the qualities of a poorly funded or a "high risk (poor)" student population. The current economic environment of Botetourt County does not represent it as an economically disadvantaged community.

EXHIBIT 5-4
BOTETOURT COUNTY PUBLIC SCHOOLS
2012-13 COMPARISON OF RECEIPTS BY FUND SOURCE

DIVISION	SALES & USE TAX	STATE FUNDS	FEDERAL FUNDS	LOCAL FUNDS	OTHER FUNDS
Botetourt	10.10%	37.78%	4.62%	43.69%	3.81%
Accomack	8.65%	44.00%	14.98%	30.72%	1.65%
Caroline	10.78%	48.50%	10.81%	28.07%	1.84%
King George	11.60%	41.74%	6.56%	37.73%	2.37%
Mecklenburg	9.72%	46.56%	11.23%	27.09%	5.40%
Orange	10.12%	38.49%	9.59%	39.75%	2.06%
Powhatan	10.72%	34.92%	4.26%	47.56%	2.54%
Wythe	9.27%	43.84%	8.70%	34.58%	3.62%
Peer Average	10.04%	41.86%	8.97%	36.22%	2.91%

Source: Table12 of the Superintendent's Annual Report for Virginia, compiled by MGT, 2014.

Exhibit 5-5 compares the receipts by fund source for BCPS from 2010-11 through 2012-2013. The percent of sales and use tax increased from 9.86 percent in in 2010-2011 to 10.10 per cent in 2012-2013. State Funds increased from 36.02 per cent to 37.78 percent during the same period while local and other funds maintained a fairly constant proportion. Federal funds fell as a percentage of total receipts as federal programs were reduced as a result of federal sequestration-mandated budget reductions.

EXHIBIT 5-5
BOTETOURT COUNTY PUBLIC SCHOOLS
COMPARISON OF RECEIPTS BY FUND SOURCE, 2010-11 THROUGH 2012-13

Revenue Source	2010-2011	2011-2012	2012-2013
Sales & Use Tax	9.86%	10.04%	10.10%
State Funds	36.02%	36.35%	37.78%
Federal Funds	6.60%	7.51%	4.62%
Local Funds	43.58%	41.79%	43.68%
Other Funds	3.95%	4.32%	3.81%
Loans, Bonds, Etc.	0.00%	0.00%	0.00%

Source: Table12 of the Superintendent's Annual Report for Virginia, compiled by MGT, 2014.

State funds are allocated to each division based upon a funding formula that establishes a base cost for the 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 SOQ account is re-benchmarked each biennium based upon state-wide prevailing costs. The composite index incorporates a notion of a 55 percent state and 45 percent local 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 comparable 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. It should be noted that the SOQ funding formula does not include facility costs and capital needs. As such, it is often

thought that the State SOQ formula recognizes approximately half of the total expenses incurred by a school division.

Exhibit 5-6 represents BCPS and peer division local composite indexes for four biennia, including the periods 2008-2010 through 2014-2016. Of the peer group, Botetourt has the second highest index for the current biennium with Powhatan County exhibiting the highest ability to pay within the peer group. Wythe County has, and continues to be, the county with the least ability to fund schools through local funds within the peer group. Five school divisions within the group have experienced growth in their composite index indicating increased local wealth. Botetourt is pretty much in the middle of the pack experiencing the same level of improved wealth when compared to the rest of the divisions within the Commonwealth.

EXHIBIT 5-6
BOTETOURT COUNTY PUBLIC SCHOOLS
COMPARISON OF LOCAL COMPOSITE INDEXES

Division	2008-2010	2010-2012	2012-2014	2014-2016
Botetourt	.3606	.3682	.3710	.3720
Accomack	.3752	.3753	.3719	.3555
Caroline	.3817	.3580	.3306	.3272
King George	.4075	.3875	.3787	.3774
Mecklenburg	.2848	.3315	.3650	.3609
Orange	.4395	.4257	.3842	.3618
Powhatan	.3790	.3969	.4230	.3913
Wythe	.2929	.3142	.3204	.3183

Source: Virginia Department of Education Composite Index Calculations, compiled by MGT, 2014.

BCPS currently exhibits the highest administrative spending ratio within the peer group; however it is well within the state and regional norms. In a small division, individual salaries can present a significant influence. In our opinion, BCPS is well within administrative spending norms. **Exhibit 5-7** represents the comparative percent of the budget spent on the administrative functions of the division for the past three fiscal years. Expenditures include activities related to establishing and administering policy for division operations, including board services, executive administration, information services, personnel, planning services, fiscal services, purchasing, and reprographics.

Only during the last reported year (2012-2013) were there data showing that BCPS was slightly above the peer, regional, and State averages. However, at 3.4 percent of the total operating cost, the rate is within reason.

EXHIBIT 5-7
BOTETOURT COUNTY PUBLIC SCHOOLS
COMPARATIVE ADMINISTRATIVE SPENDING

Division	2010-2011	2011-2012	2012-2013
Botetourt	2.44%	2.96%	3.40%
Accomack	2.00%	2.22%	2.12%
Caroline	1.75%	1.60%	1.86%
King George	2.19%	1.82%	1.90%
Mecklenburg	2.84%	2.90%	2.54%
Orange	2.96%	2.71%	2.95%
Powhatan	3.05%	3.21%	3.00%
Wythe	0.16%	1.51%	1.73%
Peer Average	2.38%	2.39%	2.48%
Regional Average	3.04%	3.18%	3.30%
State Average	2.77%	2.80%	3.33%

Source: Table 13 of the Superintendent's Annual Report for Virginia. Compiled by MGT, 2014.

FINDING

Section 22.1-100, Virginia State Statutes, requires school divisions to return unexpended state funds to the Commonwealth at the close of each fiscal year. However, Chapter 806 of the 2013 Acts of the Assembly allows school divisions that have met certain conditions to elect to carry forward to fiscal year 2014 any remaining state fund balances unexpended as of June 30, 2013. Local balances can also be carried forward one year, with the approval of the governing body.

The county has agreed to allow the school division to retain two-thirds of its operating fund balance in a capital reserve account. In recent years the division has used these funds to offset overruns in the school nutrition account and provide for certain unforeseen enhancements to the division's infrastructure. Because of the level of trust between the school administration and the county government, the school division enjoys this unique privilege.

COMMENDATION 5-D:

The division has created an agreement with the local governing body to return two-thirds of any school fund balances to the school capital expenditure fund.


FINDING

Reports of revenues and expenses are provided to the school board on a monthly basis. Unfortunately, it is difficult to ascertain the significance of a financial report when presented with an overwhelming amount of detail. The expenditure report comprises 55 pages of line item details while the revenue report contains an additional 10 pages of line item details.

Providing appropriate and regular budget updates is important to ensure that school board members are aware of the current fiscal health of the division. The school board must be made aware of the financial impact of changing operational and program needs during the school year.

Exhibit 5-8 represents an example of a single page of the current monthly financial report presented to the school board.

EXHIBIT 5-8
BOTETOURT COUNTY PUBLIC SCHOOLS
EXAMPLE MONTHLY FINANCIAL REPORT



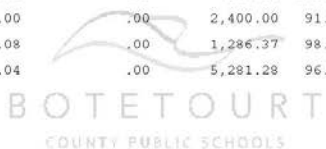
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BOTETOURT COUNTY PUBLIC SCHOOLS
FY 14 JUNE EXPENDITURE REPORT

P 1
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FOR 2014 12

ACCOUNTS FOR:	ORIGINAL	REVISED	YTD EXPENDED	MTD EXPENDED	ENC/REQ	AVAILABLE	PCT
0100 General Fund	APPROP	BUDGET				BUDGET	USED
200 Elementary							
0100 Regular Programs							
61100 Classroom Instruction							
0100-200-0100-61100-511200-000-	-0000	SAL: ELEM TEACHERS					
	8,118,484	8,118,484.00	6,775,656.13	759,538.88	.00	1,342,827.87	83.5%
0100-200-0100-61100-511510-000-	-0000	SAL: INSTR AIDES					
	139,129	139,129.00	94,198.64	8,824.95	.00	44,930.36	67.7%
0100-200-0100-61100-515200-000-	-0000	SAL: SUB TEACHERS					
	156,174	156,174.00	228,674.04	61,489.50	.00	-72,500.04	146.4%
0100-200-0100-61100-515200-000-10004-0000	-0000	PALS SUB CERTF					
	0	.00	4,700.00	.00	.00	-4,700.00	100.0%
0100-200-0100-61100-515210-000-	-0000	SAL: SUB CLASSIFIED					
	3,425	3,425.00	13,430.37	3,222.76	.00	-10,005.37	392.1%
0100-200-0100-61100-516200-000-	-0000	SAL: ELEM SUPP					
	64,691	64,691.00	78,881.46	5,897.68	.00	-14,190.46	121.9%
0100-200-0100-61100-516210-000-	-0000	SAL: SUPP CLASSIFIED					
	15,000	15,000.00	545.44	81.07	.00	14,454.56	3.6%
0100-200-0100-61100-516500-000-	-0000	SAL: ST NTL BOARD INCENTIVE					
	17,000	17,000.00	17,500.00	.00	.00	-500.00	102.9%
0100-200-0100-61100-521000-000-	-0000	FICA BENEFITS					
	664,058	664,057.96	544,771.15	64,256.39	.00	119,286.81	82.0%
0100-200-0100-61100-521000-000-10004-0000	-0000	PALS FICA					
	0	.00	359.56	.00	.00	-359.56	100.0%
0100-200-0100-61100-522100-000-	-0000	VRS BENEFITS					
	960,815	960,814.51	947,325.78	94,753.69	.00	13,488.73	98.6%
0100-200-0100-61100-523000-000-	-0000	HMP BENEFITS					
	1,113,589	1,113,588.96	858,490.91	86,592.69	.00	255,098.05	77.1%
0100-200-0100-61100-524000-000-	-0000	GLI BENEFIT					
	98,059	98,059.05	96,683.50	9,670.51	.00	1,375.55	98.6%
0100-200-0100-61100-526000-000-	-0000	UNEMPLOYMENT INSURANCE					
	0	.00	205.56	.00	.00	-205.56	100.0%
0100-200-0100-61100-527000-000-	-0000	WORKERS COMPENSATION					
	29,400	29,400.00	27,000.00	27,000.00	.00	2,400.00	91.8%
0100-200-0100-61100-527500-000-	-0000	RHCC					
	91,467	91,467.04	90,180.67	9,020.08	.00	1,286.37	98.6%
0100-200-0100-61100-528000-000-	-0000	OTHER BENEFITS					
	166,569	166,569.00	161,287.72	26,901.04	.00	5,281.28	96.8%



Source: BCPS monthly financial report, 2014.

RECOMMENDATION 5-1:

Provide summary expenditure and revenue information, as well as fund balance information, for monthly school board review.

It is recommended that a management summary report be prepared that includes categorical information in a format that is easy to assimilate. This is in addition to the detailed reports currently provided. **Exhibit 5-9** offers a recommended format for school board reporting.

EXHIBIT 5-9
BOTETOURT COUNTY PUBLIC SCHOOLS
PROPOSED MONTHLY FINANCIAL SUMMARY REPORT FORMAT

	REVENUE			EXPENSES			Variance
	Budget	Actual	Difference	Budget	Actual	Difference	
Regular Fund	\$48,029,696.00	\$47,943,557.08	-\$86,138.92	\$48,029,696.00	\$47,998,498.43	-\$31,197.57	-\$54,941.35
Self-Sustaining Fund	\$2,454,155.00	\$1,595,580.35	-\$858,574.65	\$2,454,155.00	\$1,542,796.35	-\$911,358.65	\$52,784.00
Competitive Grants	\$65,707.00	\$17,407.84	-\$48,299.16	\$65,707.00	\$15,250.27	-\$50,456.73	\$2,157.57
Regional Board	\$990,786.00	\$861,800.72	-\$128,985.28	\$990,786.00	\$861,800.70	-\$128,985.30	\$0.02
School Nutrition	\$2,200,595.00	\$1,872,959.91	-\$327,635.09	\$2,200,595.09	\$1,872,520.42	-\$328,074.67	\$439.49
Textbook Fund - Local	\$825,000.00	\$428,645.00	-\$396,355.00	\$825,000.00	\$374,190.03	-\$450,809.97	\$54,454.97
Capital Reserve	\$0.00	\$543,219.78	\$543,219.78	\$0.00	\$543,219.78	\$543,219.78	\$0.00
Credit Card Clearing	\$0.00	\$84,597.69	\$84,597.69	\$0.00	\$84,598.02	\$84,598.02	-\$0.33
	\$54,565,939.00	\$53,347,768.37	-\$1,218,170.63	\$54,565,939.09	\$53,292,874.00	-\$1,273,065.09	\$54,894.37

Source: Compiled by MGT, 2014.

FISCAL IMPACT

This recommendation can be implemented by the Senior Specialist, Budget and Finance spending approximately four hours per month.

FINDING

The September 2014 monthly financial report for the textbook fund does not properly reflect revenue and expenses related to the textbook fund. The regular fund budget reports an elementary textbook budget of \$218,901 and secondary textbook budget of \$218,901. It further reports state revenue to textbooks as \$281,071. The implication is that \$156,731 in local funds is needed to balance the textbook expenditures in the general fund. However, the separate self-sustaining textbook fund includes \$404,400 of elementary, \$285,000 of secondary, and \$135,600 of CTE requirements for total budget of \$825,000. It is offset by a single revenue entry of \$825,000. This suggests that textbook expenditures are overstated, as they are included in both the regular and textbook fund. Inter-fund transfers need to be reconciled, and/or eliminated.

RECOMMENDATION 5-2:

Remove the textbook fund from the Regular Operating and Self-Sustaining funds and show it as a completely discrete fund.

A revised textbook budget would show a total expenditure budget of \$825,000 funded by revenue from the state of \$281,071, local revenue of \$156,731, and \$387,198 from the textbook fund balance. Since the textbook budget is supported, in part, by a fund balance, it is best to include the use of fund balance as a revenue source.

FISCAL IMPACT

This recommendation can be implemented by the Director of Administration and Finance by revising the chart of accounts to include a separate textbook fund. This is estimated to take 3-5 hours.

FINDING

Departments are expected to live within available funds, however they are not provided with adequate information about their departmental budgets.

It was reported that when departments are faced with unbudgeted challenges, they ask the Director of Administration and Finance if there are funds available to meet their needs. Managers do not have adequate budget information to be held accountable and to plan for expenditures.

RECOMMENDATION 5-3:

Provide managers with budgets related to their area of responsibility and expect them to make fiscal decisions that are within their span of influence and the budget.

Many times, persons and managers closest to the point of impact can make the most reasonable decisions as to the value of competing options. Sometimes new opportunities arise that are not evident during the budget process but offer more promising results than the budgeted approach. A process needs to be provided that ensures funds are spent in the most appropriate manner. Providing managers with monthly financial reports that exhibit budget, actual expenditures, and remaining balance will encourage managers to promote positive solutions to current situations.

FISCAL IMPACT

This recommendation can be implemented by the Senior Specialist, Budget and Finance using MUNIS-generated reports on a monthly basis using 4-6 hours per month.

FINDING

Currently the division is not using the “revised budget” column included in the monthly financial report (see **Exhibit 5-9**). It was reported that administrative changes are not presented to the school board for approval and that the change is not reflected in the monthly financial report. It is important to keep a running status of original and revised budget amounts in order to properly assess needs in the next budget cycle. If unbudgeted needs are constantly accommodated without documentation they are never addressed in future budget cycles.

It is important that these expenditure changes be documented, even if they are within the spending parameters of the superintendent, as defined in policy. School board members must have all the tools at their disposal to ensure that they are responsible stewards of public funds.

RECOMMENDATION 5-4:

Present significant budget changes to the school board for information and include financial results of such actions in the revised budget column of the monthly financial report.

FISCAL IMPACT

This recommendation can be implemented by the Director of Administration and Finance based on monthly financial review estimated at 1-2 hours per month.

FINDING

With the implementation of the MUNIS accounting system schools are expected to maintain all school division-appropriated and school activity funds within this common accounting system. The high schools and middle schools have a dedicated bookkeeping position that can oversee the school’s

accounting system. The elementary bookkeepers are responsible for student activity accounting, as well as student attendance, reception, and a myriad of other school secretary activities. When MUNIS was adopted, all school accounting was moved within this system and School Funds On –Line was no longer available to site staff.

The MUNIS system provides an excellent process for documenting all of the required approvals related to purchasing requisitions, purchase orders, and invoice payments. It is a very demanding system that requires numerous entries to complete a simple purchasing and payment cycle. An added constraint is that only one person within the entire division may process checks at the same time. A weekly calendar has been prepared allowing certain check processing windows.

At the beginning of the year, the division drafts a check to each school covering the division’s allocation for consumable instructional needs. The allocation is based upon established rates and prior year average daily membership figures. The schools deposit the division funds in their individual school activity bank accounts. Charges for division funds as well as local school funds are transacted through the individual school bank accounts, but are managed through the MUNIS system.

Exhibit 5-10 details the school allocations for 2014-15.

EXHIBIT 5-10
BOTETOURT COUNTY PUBLIC SCHOOLS
FY 2015 BUDGETED SCHOOL ALLOCATIONS

SCHOOL	RATE	2014 ADM	AMOUNT
Breckenridge Elementary	\$92.92	226.33	\$21,030.58
Buchanan Elementary	\$92.92	243.39	\$22,615.80
Cloverdale Elementary	\$92.92	326.90	\$30,375.55
Colonial Elementary	\$92.92	419.81	\$39,008.75
Eagle Rock Elementary	\$92.92	150.00	\$13,938.00
Greenfield Elementary	\$92.92	385.00	\$35,857.83
Troutville Elementary	\$92.92	274.73	\$25,527.91
Central Academy Middle	\$98.70	461.10	\$45,510.56
Read Mountain Middle	\$98.70	716.63	\$70,731.39
Botetourt Tech. Ed. Center	\$100.43	257.50	\$25,860.73
James River High School	\$100.43	563.79	\$56,621.43
Lord Botetourt High School	\$100.43	1,052.39	\$105,691.53
Total School Allocations		5,078.47	\$492,770.05

Source: Division Finance Office, 2014.

According to policy “DGC”, school activity funds are the sole responsibility of the school principal, however, the MUNIS system requires all expenditures from the School Activity Funds in excess of \$500.00 to be approved by the Director of Finance and Administration.

School principals and bookkeepers identified the demands placed upon them by the MUNIS “work flow” system as problematic. Since school activity funds are, by policy, the responsibility of the principal, the process for accounting for such funds should be reasonably accommodated by local staff. Although it is

important for all school's account systems to be consistent for the purpose of audit and support, the system must be reasonably managed by local staff.

RECOMMENDATION 5-5:

Revert to "School Funds On-Line" for the purpose of accounting for school student activity funds. In conjunction with this action, the division should modify the MUNIS system to allow for the discrete reporting of school-appropriated funds, so that checks do not have to be written to schools and funds passed through their bank accounts.

Local school funds should be disassociated from divisional appropriations. Maintaining discrete school accounts within the MUNIS system will maintain the integrity of reporting and controlling appropriated fund reporting without co-mingling them with local revenues. In addition, the schools will be relieved of the additional MUNIS work-flow process upon local funds. The division should have or develop processes that can support and differentiate between purchases of minor (\$10.00 for a staff meeting) school-based supplies and major division purchases (\$80,000 for a school bus).

FISCAL IMPACT

"School Funds On-Line" could be reinstated at cost of approximately \$8,000 per year, based upon previous billings. It is further expected that previously existing procedures could be reinstated at no additional cost.

RECOMMENDATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
"School Funds On-Line" reinstated	(\$8,000)	(\$8,000)	(\$8,000)	(\$8,000)	(\$8,000)

FINDING

Currently the School Nutrition fund is included within a group of self-sustaining funds. As such, the entire group is offset with a singular revenue figure that assumes the combined group will be self-sustaining, requiring no local funding support. There are no revenue details related to anticipated meal sales, federal and state support or, other sources of School Nutrition revenue. In fact, over the past few years, the school nutrition fund has required a transfer from the local fund to offset operating losses. As evidenced in **Exhibit 5-11**, the school nutrition fund required the application of local funds in the amount of \$24,797.43 in 2012-13 to balance revenue with expenses.

EXHIBIT 5-11
BOTETOURT COUNTY PUBLIC SCHOOLS
FY 2012-13 FINANCIAL OVERVIEW

	REVENUE			EXPENSES			Variance
	Budget	Actual	Difference	Budget	Actual	Difference	
1 Regular Fund	\$47,501,779.00	\$46,952,921.64	-\$548,857.36	\$47,501,779.00	\$46,975,425.13	-\$526,353.87	-\$22,503.49
2 Self-Sustaining Fund	\$2,941,192.00	\$1,738,827.09	-\$1,202,364.91	\$2,941,192.00	\$1,716,323.61	-\$1,224,868.39	\$22,503.48
3 Regional Board	\$799,599.00	\$782,203.15	-\$17,395.85	\$799,599.00	\$782,203.14	-\$17,395.86	\$0.01
4 School Nutrition	\$2,210,020.43	\$1,995,128.89	-\$214,891.54	\$2,210,020.43	\$2,019,926.32	-\$190,094.11	-\$24,797.43
5 Textbook Fund - Local	\$813,613.57	\$637,778.75	-\$175,834.82	\$813,613.57	\$637,778.75	-\$175,834.82	\$0.00
8 Capital Reserve Fund	\$0.00	\$234,835.00	\$234,835.00	\$0.00	\$234,835.00	\$234,835.00	\$0.00
	\$54,266,204.00	\$52,341,694.52	-\$1,924,509.48	\$54,266,204.00	\$52,366,491.95	-\$1,899,712.05	-\$24,797.43

Source: Botetourt County Public Schools. Compiled by MGT, 2014.

RECOMMENDATION 5-6:

Provide additional revenue details for discrete self-sustaining funds that may include an anticipation of local funds or the use of fund balances.

Fund details relative to all expenses balanced against revenue for food sales, state revenue, federal revenue, investments and local appropriation should be exhibited within the school nutrition budget. In the past this program was presented within a list of self-sustaining programs with an assumed level of revenue to budget the aggregate total of all items. It is apparent from most recent years that an amount of local funds is needed to balance the school nutrition fund. Recent reports indicate that the operation is no longer self-sustaining. Local revenues and fund balances have been called upon to balance the fund, and the division has taken steps to adjust staffing expenditures in an effort to make the fund self-sustaining into the future. This recommendation would ensure regular information about these funds are provided and monitored.

FISCAL IMPACT

This recommendation can be implemented by the Senior Specialist, Budget and Finance at no additional cost.

5.C. PLANNING AND BUDGETING

Budget preparation and planning are important aspects of overall division operations. Providing adequate resources for programs within the constraints of available funding sources presents administrators with significant challenges, as there seem to be a never-ending opportunities for enhancing instructional deliveries. Sound fiscal management recommends forecasting a reasonable, but conservative, revenue figure, as well as reasonable, but aggressive, expenditures, to ensure that adequate funds are available. In other words it is always best to provide a conservative estimate of revenue while presenting a worst case estimate of expenses. It is much easier to manage within these two extremes, rather than hoping for the best of both worlds.

A school division's budget is a critical tool that enables a division to adequately maintain and control its financial resources. It also provides a funding roadmap for achieving the division's goals in delivering a sound instructional program and meeting its operational needs. School administrators, department heads, teachers, and community members, as well as central office administration and the school board should be involved in the budget development process.

The budget is a plan for funding the operational needs of the division and must remain adaptable to change. A budget is always a work in process, reflecting and accommodating current fiscal challenges.

FINDING

The current BCPS process includes perceived limited input from staff and community members during the budget development session.

During the development of the FY2014-15 budget, input previously requested of building principals and directors was not solicited. The superintendent and the director of administration and finance produced the initial budget submission, relying upon informal discussions with various staff members.

The BCPS budget process includes an early estimate of available revenues based upon the governor's budget recommendation. The governor's budget is usually presented around December 20th each year. The finance office projects state revenue using the VDOE-provided budget calculation tool. The budget calculation tool uses an estimation of the next year's average daily membership (ADM) in calculating the state's share of local revenue. The finance office then determines the impact of upcoming compensation and benefit costs and determines if next year's projected revenue will be less, the same, or more than the current budget. The difference is then used to determine if additional items can be included in the budget or if reductions must be made. Information from interviews conducted during the onsite review suggested limited engagement in the budget development process, including any input in prioritizing new purchases/programs/proposals or identifying areas for budget reduction.

Exhibit 5-12 represents the budget calendar for the FY 2014-15 budget.

EXHIBIT 5-12
BOTETOURT COUNTY PUBLIC SCHOOLS
2014-20115 BUDGET CALENDAR



Botetourt County Public Schools
143 Poor Farm Road
Fincastle, VA 24090
Telephone (540) 473-8263
Fax (540) 473-8298

*Office of
Division Superintendent*

TO: Members of the School Board

FROM: Anthony S. Brads, Ed.D.
Division Superintendent

SUBJECT: Revised FY15 School Board Budget Development

DATE: November 18, 2013

The following information identifies proposed dates for public input and budget committee meetings. Please review these dates and times to see if you have any conflicts with your personal calendar. I will be requesting your approval of these dates/times at the **December 12, 2013** School Board meeting.

The following meetings are open to the public to provide input for the development of the FY15 School Board Budget. Two school board members are requested to attend each meeting. In addition, two members of the Board of Supervisors are invited to attend each meeting.

January 14, 2014 (Tuesday)	Read Mountain Middle School - Forum	7:00 p.m.
January 16, 2014 (Thursday)	Central Academy Middle School - Forum	7:00 p.m.
<u>Alternate Date: (if inclement weather should occur on any of the above dates)</u>		
January 21, 2014 (Tuesday)	original location	7:00 p.m.

The School Board Budget Committee consists of all School Board members and designated members of the Board of Supervisors. The meetings are scheduled as follows:

January 30, 2014 (Thursday)	School Board Office	Board Room	8:30 a.m.
February 20, 2014 (Thursday)	School Board Office	Board Room	5:00 p.m.
February 27, 2014 (Thursday)	School Board Office	Board Room	8:30 a.m.
March 13, 2014 (Thursday)	School Board Office	Board Room	5:00 p.m.
March 20, 2014 (Thursday)	School Board Office	Board Room	8:30 a.m.
March 27, 2014 (Thursday)	School Board Office	Board Room	6:00 p.m. Public Hearing

Meetings are subject to change or cancellation at the discretion of the School Board Budget Committee.

Source: Division Finance Office, 2014.

RECOMMENDATION 5-7:

Adopt a budget preparation calendar that accommodates a wider range of engagement from the school staff, school board, and the public to ensure not only input, but also opportunities for prioritization of issues.

Since budgets embody this division's plans for current and future work, public participation or at least opportunities for engagement around budget development are important. **Exhibit 5-13** represents a

sample budget calendar. The inclusion of School Board Goals and a pre-budget workshop provide staff with clear focus as to what should be considered during the budget process. Only those staffing and operating requests that are aligned with the established school board priorities should be considered during the budget development process.

EXHIBIT 5-13
SAMPLE BUDGET DEVELOPMENT CALENDAR

TIME FRAME	ACTIVITY
Annually – typically when the board is re-structured or at the beginning of each school year	Identify, adopt, refine, review board goals, including any new initiatives, etc.
September	Create, update, review, revise departmental long-range targets for work, new initiatives, etc.
November	Conduct “pre-budget development” workshop to raise board and community awareness and provide early information. Publish budget development calendar, including dates for open meetings, input sessions, workshop sessions. Identify specific session dates for topic areas, e.g., general fund, federal funds, capital funds, technology or curriculum updates, staffing ratio discussions, etc.
December	Create finance report based on current status
January - March	Continue to update financial picture with data, as available from state, local, and grant-funded sources
January - March	Hold scheduled input, presentation, and response sessions, as advertised
As required by state law or board policy	Conduct formal budget hearing(s) and board vote(s). Present final budget request to county.

Source: MGT, 2014.

FISCAL IMPACT

This recommendation can be implemented by the Director of Administration and Finance in place of current budget development activities.

FINDING

BCPS's budget process could be described as "incremental budgeting." In traditional, incremental budgeting, departmental managers justify only variances versus past years, based on the assumption that the "baseline" is automatically approved. The BCPS budget document is presented showing the prior fiscal year appropriation, the current year appropriation, the proposed appropriation, and the difference between the current and proposed appropriation. Actual expenses are not included in the budget document. The budget document includes no details relative to the actual spending plan for the division. Looking at the line item budget, one would not be able to ascertain what specific plans for spending are included.

Effective school divisions rely upon zero-based budgeting, instead of incremental budgeting, because it provides them an accurate assessment of current needs rather than a perpetuation of assumed levels of funding.

RECOMMENDATION 5-8:

Develop and implement a zero-based budgeting process that delineates and prioritizes the true needs of the division.

Zero-based budgeting is an approach to planning and decision-making that reverses the working process of traditional incremental budgeting. With zero-based budgeting, every line item of the budget must be approved, rather than only changes. Zero-based budgeting requires the budget request be re-evaluated thoroughly, starting from the zero-base. This process is independent of whether the total budget or specific line items are increasing or decreasing.

Zero-based budgeting provides the following advantages:

- ◆ Efficient allocation of resources, as it is based on needs and benefits, rather than history.
- ◆ Drives managers to find cost effective ways to improve operations.
- ◆ Detects inflated budgets.
- ◆ Increases staff motivation by providing greater initiative and responsibility in decision-making.
- ◆ Increases communication and coordination within the organization.
- ◆ Identifies and eliminates wasteful and obsolete operations.
- ◆ Identifies opportunities for outsourcing.
- ◆ Forces cost centers to identify their mission and their relationship to overall goals.

Many school divisions that have adopted this approach have "found money" in existing operations that can be re-channeled to other initiatives.

The disadvantages to zero-based budgeting include:

- ◆ More time-consuming than incremental budgeting.
- ◆ Justifying every line item can be problematic for departments with intangible outputs.
- ◆ Requires specific training, due to increased complexity vs. incremental budgeting.

This process does not suggest that the division's budget be built by the school board in an open forum. It remains the primary responsibility of the superintendent to recommend a budget to the school board

that meets the needs of the division. It is the school board's responsibility, however to understand what is actually included in the budget. It is important for the school board to understand significant changes in budget and to be aware of items that were excluded from the final budget.

FISCAL IMPACT

This recommendation can be implemented by the Superintendent and Director of Administration and Finance at no additional cost and within current responsibilities. It is estimated that the process could take 40-60 hours for the initial zero-based budget development and 20-40 hours in future years. Some training or study may be required to fully develop the process for BCPS use. It is recommended that the division contact other school divisions currently using this type of budgeting process.

FINDING

The division posts a summary of revenue, a line-item listing of the regular fund, and a listing of the self-sustaining funds on its website for public information. There is no narrative summary of information that is made available to assist in understanding the data.

Exhibit 5-14, on the following pages, depicts examples of the division's web pages:

EXHIBIT 5-14
BOTETOURT COUNTY PUBLIC SCHOOLS
PUBLIC BUDGET DOCUMENTS

**BOTETOURT COUNTY PUBLIC SCHOOLS
2014-2015 REVENUE**

<u>Account</u>	<u>Account Title</u>	<u>2013-2014</u>	<u>2014-2015</u>	<u>Increase / Decrease</u>
450201	Rents	\$ 120,000	\$ 120,000	\$ -
461201	Tuition-Day School	\$ 15,000	\$ 15,000	\$ -
461205	Transportation of Pupils	\$ 32,000	\$ 32,000	\$ -
461207	Tuition-Summer School	\$ 1,500	\$ 1,500	\$ -
480303	Other Rebates/Refunds	\$ 30,000	\$ 30,000	\$ -
489908	Sale of School Buses	\$ 4,000	\$ 4,000	\$ -
489909	Sale of Other Equipment	\$ 5,000	\$ 5,000	\$ -
489910	Insurance Adjustments	\$ 10,000	\$ 10,000	\$ -
489912	Other Funds	\$ 497,391	\$ 497,391	\$ -
490102	Other Payments Another City/County	\$ 157,000	\$ 157,000	\$ -
	OTHER FUNDS TOTAL	\$ 871,891	\$ 871,891	\$ -
440202	Basic Aid Entitlement	\$ 12,605,465	\$ 12,581,146	\$ (24,319)
440203	ISAEP	\$ 7,859	\$ 7,859	\$ -
440204	Remedial Summer School	\$ 29,752	\$ 42,782	\$ 13,030
440205	Foster Home Children Regular	\$ 40,505	\$ 31,541	\$ (8,964)
440207	Gifted Education SOQ	\$ 139,607	\$ 137,293	\$ (2,314)
440208	Prev/Intrvn/Remedial SOQ	\$ 151,746	\$ 169,426	\$ 17,680
440212	Special Education SOQ	\$ 1,808,815	\$ 1,624,148	\$ (184,667)
440214	Textbook Payments	\$ 272,324	\$ 281,071	\$ 8,747
440217	Vocational Ed SOQ	\$ 364,191	\$ 271,665	\$ (92,526)
440221	Social Security Instructional	\$ 813,360	\$ 777,021	\$ (36,339)
440223	Teacher Retirement Instructional	\$ 1,356,611	\$ 1,592,016	\$ 235,405
440228	Early Reading Intervention	\$ 51,059	\$ 47,804	\$ (3,255)
440241	Group Life Insurance	\$ 51,594	\$ 52,580	\$ 986
440246	Homebound	\$ 48,052	\$ 32,950	\$ (15,102)
440248	Regional Tuition Programs Spec Ed	\$ 120,831	\$ 119,179	\$ (1,652)
440252	Voc Ed State Equipment	\$ 15,812	\$ 15,812	\$ -
440253	Voc Ed Occupational Prep	\$ 47,436	\$ 46,479	\$ (957)
440259	Foster Care Spec Ed	\$ 94,510	\$ 73,597	\$ (20,913)
440265	At Risk	\$ 69,911	\$ 71,542	\$ 1,631
440275	K-3 Class Size Reduction	\$ -	\$ 54,213	\$ 54,213
440281	VPI At Risk 4 Yr Olds	\$ 113,220	\$ 139,460	\$ 26,240
440291	Mentor Teacher Program	\$ 2,943	\$ 2,943	\$ -
440295	Special Ed in Jails	\$ -	\$ 22,110	\$ 22,110
440308	Sales Tax 1%	\$ 4,909,334	\$ 4,879,940	\$ (29,394)
440309	English as a 2nd Language	\$ 25,503	\$ 20,766	\$ (4,737)
440312	Sales Tax 1/8%	\$ 545,482	\$ 542,215	\$ (3,267)
440399	NBC Supplement	\$ 32,000	\$ 27,000	\$ (5,000)
440405	SOL Algebra Readiness	\$ 24,127	\$ 24,502	\$ 375
410405	VPSA Technology Grant	\$ 336,000	\$ 336,000	\$ -
445555	Compensation Supplement	\$ 309,424	\$ -	\$ (309,424)
449999	Addtl Asst w/Retirement/Inflation/Preschool	\$ 185,535	\$ -	\$ (185,535)
	STATE FUNDS TOTAL	\$24,573,008	\$24,025,060	\$ (547,948)
410665	Federal Land Use	\$ 55,000	\$ 55,000	\$ -
	FEDERAL FUNDS TOTAL	\$ 55,000	\$ 55,000	\$ -
451050	Appropriation Board of Supervisors	\$ 21,734,788	\$ 22,549,282	\$ 814,494
	Debt Service	\$ 795,009	\$ 775,462	\$ (19,547)
	COUNTY FUNDS TOTAL	\$22,529,797	\$23,324,744	\$ 794,947
	TOTAL REVENUE	\$ 48,029,696	\$ 48,276,695	\$ 246,999

Botetourt County Public Schools		Annual Expenditure Budget Comparison			page 1
3/27/2014 4:45:40 PM		PROJECTION: FY 15 BUDGET			BCPS\hipes
200	Elementary				
0100	Regular Programs				
61100	Classroom Instruction				
Object Code	Description	2013 Appropriation	2014 Appropriation	2015 Appropriation	Difference between FY2014 - FY2015
511200	SAL: ELEM TEACHERS	\$ 7,763,121.00	\$ 8,118,484.00	\$ 7,831,034.00	\$ -287,450.00
511510	SAL: INSTR AIDES	\$ 114,274.00	\$ 139,129.00	\$ 115,920.12	\$ -23,208.88
515200	SAL: SUB TEACHERS	\$ 131,174.00	\$ 156,174.00	\$ 156,174.00	\$ 0.00
515210	SAL: SUB CLASSIFIED	\$ 3,425.00	\$ 3,425.00	\$ 3,425.00	\$ 0.00
516200	SAL: ELEM SUPP	\$ 64,691.00	\$ 64,691.00	\$ 64,691.00	\$ 0.00
516210	SAL: SUPP CLASSIFIED	\$ 15,000.00	\$ 15,000.00	\$ 15,000.00	\$ 0.00
516500	SAL: ST NTL BOARD INCENTIVE	\$ 17,000.00	\$ 17,000.00	\$ 17,000.00	\$ 0.00
521000	FICA BENEFITS	\$ 649,188.06	\$ 664,057.96	\$ 636,466.59	\$ -27,591.37
522100	VRS BENEFITS	\$ 1,244,918.23	\$ 960,814.51	\$ 1,136,872.47	\$ 176,057.96
522200	VRS HYBRID	\$	\$ 0.00	\$ 4,200.00	\$ 4,200.00
523000	HMP BENEFITS	\$ 1,066,339.92	\$ 1,113,588.96	\$ 1,072,177.44	\$ -41,411.52
524000	GLI BENEFIT	\$ 94,601.00	\$ 98,059.05	\$ 103,494.66	\$ 5,435.61
527000	WORKERS COMPENSATION	\$ 29,400.00	\$ 29,400.00	\$ 29,400.00	\$ 0.00
527500	RHCC	\$ 88,241.44	\$ 91,467.04	\$ 92,517.92	\$ 1,050.88
528000	OTHER BENEFITS	\$ 191,069.00	\$ 166,569.00	\$ 116,569.00	\$ -50,000.00
530000	ELEM REG PURCH SERVICES	\$ 58,726.00	\$ 58,726.00	\$ 58,726.00	\$ 0.00
530003	ELEM REG CONFERENCE	\$ 2,000.00	\$ 2,000.00	\$ 2,000.00	\$ 0.00
554000	ELEM REG LEASES/RENTALS	\$ 47,171.00	\$ 47,171.00	\$ 47,171.00	\$ 0.00
555000	ELEM REG TEACHER TRAVEL	\$ 3,270.00	\$ 3,270.00	\$ 3,270.00	\$ 0.00
560000	ELEM REG MATLS & SUPPLIES	\$ 75,735.00	\$ 75,735.00	\$ 75,735.00	\$ 0.00
560200	ELEM TEXTBOOKS	\$ 222,082.00	\$ 216,474.00	\$ 218,901.00	\$ 2,427.00
560300	ELEM INSTR MATLS	\$ 40,000.00	\$ 40,000.00	\$ 40,000.00	\$ 0.00
Total		\$ 11,921,426.65	\$ 12,081,235.52	\$ 11,840,745.20	\$ -240,490.32

BOTETOURT COUNTY PUBLIC SCHOOLS

Fincastle, Virginia

2014-2015

SELF-SUSTAINING FUNDS

The following budgets for self-sustaining funds reflect programs which are not carried in the regular school budget. The funding source, either the Federal government, State government, the Roanoke Valley Regional Program, School Nutrition Fund, or other special grants, covers the cost of these programs. The budgets have been prepared using past experience and the best information available from funding agencies. Expenditures will not be made until allocations are guaranteed by the appropriate funding agency. In no instance will expenditures exceed funding allocations.

2014-2015 Self-Sustaining Funds

No Child Left Behind (NCLB)	\$ 554,989.00
Perkins CTE, Federal – Title I	\$ 50,655.00
IDEA Part B, Section 611, Special Education	\$ 1,681,859.00
IDEA Part B, Section 619, Preschool Spec. Ed.	
Adult Basic Education	\$ 40,000.00
Competitive Grants	\$ 65,707.00
Textbooks	\$ 825,000.00
School Nutrition	\$ 1,824,950.00
Roanoke Valley Regional Program	\$ 1,065,333.00
Total	\$ 6,108,493.00

Source: Botetourt County Public Schools, 2014.

RECOMMENDATION 5-9:

Develop an annual budget format for public review that provides all readers with easy access to the data.

As a minimum, the budget document should include both revenue and expense details with at least one year of actual data. It is further recommended that the budget contain summary and detailed information, along with charts, graphs, and explanatory narratives, to help readers understand what is included in the numbers.

It may be helpful for staff to review the budget web postings of comparable divisions for examples of more descriptive budget postings.

FISCAL IMPACT

It is expected that a revised budget presentation, including all supporting documentation, could be developed within 25 hours of administrative time by the Director of Administration and Finance and the Senior Specialist, Budget and Finance.

5.D. ADMINISTRATIVE TECHNOLOGY

School division technology often focuses primarily on instructional technology, leaving many divisions with minimal administrative applications. The failure to invest in technology at the administrative level stunts instructional programs by diverting vital resources to labor-intensive manual processes. Fully automated and integrated administrative functions can help the division eliminate some of the manual aspects of processes requiring labor hours and improve accuracy of data reports.

FINDING

In October 2011, BCPS began the process of investigating the replacement of its aging financial management system with a modern, integrated resource management system. After a review of options, the division selected the MUNIS system. The anticipated cost of the platform included the following planned expenditures:

FY 2012	Software Licenses	\$88,520
FY 2013	System Conversion	\$50,600
	Training	\$64,000
FY 2014	Recurring Software Support	\$20,068

The total, upfront investment was budgeted at \$203,700, with an annual recurring cost of \$20,068 for software support. When compared to the cost of various software products to be retired, the annual savings was calculated to be \$20,832. It was determined that the new system would more than pay for itself.

Following initial implementation, the division opted for a vendor-provided disaster recovery feature costing an additional \$5,000.

During FY 2013, the BCPS finance staff assumed responsibility for the on-site implementation of the new MUNIS system. The system required significant customization for the BCPS environment. After exceptional efforts by the vendor and the division's staff, the system went live for the 2014 fiscal year, providing all necessary transaction processing and financial reports.

COMMENDATION 5-E:

The school division recently implemented a state-of-the-art resource management system that fully integrates all accounting, purchasing and personnel functions within an integrated software platform.

FINDING

The MUNIS system provides an automated workflow system that provides for various approval levels. It is evident from the formatting of the monthly financial report that some modification is necessary to present the data in a user-friendly condition.

The following depicts a simplified version of the process for ordering, receiving, and paying for an item.

- ◆ A need is identified.
- ◆ A requisition is entered enter it to the system with all relevant information.
 - A authorization request is sent to the appropriate individual.
 - ▶ *Embedded within the system is a scheme for assigning the proper approvals based upon the organization structure and the amount of the request.*
 - ▶ *The system also maintains tables related to appropriate accounts and interrogates the general ledger system to verify availability of funds.*
 - ▶ *An email is sent to the approving staff member notifying him/her of a pending approval request.*
- ◆ An approval request is generated and forwarded to the appropriate approver.
- ◆ The requisition is approved, denied or returned for additional information.
- ◆ Upon approval a purchase order is generated.
 - The purchase order is forwarded to the requisitioner for disposition.
 - ▶ The requestor can e-mail, mail or order on line with an approved purchase order number.
- ◆ When the goods/services are received the requestor forwards the items to the accounts payable office with an indication that the goods have been received.
- ◆ A request for payment is generated and sent to the proper approver.
- ◆ Upon approval a check is generated.

Although the system is much more complex with many more checks and balances, the general flow is properly depicted. Indications from the users relate to the complexity of the system and the number of additional steps that are required. It is clear that there is a need for additional training and possibly modification of the process to make it more user-friendly.

Users have complained about the complexity of the system and the number of additional steps required in completing a posting task. It is also reported that user reports are difficult to read.

RECOMMENDATION 5-10:

Perform an audit of the MUNIS system to insure that the platform is operating as expected.

Now that the MUNIS system has operated for a complete fiscal year cycle, it is time to evaluate its performance and make any “as installed” modifications that may enhance its performance.

Understanding that the MUNIS installation is unique to each location, it is imperative that the system is properly configured and installed.

It is evident from the formatting of the monthly financial report that some modification is necessary to present the data in a user friendly condition. It is also apparent from numerous user comments that some processes might be modified to present a more user friendly interface.

FISCAL IMPACT

This recommendation can be implemented by the Director of Administration and Finance utilizing approximately 80 hours of programming time from the district's IT programmer.

FINDING

During onsite interviews and site visit data reviews, staff identified issues and concerns regarding the complexity and difficulty in implementing the MUNIS system. It is not surprising that users find any new process difficult to assimilate, however there may be some procedures that need to be or could be improved. It was further mentioned that additional or modified reports may be more useful.

In an effort to make the system easier to understand, the accounts payable specialist has prepared and posted a number of on-line MUNIS processing procedures to assist school bookkeepers and departmental secretaries in entering financial data. The MUNIS system also includes a considerable number of help screens related to specific functions.

A division technology programmer tasked with supporting the MUNIS system is currently engaged in supporting the student data management system.

RECOMMENDATION 5-11:

Insure that all MUNIS operating procedures are properly documented and published and that all generated reports are available and properly formatted.

It is recommended that all of the individual procedures be compiled into a comprehensive manual that address the entire accounting process. It is further recommended that the programmer previously assigned to enhance the MUNIS system be re-instated in that position.

FISCAL IMPACT

It is anticipated that 40-60 hours of finance department staff time may be required for the development of a consolidated user manual.

5.E. REVIEW AND EVALUATION OF CONTRACTING PROCESS

Division management functions, such as staff development and legal services, can be purchased or contracted for through private companies or inter-local agreements with neighboring divisions or other governmental entities. It is important to regularly evaluate whether there are goods or services that can be obtained from the private sector at a lower cost, higher quality, or both. It is equally important to continually evaluate existing contracts to determine if the division is getting the best value possible through the contracting arrangement.

MGT's review has not identified any commendations or recommendations to increase division efficiency or effectiveness in these areas.

6.0 TRANSPORTATION

Throughout the Commonwealth of Virginia, more than 15,000 school buses transport almost one million students to and from schools and school activities each day during the school year. This is accomplished by the school systems throughout the state and is a tribute to the leaders who ensure that they provide the safest mode of transportation in comparison with any other form of public or private transportation in the country.

The primary goal of all school transportation departments is to deliver their services safely, efficiently, and effectively. The more effective the operation, the higher is the quality of transportation services. An efficient and effective transportation department will directly and indirectly support the educational goal of the entire school division. The more efficient the transportation operation, the greater the potential return of dollars to the school classrooms. Virginia allows school divisions to provide pupil transportation services, but it is not required. Federal regulations require school divisions to provide transportation for students with disabilities and/or if a student receives special education services.

This section presents the findings, commendations, and recommendations for the Botetourt County Public Schools (BCPS) transportation department.

The sections of the section include:

- 6.A. Organization and Staffing
- 6.B. Planning, Policies and Procedures
- 6.C. Routing and Scheduling
- 6.D. State Reporting
- 6.E. Training and Safety
- 6.F. Vehicle Maintenance and Bus Replacement Schedules

OVERVIEW

Botetourt County Public Schools (BCPS) has chosen to provide transportation services and is in compliance with Virginia Department of Education (VDOE) transportation policies, regulations and procedures. The BCPS Transportation Department has one primary mission: to safely, effectively, and efficiently transport students to and from school and school activities.

BCPS encompasses all of Botetourt County, with approximately 4,856 students enrolled for the 2014-15 School Year. In 2013-14, BCPS transported 2,820 students on 50 regular route buses and 24 students on 15 exclusive route buses that traveled more than 766,000 total miles.

The department provides daily transportation to seven elementary schools; two middle schools; three high schools; one learning academy; and one technical education center. In addition, the department provides transportation to the regional Governor's School, between school shuttle services, after school programs, and curricular and extracurricular activity transportation (field and athletic trips).

Exhibit 6-1 shows a comparison of the operational data for the previous three fiscal years. The regular transportation ridership and the number of buses have dropped (riders by 6.25 percent or 188; buses by 2.74 percent or two) while the miles, total operational cost, cost per mile, and cost per student have increased (miles by .13 percent or 657 miles; operational cost by 2.85 percent or \$35,732.65; cost per mile by 2.91 percent or \$.07; cost per student by 8.9 percent or \$39.70).

The exclusive transportation ridership, mileage, and operational cost has dropped (riders by 38.5 percent or 27 students; miles by 16.33 percent or 21,781; cost by 2.46 percent or \$12,674), while the cost per mile and cost per student has increased (cost per mile by 14.22 percent or \$.64; cost per student by 37.4 percent or \$4,328.65).

EXHIBIT 6-1
BOTETOURT COUNTY PUBLIC SCHOOLS
TRANSPORTATION DEPARTMENT
COMPARISON OF DATA, FY 2010-11 – FY 2012-13

TRANSPORTATION	STUDENTS	BUSES	MILES	TOTAL OPERATIONAL COST	COST PER MILE	COST PER STUDENT
Regular Service						
FY 2010-11	3,008	73	525,726	\$1,219,706.32	\$2.32	\$405.49
FY 2011-12	2,930	73	509,928	\$1,193,159.35	\$2.34	\$407.22
FY 2012-13	2,820	71	526,383	\$1,255,438.97	\$2.39	\$445.19
Exclusive Service						
FY 2010-11	70	21	133,380	\$514,691	\$3.86	\$7,324.48
FY 2011-12	57	21	110,844	\$480,886	\$4.34	\$8,373.43
FY 2012-13	43	24	111,600	\$502,017	\$4.50	\$11,653.13

Source: Virginia Department of Education, Office of Support Services, 2014.

Exhibit 6-2 shows the comparison of the number of students being transported by school bus in BCPS and the identified peer divisions. BCPS ridership has decreased over the past four years, as has the ridership in the peer divisions, with the exception of Orange County. BCPS ridership is currently below the peer average.

EXHIBIT 6-2
BOTETOURT COUNTY PUBLIC SCHOOLS
COMPARISON OF BUS RIDERSHIP
2009-10 THROUGH 2012-13 SCHOOL YEARS

DIVISION	2009-10	2010-11	2011-12	2012-13	CHANGE
Botetourt County	3,254	3,008	2,930	2,820	(434)
Accomack County	4,422	3,532	3,340	3,323	(1,099)
Caroline County	3,633	3,660	3,761	3,613	(20)
King George County	2,905	2,538	2,363	2,374	(531)
Mecklenburg County	4,149	3,877	4,359	---	---
Orange County	3,790	3,822	3,839	3,880	90
Powhatan County	3,802	3,147	3,387	3,389	(413)
Wythe County	3,098	3,151	2,551	2,484	(614)
Peer Average	3,686	3,390	3,371	3,177	(431)

Source: Virginia Department of Education, Office of Support Services, 2014.

Note: Mecklenburg County did not report any student transportation data in FY 2012-13. The peer Average does not include Mecklenburg County in FY 2012-13.

Exhibit 6-3 compares the school bus mileage for different categories for the 2012-2013 school year. BCPS is below the peer average for the regular, exclusive, and summer school programs and the total mileage category. The deadhead mileage for BCPS is third and second in the between-school mileage category.

EXHIBIT 6-3
BOTETOURT COUNTY PUBLIC SCHOOLS
COMPARISON OF MILES TRAVELED BY BUS
2012-13

DIVISION	REGULAR	EXCLUSIVE	DEADHEAD	BETWEEN SCHOOL	SUMMER SCHOOL	TOTAL
Botetourt	526,383	111,600	429,258	59,238	8,396	1,074,151
Accomack	924,688	172,260	313,560	76,680	22,125	1,564,499
Caroline	708,249	305,952	162,849	0	13,223	1,190,273
King George	510,035	215,800	430,569	47,016	6,345	1,209,765
Mecklenburg	---	---	---	---	---	---
Orange	779,392	201,379	398,276	3,612	18,977	1,401,636
Powhatan	750,631	124,582	435,060	0	2,960	1,313,233
Wythe	390,034	169,919	207,334	35,956	360	803,603
Peer Average	677,172	198,315	324,608	40,816	12,064	1,426,193

Source: Virginia Department of Education, Office of Support Services, 2014.

Note: Mecklenburg County did not report any student transportation data in FY 2012-13. The peer average does not include Mecklenburg County. The peer average does not include the two divisions that did not provide between-school services.

Exhibit 6-4 compares the cost per mile and cost per student for the transportation costs in BCPS and the peer divisions. BCPS's cost per mile is higher than the peer average. While BCPS's cost per mile and cost per student is higher than the average cost in the peer divisions, the regular transportation cost per mile and per pupil is below the state average. The exclusive cost per mile is the highest among the peer divisions. However, the cost per pupil is fourth among the peer divisions, is slightly below the state average, and is the 26th lowest cost per pupil of the 133 school divisions in the state.

EXHIBIT 6-4
 BOTETOURT COUNTY PUBLIC SCHOOLS
 COMPARATIVE
 SCHOOL BUS COSTS PER MILE / PER PUPIL, 2012-13

DIVISION	REGULAR COST/MILE	REGULAR COST/PUPIL	EXCLUSIVE COST/MILE	EXCLUSIVE COST/PUPIL
Botetourt County	\$2.39	\$445.19	\$4.50	\$11,653.13
Accomack County	\$1.77	\$491.31	\$2.49	\$5,875.52
Caroline County	\$2.29	\$449.32	\$2.29	\$9,877.11
King George County	\$1.43	\$307.60	\$1.91	\$5,084.06
Mecklenburg County	---	---	---	---
Orange County	\$2.18	\$449.03	\$3.17	\$9,110.21
Wythe County	\$2.25	\$354.06	\$3.19	\$20,838.93
Peer Average	\$2.06	\$431.23	\$2.89	\$9,904.46
State Average	\$2.96	\$446.18	\$4.07	\$7,979.35

Source: Virginia Department of Education, Office of Support Services, 2014.

Note: Mecklenburg County did not report any student transportation data in FY 2012-13. The peer Average does not include Mecklenburg County.

Conditions in Botetourt County of importance to this review include:

- ◆ Delay in acquiring replacement school buses and support vehicles.
- ◆ Lack of adequate numbers of substitute bus drivers and aides to insure bus routes are on time.
- ◆ Delay of maintenance repairs to school buses due to limited funding.
- ◆ Excessive number of spare school buses in the fleet.
- ◆ Excessive number of non-school bus vehicles in the fleet.

CHAPTER SUMMARY

In preparing this section, MGT of America, Inc., reviewed extensive documents provided by the division, and interviewed the transportation staff, schools' staff, the vehicle maintenance employees, and a group of school bus drivers. Additionally, data were collected through the Virginia Department of Education website, the BCPS website, the Auditor of Public Accounts website, and the Virginia State Statutes.

The following commendations are included in the chapter:

- Commendation 6-A** **School bus drivers and aides work professionally with the BCPS school staff in providing safe drop-off and pick-up for students at the school bus ramps.**
- Commendation 6-B** **BCPS is commended for having a VDOE-certified school bus driver trainer program and a DMV certified third-party tester for prospective and new school bus drivers.**
- Commendation 6-C** **BCPS is commended for providing the school bus mechanics vehicle maintenance training during the annual VDOE/VPT conference.**

The following recommendations are included in the section:

- | | |
|----------------------------|--|
| Recommendation 6-1 | Provide all transportation department employees with a written job description and job responsibilities. |
| Recommendation 6-2 | Hire three additional, full-time substitute school bus drivers and review the high absenteeism of the school bus drivers. |
| Recommendation 6-3 | Develop a formal process for adopting and reviewing key performance indicators, including safety, cost efficiency, cost effectiveness, and customer service in the transportation department operations and document and annually report activities and progress. |
| Recommendation 6-4 | Develop standards for evaluating the potential for outsourcing transportation operations. |
| Recommendation 6-5 | Review and revise all school bus routes which have a ride-time more than 60 minutes; and any routes with a ride-time of 90 or more minutes should receive top priority. |
| Recommendation 6-6 | Reduce the current deadhead mileage by ten percent and develop policy and procedures for an annual review process to reduce deadhead mileage in order to control costs. |
| Recommendation 6-7 | Establish a committee and develop a written procedure for reviewing and evaluating the VDOE annual Warnings Report. |
| Recommendation 6-8 | Purchase and implement a Vehicle Maintenance Information System (VMIS) for the shared Botetourt County and School Division vehicle garage. |
| Recommendation 6-9 | Hire a full-time position for the transportation garage to implement and maintain the Vehicle Maintenance Information System (VMIS). |
| Recommendation 6-10 | Maintain no more than a 25 percent spare bus ratio, or 17 spare buses. The additional 11 school buses in the fleet should be sold or used for trade-in. |
| Recommendation 6-11 | Develop and implement a regular bus replacement schedule to ensure a safe and reliable fleet while also controlling costs. |
| Recommendation 6-12 | Eliminate excess white fleet sedans. |

6.A. ORGANIZATION AND STAFFING

The organizational structure and staffing of any school division student transportation operation is critical to maintaining effective and efficient operations in this essential area. Departments that are able to balance efficiency and quality are succeeding in one of the most challenging areas of school division operations.

BCPS transportation has a small administrative and operational staff and does not have a written organizational chart. The transportation supervisor evaluates all of the department employees.

Exhibit 6-5 provides a comparison of the number of BCPS transportation staff and the peer divisions. (Note: In BCPS, the Transportation Supervisor is an administrative position, but was listed under Other Professional.)

EXHIBIT6-5
 BOTETOURT COUNTY PUBLIC SCHOOLS
 PEER COMPARISON OF TRANSPORTATION PERSONNEL POSITIONS
 2012-13

DIVISION	ADMINISTRATIVE	TECHNICAL AND CLERICAL	OTHER PROFESSIONAL	TRADES, OPERATIVE AND SERVICE
Botetourt County	0.00	2.00	1.00	67.00
Accomack County	1.00	9.60	0.00	93.25
Caroline County	1.25	1.50	0.00	102.00
King George County	1.00	1.00	0.00	57.00
Mecklenburg County	1.75	5.00	0.00	135.00
Orange County	1.25	1.88	0.00	84.57
Powhatan County	1.60	1.65	0.25	87.10
Wythe County	0.50	0.50	0.00	84.50
Peer Average	1.04	2.89	0.16	88.80

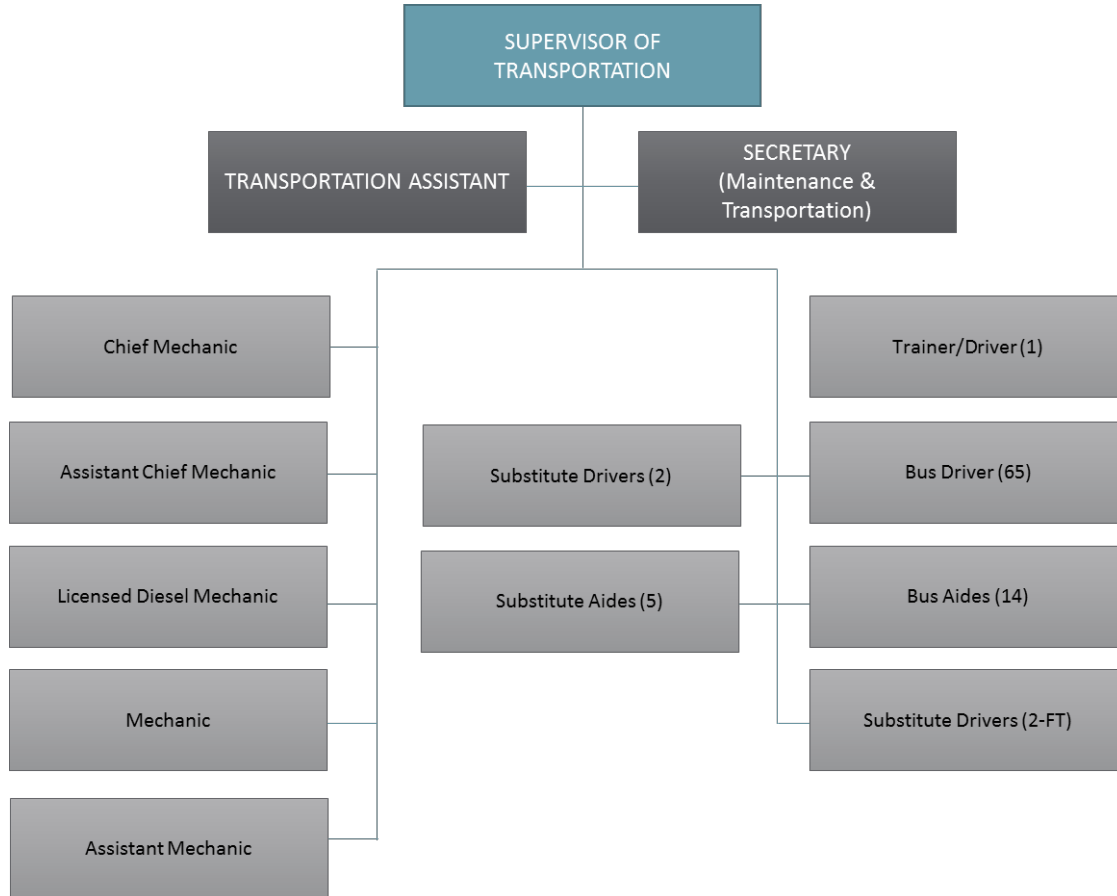
Source: Virginia Department of Education, 2014.

The department staff is comprised of a transportation supervisor, a transportation assistant, a secretary (who supports both the transportation and maintenance departments), a chief mechanic, an assistant chief mechanic, a licensed diesel mechanic, a mechanic, an assistant mechanic, 65 school bus drivers (two positions are vacant), one car driver, 14 school bus aides, two full-time substitute bus drivers, and five substitute school bus aides.

The transportation department did not have an organizational chart. Creating and providing a chart for the department communicates necessary and valuable organizational information to all employees; charts are ideal for defining responsibilities, position titles and lines of authority.

Based on staff interviews and observations, MGT developed an organizational chart for the department, as shown in **Exhibit 6-6**.

EXHIBIT 6-6
 BOTETOURT COUNTY PUBLIC SCHOOLS
 TRANSPORTATION DEPARTMENT
 OBSERVED ORGANIZATIONAL CHART
 2014-2015



Source: MGT America, 2014.

FINDING

During the interviews, all of the employees stated that they do not have a copy of their job description and job responsibilities.

Various employees explained their responsibilities with some different job category employees describing the same responsibilities. The secretary stated that her work included receptionist, payroll clerk, dispatcher, coordinator of all field and athletic trips, substitute driver and aide assignment, accounts payable clerk, and secretary for both the transportation and maintenance departments. However, the chief mechanic assigns substitute drivers in the mornings, manages dispatch, and is the morning mechanic. The transportation assistant stated that he is responsible for all routing and scheduling, payroll, and mileage and payroll for all school trips. Divisions that lack clear job descriptions and job responsibilities for the employees, are less efficient and may have miscommunication and the possibility of losing important information needed for daily operations.

RECOMMENDATION 6-1:

Provide all transportation department employees with a written job description and job responsibilities.

Two sample job descriptions and responsibilities are shown in **Exhibit 6-7**.

EXHIBIT 6-7
BOTETOURT COUNTY PUBLIC SCHOOLS
SAMPLE TRANSPORTATION JOB DESCRIPTIONS

POSITION	SPECIFIC DUTIES (A) & MINIMUM QUALIFICATIONS (B)
<p>Bus Driver <i>(Bus Operator)</i></p>	<p>A. SPECIFIC DUTIES</p> <ul style="list-style-type: none"> ◆ Report defective school bus equipment and accessories, including but not limited to, fire extinguishers, highway warning kits, first aid and body fluid cleanup kits, snow chains, sanders, etc., and when necessary install, service or replace defective equipment; ◆ Perform required operational and safety inspections of the school bus and all related equipment; ◆ Ability to clean and service the school bus to include interior cleaning and exterior bus washing, installation of fuel, oil and other fluids, as directed; ◆ Operate all hand and foot controls installed in a school bus, as required; ◆ Perform basic first aid, as appropriate, which may include CPR; ◆ Work effectively with a group of students of different grad levels, abilities or program placement; ◆ Complete legibly and accurately forms, records, reports and other documentation/data-logging activities, as required by state or division policy; ◆ Be punctual; ◆ Dress appropriately and wear proper foot protection; ◆ Manage passengers in the school bus; ◆ Report unsafe acts or conditions that require the attention of any person other than the driver; and ◆ Successfully complete school bus driver training programs and courses established by the state or school division.

EXHIBIT 6-7 (CONTINUED)
 BOTETOURT COUNTY PUBLIC SCHOOLS
 SAMPLE TRANSPORTATION JOB DESCRIPTIONS

POSITION	SPECIFIC DUTIES (A) & MINIMUM QUALIFICATIONS (B)
	<p>B. MINIMUM QUALIFICATIONS</p> <ul style="list-style-type: none"> ◆ High school graduate or equivalent. ◆ Hold and maintain a class license with all applicable endorsements for the type of vehicle being driven; ◆ Excellent driving record; ◆ Physical ability to drive and perform all duties related to school bus operations; ◆ Ability to relate effectively with parents, staff and public in a multicultural and multiracial community; ◆ Possess sufficient command of local language so as to communicate with students, parents, division staff members and other concerned individuals regarding all aspects of their job-related activities; ◆ Ability to pass a criminal history background check; ◆ Ability to pass a state or DOT medical examination; and ◆ Ability to pass a federally mandated drug/alcohol screen.
<p>Bus Attendant (Monitor or Attendant) (<i>Bus Aide</i>)</p>	<p>A. SPECIFIC DUTIES</p> <ul style="list-style-type: none"> ◆ Assist the school bus driver; ◆ Assist students to safely embark and disembark from a school bus; ◆ Ensure that students get off at the correct bus stop; ◆ Help implement safety standards on board the bus; ◆ When applicable, assist with loading/unloading and securing of assistive devices and safety restraints; and ◆ Assist driver with student management. <p>B. MINIMUM QUALIFICATIONS</p> <ul style="list-style-type: none"> ◆ High school graduate or equivalent; ◆ Ability to work with all students; ◆ Ability to physically move wheelchairs onto wheelchair ramp and into the bus; ◆ Ability to physically remove students from a disabled bus; ◆ Ability to get along with co-workers, parents, students and other staff; ◆ Ability to interact with students; ◆ Ability to follow directions; and ◆ Ability to communicate with staff.

Source: National Congress on School Transportation, May 2010.

Additional sample job descriptions are available on the website for the National Congress on School Transportation at www.ucmo.edu/safetycenter/nctonline.

FISCAL IMPACT

This recommendation can be implemented at no additional cost with existing staff: the supervisor of transportation, assistant to the supervisor of transportation, and a human resources department staff member, working for a total of 24 hours.

FINDING

The number of substitute bus drivers and bus aides is inadequate to provide coverage for scheduled school bus routes daily.

BCPS has two substitute bus drivers and five substitute bus aides that are available to cover bus routes when assigned drivers and/or aides are off work due to sick leave, personal days, or leave without pay. There are two, full-time (contracted, with benefits) substitute drivers that are assigned to cover bus routes. In addition, the entire mechanic staff (5) and maintenance workers (3) drive buses almost every day (mornings and/or afternoons) in order to cover scheduled bus routes. One school custodian also drives for field and athletic trips.

During MGT interviews, transportation staff indicated that mechanics are only able to work approximately three to four hours daily in the garage and vehicle maintenance has had to be deferred because they are driving buses and cannot get to the work. The mechanics are not paid overtime, since driving bus routes is included within their daily job responsibilities.

Based on information gathered during the onsite visit, MGT learned that division maintenance workers are required to obtain and maintain a Commercial Driver License (CDL) so they may drive a school bus as a substitute bus driver, as needed. The workers are not paid overtime, since driving bus routes is included within their daily job responsibilities. During the principals' focus group, MGT was made aware that having the school-based maintenance workers drive a school bus has resulted in delaying needed school maintenance work. The same concern was voiced regarding the school custodian driving a bus. While the intent of requiring maintenance workers to drive a school bus was to provide a group of emergency bus drivers for the transportation department, it actually has become a regular event for them to drive. In the 2013-2014 school year, one maintenance worker drove a substitute bus for 124 days.

Interviews with division staff, indicated that this had been a problem for several years. While they have been able to hire and keep a full complement of bus drivers, the daily number of drivers missing time off from work and the lack of an adequate number of part-time substitute drivers has required mechanics and maintenance workers to drive the buses. The division has hired two full-time substitute drivers to help with the situation and the school board approved a cash incentive for drivers who have perfect attendance throughout the school year (\$100 for each month, up to a maximum \$1,000.00 for the school year), but it has not solved the problem.

RECOMMENDATION 6-2:

Hire three additional, full-time substitute school bus drivers and review the high absenteeism of the school bus drivers.

This will bring the total number of full-time substitute school bus drivers to five (5). The transportation and human resources departments should review the absenteeism of the drivers and/or aides over the past three years and develop recommendations to improve the situation.

FISCAL IMPACT

This recommendation would cost initially \$54,330 (\$9,400 salary + \$8,710 benefits, for each person) annually. The cost for five years would be \$271,650 (\$54,330 x 5 = \$141,000 salary + \$8,710 x 5 = \$130,650 benefits). However, these costs would likely be offset by a reduction in the need for maintenance workers to leave schools where they are repairing lighting or heating or a reduction in the need for transportation repair staff to stop repairing transmissions or brakes to go drive a school bus or reduce the number of additional substitute drivers that need to be hired. This is not to suggest that driving a school bus is unimportant, but taking transportation maintenance staff or operational maintenance staff to do this important work means that vehicle repair and facility repair activities stop. The exact cost savings for this plan are not clear, but the possibility exists for more efficiency.

RECOMMENDATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Hire three (3) Full-Time Substitute Bus Drivers	(\$54,330)	(\$54,330)	(\$54,330)	(\$54,330)	(\$54,330)

6.B. PLANNING, POLICIES, AND PROCEDURES

The BCPS transportation department has an administrative staff that works well as a team. The school board policies and administrative regulations, including the student code of conduct, are printed and issued to each student and employee each year. The school board policies define a safe and reasonable walking distance to determine which students are eligible for bus transportation. All transportation employees annually receive a copy of the *Employee Handbook for School Transportation Personnel*, which includes state and local school bus policies, regulations, and guidelines.

FINDING

The loading of students onto the school buses at the school bus ramps is well supervised by the school staff and extremely safe. The bus drivers arrive prior to the dismissal bells and remain on board the bus to assist the students (elementary) and supervise the process in an orderly fashion (secondary). The school staff is alert and aware for the students' safety the entire time. The buses are separate from the private vehicles and the bus ramps are appropriately signed, painted, and in good condition. The school bus drivers and the schools' staff work together professionally.

COMMENDATION 6-A

School bus drivers and aides work professionally with the BCPS school staff in providing safe drop-off and pick-up for students at the school bus ramps.

FINDING

BCPS does not have a formal performance measurement structure for the transportation department.

The department does not regularly track, compile, or publish its findings on performance indicators. The department does collect a portion of these statistics, as required by the state for the annual transportation report, but does not report them in an open forum, such as a school board meeting or on the school division web site.

Many high-performing school divisions use indicators to assess ongoing performance in key management areas. Performance indicators allow departments of transportation to track service quality and make adjustments where required. Improvements in performance can be documented to demonstrate progress. Accurate and timely performance indicators help management allocate funds to the most critical needs. They also provide assurances to the central office, the school board, and the public that the department is using its resources in the best possible manner.

Exhibit 6-8 shows some of the transportation performance indicators typically used by school divisions. Such indicators could assist the department in consistently tracking and monitoring performance, and could organize and report the data in comparison with peer school divisions and its own history. Ideally, BCPS would select an annual target goal for each indicator and track progress towards that goal.

EXHIBIT 6-8
SAMPLE
STANDARD TRANSPORTATION PERFORMANCE INDICATORS

PERFORMANCE AREA	PERFORMANCE INDICATOR
Safety	<ul style="list-style-type: none"> ◆ Accidents per 100,000 miles ◆ Incidents per 100,000 miles
Cost Efficiency	<ul style="list-style-type: none"> ◆ Operational costs per route mile ◆ Annual operational costs per route ◆ Operational costs per student for regular education, special education, shuttles, and field/athletic trips
Cost Effectiveness	<ul style="list-style-type: none"> ◆ On time performance; morning and afternoon ◆ Average rider trip time in minutes ◆ Average bus occupancy
Customer Service	<ul style="list-style-type: none"> ◆ Number of complaints by category

Source: Created by MGT of America, 1999 (updated 2014).

Throughout the onsite review, the MGT team searched for evidence of effective cost analysis and evaluation, but was provided only a few isolated documents related to overall operational costs. There was no evidence found in departmental records or staff interviews to suggest that comprehensive cost analyses were conducted to evaluate program efficiency and no formal, centralized source of performance information was identified for use in strategic planning and monitoring.

RECOMMENDATION 6-3:

Develop a formal process for adopting and reviewing key performance indicators, including safety, cost efficiency, cost effectiveness, and customer service in the transportation department operations and document and annually report activities and progress.

A comprehensive internal analysis of ongoing transportation costs would serve as a source of benchmarking data that could be used to monitor performance throughout the year. Such information could also be used to prepare a report to build a stronger understanding of the department's successes and challenges for parents, schools, and the division.

Budgetary constraints, coupled with the increasing demands on transportation resources in BCPS, necessitate precise fiscal monitoring and evaluation within the department. The current level of fiscal monitoring, evaluation, and planning is insufficient to ensure a high level of efficiency. The transportation department must develop and implement a systematic approach to addressing these issues.

The transportation department should also use this report as a key planning milestone, allowing for the previous year's performance to be evaluated to enhance strategic planning for the upcoming year.

Exhibit 6-9 shows an example of the Round Rock Independent School District (TX) Transportation Performance Evaluation that is posted on the district's website. Henrico County Public Schools (VA) has posted their transportation key performance indicators on their web site at [henrico.k12.va.us/Data Reports](http://henrico.k12.va.us/DataReports).

EXHIBIT 6-9
 SAMPLE TRANSPORTATION
 PERFORMANCE EVALUATION

Mission Statement	The mission of the Transportation Department is to safely provide quality and reliable service for students, staff, and community through a well-trained and positive staff that satisfies customers.
Customer Requirement:	STUDENT ACHIEVEMENT
Goal:	The Transportation Department will provide superb student transportation services that meet or exceed local, state, national, and international standards in all areas.
Measures:	<ul style="list-style-type: none"> ◆ Student, staff, and community perceptions of the Transportation Department. ◆ Benchmarks for on-time arrivals based on district history and industry standards ◆ Benchmarks for telephone complaints based on district history ◆ Percent of employees receiving training in all areas of their job responsibility
Customer Requirement:	SAFE, ORDERLY & RELIABLE TRANSPORTATION SERVICE
Goal:	Buses and facilities will be safe, secure, and nurturing places for students and staff.
Measures:	<ul style="list-style-type: none"> ◆ Student, staff, and community perceptions of the safety of the Transportation Department ◆ Benchmarks for accident rate based on district history and industry standards ◆ Benchmarks for student misconduct based on district history and industry standards ◆ Benchmarks for on-time student arrivals based on district history and industry standard
Customer Requirement:	EFFECTIVE & EFFICIENT TRANSPORTATION OPERATIONS
Goal:	The Transportation Department will use the Baldrige criteria to achieve performance excellence and improve customer satisfaction.
Measures:	<ul style="list-style-type: none"> ◆ Percent of individuals using Baldrige Criteria to assess, plan, and improve individual performance ◆ Benchmarks for ridership efficiency based on district history. ◆ Benchmarks for field trips based on district history and industry standards ◆ Benchmarks for transportation efficiency measures based on district history and industry standards ◆ Benchmarks for breakdowns and mechanic efficiency based on district history and industry standards ◆ Employees dedication and satisfaction with department based on district history

Source: Round Rock ISD, February 2011.

FISCAL IMPACT

This recommendation can be implemented with existing staff: the supervisor of transportation – 48 hours over two months; assistant to the supervisor of transportation – 48 hours over two months; chief mechanic – 24 hours over two months; secretary – 12 hours over two months.

FINDING

While BCPS is performing needed transportation services adequately, changes in future funding may necessitate a rethinking of the current use of outsourcing contracting. The practice of outsourcing should always be considered when striving to provide optimal transportation services within a limited budget. Further, there should be a formal process for considering this option.

Exhibit 6-10 provides a sample of criteria for reviewing outsourcing opportunities.

EXHIBIT 6-10
POSSIBLE SCREENING CRITERIA FOR IDENTIFYING OUTSOURCING OPPORTUNITIES

1. Competitive Market

A relatively large competitive base will provide the best opportunity for savings. A division with few competitors may enjoy a competitive advantage that may not produce the desired savings. A large pool of competitors also ensures that initial bids will not be substantially increased in future years after the public sector no longer has the immediate ability to provide the goods or services. If a competitive market cannot be identified, it is probably not worth the cost of developing specifications and pursuing bids.

2. Determinable Service Delivery Measurement

If the nature of the good or service is uncertain or likely to require revision as the program proceeds, it may be difficult to convey the terms of service delivery in a contract or performance agreement.

Similarly, it may be difficult to hold the provider accountable for errors or inefficiencies. Also, if the service cannot be adequately defined, it will be impossible to identify the associated costs and determine if competition would yield increased savings or a better product.

3. Legal Authorization

Programs considered for increased competition must be those free from existing constitutional or case law requirements to the contrary. Statutory changes may be necessary to implement others, and the costs of developing and pursuing legislation should be considered.

4. Contract Management/Monitoring Division Defined

The ability to properly supervise the work of a provider must exist.

5. Existing Costs Determinable

If it is impossible to determine the existing costs of providing the service, it will also be impossible to determine if savings can be realized through increased competition. Obtaining accurate, verifiable cost information is critical to the decision for competition. This screening criterion is strongly linked to the service description since costs must be obtained for the service described.

6. Local Area Economic Impact

Conversion to competitive delivery should not result in a significant increase in the unemployment rate of a municipality, county, or region or loss of an essential local market. Economic changes of special interest, such as the elimination of a traditional minority business industry, is not recommended for competition.

EXHIBIT 6-10 (CONTINUED)
POSSIBLE SCREENING CRITERIA FOR IDENTIFYING OUTSOURCING OPPORTUNITIES

7. Financial and Liability Risks

Competition is best pursued when the financial and liability risks are equal to or lower than those experienced in public sector delivery. State laws or constitutional provisions sometimes limit state liability unless provided through a claims bill. Additional risks, insurance costs, and differences in financial conditions and legal liabilities must be considered.

8. Size of Programs

High dollar amount programs or staff-intensive programs may reap the greatest benefit from savings generated through competition. Larger programs may have a greater chance for inefficiencies to develop due to larger spans of control and less frequent oversight by upper-level managers.

9. New Program or New Service Requirements

These programs would offer the organization an immediate opportunity to avoid growth. New demands placed on services will ultimately lead to increased resource allocations which are seldom, if ever, reversed.

10. Level of Policy Discretion

Activities which require low levels of policy setting, judgment, or discretion are better suited for administration by outside providers. Routine application processing, data entry, maintenance, and fee collection is examples of activities which are not influenced by political processes and do not require sensitive treatment by an agency employee.

11. Security Requirements

Activities for which special security is unnecessary are most conducive to increased competition. These activities do not address the possibility of manipulating sensitive information such as student records or lab results. If the information is sensitive, adequate controls must exist to protect data.

12. Not Currently Subject to Competition

Large portions of programs may already be privatized or subject to market pressures and are less likely to benefit from further competition. Programs which are entirely in-house operations, perhaps in a monopoly-like environment, are strong candidates for competition.

EXHIBIT 6-10 (CONTINUED)
POSSIBLE SCREENING CRITERIA FOR IDENTIFYING OUTSOURCING OPPORTUNITIES

SCREENING CRITERIA FOR IDENTIFYING OUTSOURCING OPPORTUNITIES

13. Alternative Delivery Methods

If alternative methods of production exist to provide the desired final product, increased competition can lead to innovative methods to save costs or improve services. Programs which require product or service delivery in a specific fashion to accomplish specific goals may be better handled by the public.

14. Satisfaction with Current Service

Services where significant concerns exist about quality, time lines, or costs are candidates for outsourcing/privatization. Evidence of concern includes complaints by customers, customers trying to provide service with their own resources, or customers reducing their use of the service.

15. Comparative Cost of Services

If current costs per unit (e.g., cleaning cost per square foot) are above the per unit costs of similar services being provided by private vendors, then the service are an attractive candidate for privatization.

16. Costs and Ease of Conversion to Private Vendor

Some services are relatively easy and inexpensive to convert to a private vendor. Other services may be very difficult or expensive to convert. Those that are easy and inexpensive to convert are good candidates for outsourcing/privatization.

17. Ease and Cost of Insourcing

The possibility always exists that the outsourcing/privatization of a service will not work out for an agency or organization. When this happens, it may become necessary to insource a service. When major difficulties exist or costs are high for insourcing operations, the organization may find that it is forced to put up with poor performance. In these cases, outsourcing/privatization is less attractive.

18. Impact on Employee Morale

If outsourcing will cause major employee morale problems throughout the organization, careful consideration must be given to outsourcing or perhaps finding a way to minimize impact on employee morale.

19. Mission Service Function

A function determined to be highly critical to the overall mission of the agency should likely remain insourced because of the higher degree of control.

20. Stability of Marketplace

A high level of stable vendors in the marketplace indicates that the outsourcing of a service has been successful and that the vendors can generally be relied upon to produce quality services at competitive rates.

Source: Developed by MGT of America, Inc., 1996 (updated 2014).

RECOMMENDATION 6-4:**Develop standards for evaluating the potential for outsourcing transportation operations.**

Many functions of the transportation department could lend themselves to effective and efficient privatization under appropriate circumstances. It is critical that division administrators routinely evaluate the potential success of outsourcing departmental responsibilities. Standards should address both cost and quality to ensure that non-monetary factors have been appropriately considered. Consistent standards should include a method for fairly comparing in-house expenses with outsourcing costs.

FISCAL IMPACT

There is no specific fiscal impact associated with this recommendation; however, under the appropriate circumstances, privatizing departmental responsibilities could possibly free up resources while allowing for a high level of service. The transportation department may realize significant cost savings over time. However, other school divisions have not experienced significant cost savings based on outsourcing of the program. The transportation director or director of administration and finance could gather costs and explore alternatives fully before deciding to outsource the transportation program. The time required for this review is estimated at 16 hours.

6.C. ROUTING AND SCHEDULING

Some of the largest potential cost savings in student transportation are realized due to changes in routing functions within the transportation services. Efficient and effective bus routing is critical to the success of any school transportation department. Optimized routes minimize student ride time and decrease the total number of buses needed to transport student populations.

Effective routing and scheduling can impact:

- ◆ Efficiencies pertaining to student start and end times in coordination with bell times.
- ◆ Bus route average ridership and miles driven.
- ◆ Ride times for regular and exclusive students.
- ◆ Efficiency and effectiveness of regular routes.
- ◆ Efficiency and effectiveness of exclusive routes.

FINDING

The transportation supervisor and the transportation assistant who is the routing coordinator reported that BCPS had used the *TransFinder* software in the past and switched to the *Versatrans* routing software. The change resulted in “improved efficiency and more effective routes.” MGT was not provided data to compare with the existing routing information.

Exhibit 6-11 shows the comparison between the number of students enrolled and the number of students being transported by school bus for the school years 2010-11 through 2012-13, the last year for which data are available. Enrollment increased from 2010-11 year to 2011-12, but bus ridership decreased and the percentage of students riding the bus also decreased. According to the transportation supervisor, very few school buses are crowded, even though the department attempts to maintain a two-student-per-seat routing structure. During onsite observations of elementary, middle,

and high school runs and shuttles from two schools to the technical center, only the shuttle run had almost every seat filled with two students seated.

EXHIBIT 6-11
BOTETOURT COUNTY SCHOOLS
ENROLLMENT AND RIDERSHIP
2010 THROUGH 2013

SCHOOL YEAR	ENROLLMENT	RIDERSHIP	PERCENTAGE
2010-2011	5,009	3,008	60.05%
2011-2012	5,051	2,930	58.01%
2012-2013	4,962	2,820	56.83%

Source: Virginia Department of Education, 2014.

As observed at the Colonial Elementary School, the student bus ridership was low, but the parent drop-off and pick-up situation was such that it required monitoring by additional school staff due to the large number of private vehicles, daycare vans, and two daycare school buses. MGT observed that traffic on the state road in front of the school was blocked by private vehicles.

The transportation assistant has the responsibility of routing and scheduling the school buses for the department. He provided a report showing the average ride-time for students was 52 minutes, within the division's goal of keeping routes no longer than one hour. With a large and mostly rural county, it is difficult to keep the average ride-time below an hour, but impossible to keep all ride times below that target.

Exhibit 6-12 shows the number of school bus routes based on ride-time categories.

EXHIBIT 6-12
BOTETOURT COUNTY PUBLIC SCHOOLS
SCHOOL BUS ROUTE RIDERSHIP TIME

AVERAGE MIN / TOTAL ROUTES	UNDER 30 MINUTE ROUTES	BETWEEN 30-60 MINUTE ROUTES	OVER 60 MINUTE ROUTES	OVER 90 MINUTE ROUTES	OVER 120 MINUTE ROUTES
52 / 286	44	150	73	15	4

Source: BCPS Transportation Department, 2014.

Of the 286 bus routes, 194 are no more than 60 minutes; 88 routes are between 60 minutes to 90 minutes; and four bus routes are longer than two hours. These route times are one-way.

RECOMMENDATION 6-5:

BCPS should review and revise, if possible, all school bus routes which have a ride-time more than 60 minutes; and any routes with a ride-time of 90 or more minutes would receive top priority.

With all schools having a total of 6.5-hours of instruction each day, it should be a priority to not require a student ride their bus between three or four hours, creating a total day away from home of 9.5 to 10 hours each school day.

FISCAL IMPACT

This recommendation can be implemented with existing staff: the supervisor of transportation – 20 hours per month for two months (40 hours); the assistant to the supervisor of transportation – 40 hours per month for two months (80 hours); 92 drivers assigned to the identified longest bus routes – two hours per month for two months (368 hours); and the secretary – four hours per month for two months (8 hours). The total staff time would be 436 hours, over two months. However, the solution(s) identified may carry additional costs for drivers or fleet costs.

FINDING

Deadhead mileage (defined as mileage without students on board a vehicle) is extremely high at BCPS. During the interview with the supervisor of transportation, he stated that school buses are parked at the garage and at most school sites and a few buses were parked at the driver's home, since the driver lived closer to the start location of the school bus route than a school site. However, a review of the scheduled school bus routes indicated that 28 buses are parked at school sites, six buses are parked at the garage lot, and 27 buses are parked at the driver's home. For 2012-13 fiscal year, deadhead miles represent 35.9 percent of all miles traveled, more than one-third of all transportation miles.

Exhibit 6-13 shows a comparison of the deadhead miles and costs for BCPS relative to the identified peer divisions.

EXHIBIT 6-13
BOTETOURT COUNTY PUBLIC SCHOOLS
COMPARISON OF TOTAL AND DEADHEAD MILES AND COSTS
2012-13

DIVISION	COST PER MILE	TOTAL MILES	TOTAL MILES COST	DEADHEAD MILES	DEADHEAD MILES COST	PERCENT OF TOTAL MILES THAT ARE DEADHEAD MILES
Botetourt	\$2.58	1,195,599	\$3,084,645	429,258	\$1,107,486	35.9
Accomack	\$1.85	1,564,499	\$2,894,323	313,560	\$553,614	20.0
Caroline	\$2.29	1,232,830	\$2,823,318	162,849	\$373,269	13.2
King George	\$1.49	1,650,784	\$2,459,668	430,569	\$616,476	26.1
Mecklenburg	---	---	---	---	---	---
Orange	\$2.31	1,502,469	\$3,470,703	398,276	\$868,022	26.5
Powhatan	\$2.59	1,361,779	\$3,527,008	435,060	\$1,052,991	31.9
Wythe	\$2.43	893,887	\$2,172,145	207,334	\$467,516	23.2
Peer Average	\$2.16	1,218,727	\$2,891,194	324,608	\$655,315	23.48

Source: Virginia Department of Education, Office of Support Services, 2014.

Note: Mecklenburg County did not report any student transportation data in FY 2012-13. The peer average does not include Mecklenburg County.

Divisions that lack procedures for an annual review of deadhead miles and bus parking options risk spending large portions of time and resources moving buses to appropriate locations. This is neither effective nor efficient.

RECOMMENDATION 6-6:

Reduce the current deadhead mileage by ten percent and develop policy and procedures for an annual review process to reduce deadhead mileage in order to control costs.

The transportation staff should establish procedures to review and reduce the deadhead miles of the school bus fleet. A study is necessary to explore the potential of central parking for the school bus fleet, over the night and/or between morning and afternoon runs to reduce bus deadhead mileage by 10 percent. BCPS should benchmark the 10 percent reductions, but further reduction should be a long term goal. Other options to review could be to establish regional parking areas, possibly on school sites and the bus garage lot; create a carpool (or ‘bus pool’) and pick-up and drop-off drivers to and from bus area parking locations; reassign drivers to routes closer to the start and stop of existing bus routes; or a combination of these options.

FISCAL IMPACT

The recommendation can be implemented by the transportation director through a review of routes. It is estimated that it could take 12 hours. The current various school sites used for parking the buses and the garage bus lot are adequate to accommodate the vehicles. Reducing the current deadhead mileage of the school bus fleet by ten percent would provide a one-year cost savings of \$110,749 and \$553,745 over the next five years.

RECOMMENDATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Reduce Deadhead Miles and Cost by 10 percent	\$110,749	\$110,749	\$110,749	\$110,749	\$110,749

6.D. STATE REPORTING

Virginia Department of Education (VDOE), Office of Support Services, requires all public school divisions to submit the Pupil Transportation Report information annually. This report becomes a part of the VDOE Superintendent’s Verification Report published annually on the VDOE web site.

During the process of reviewing the information from the transportation departments, VDOE identifies exceptions (called warnings) that fall outside the range of expected values, as established by VDOE. These warnings do not necessarily mean that the information is incorrect, but the localities are requested to respond and answers are reviewed and accepted or rejected.

All of the warnings sent to BCPS were responded to by the division and the reports accepted by VDOE.

FINDING

BCPD is receiving ‘Warning Reports’ from the VDOE, Office of Support Services, after the transportation department is submitting the data in the annual Pupil Transportation Report. VDOE states on these reports that, “These warnings only reflect entries outside the expected range of values, but this does not necessarily mean they are incorrect.”

Exhibit 6-14 lists a portion of the warning messages and division comments for the 2012-2013 school year.

EXHIBIT 6-14
 BOTETOURT COUNTY PUBLIC SCHOOLS
 2012-2013 PUPIL TRANSPORTATION REPORT
 WARNING REPORT

TYPE	2011 - 2012	2012 - 2013	WARNING MESSAGE	DIVISION RESPONSE
Special Trips Miles	64,345.00	60,724.00	Miles increased or decreased more than 3% from prior year.	Decrease in number of field trips. Reduction in travel to sports events.
Total Regular Pre-K Pupil Count	26.00	30.00	Total regular P-K pupil count increased or decreased by more than 5% from prior year.	Increase in capacity for PK students at two schools (4 slots).
K-12 Exclusive Pupil Count	57.43	43.08	Exclusive K-12 pupil count increased or decreased more than 6% from prior year.	Eliminated Day Treatment Programs at two schools. Students transitioned to home schools, regular transportation.
Exclusive Buses	21.00	24.00	Exclusive bus count increased or decreased more than 5% from prior year.	Three SPED buses added to fleet in June 2012.
Regular Costs	\$1,193,159	\$1,255,436	Regular costs increased or decreased more than 5% from prior year.	Increase in route mileage calculations.
Private Carriers Cost	\$7,152	\$22,743	Costs increased or decreased more than 22% from prior year.	Increase in number of students being transport by private carriers. Great distance to regional schools.
Exclusive Per Pupil Cost	\$8,373	\$11,653	Cost increased or decreased more than 10% from prior year.	Fewer in number of students transported by private carriers. Great distance to regional schools.
Exclusive Private Carriers Pupil Count	2.07	3.92	Count increased or decreased more than 14% from prior year.	Transportation by private carrier more efficient for single students to outlying regional programs.
Percent of Exclusive Riders to All riders	1.92	1.50	Percent increased or decreased more than 4%.	Elimination of two day treatment programs. Transition of more students to regular trans.

Source: VDOE, Office of Support Services, 2013. Compiled by MGT, 2014.

NOTE: There were seven additional warning messages related to Exclusive Private Carrier Pupil Count with identical questions and same response; and seven additional messages related to Percent of Exclusive Riders to All Riders with identical questions and same response.

Additionally, **Exhibit 6-15** shows that from 2010-11 to 2012-13, the cost per pupil for exclusive transportation went up while the count of students went down, and the number of buses went up by three.

EXHIBIT 6-15
BOTETOURT COUNTY PUBLIC SCHOOLS
SUPERINTENDENT'S VERIFICATION REPORT
2012 - 2013

EXCLUSIVE	2010 - 2011	2011 - 2012	2012 - 2013
PER PUPIL COST	\$7,324.48	\$8,373.43	\$11,653.13
BUSES	21	21	24
PUPILS	70	57	43

Source: VDOE, Office of Support Services, 2013. Compiled by MGT, 2014.

Divisions that lack written procedures for annually reviewing the Warning Report may not have a way to review, evaluate and determine cost effectiveness measures relating to transportation services.

RECOMMENDATION 6-7:

Establish a committee and develop a written procedure for reviewing and evaluating the VDOE annual Warnings Report.

A committee should be established to identify areas to address, review, and recommend actions to keep transportation operations effective. Committee members may include, transportation supervisor, chief mechanic, transportation assistant, Director of Administration and Finance, school principal, special education administrative, or other appropriate designated by the Superintendent. The committee should review and analyze operational data from the current and previous fiscal years. The VDOE Warnings Report should be reviewed and recommend changes, if needed.

FISCAL IMPACT

This recommendation can be implemented with existing staff: supervisor of transportation – 48 hours over two months; assistant to the supervisor of transportation – 48 hours over two months; chief mechanic – 24 hours over two months; other division employees as designated by the Superintendent (3 positions) – four hours over two months.

6.E. TRAINING AND SAFETY

The main objective of any pupil transportation system is to transport passengers to and from school each day safely and efficiently. To achieve this goal, driver trainees must be instructed thoroughly in the fundamentals and techniques of operating school buses. The success of the program depends upon their motivation, dedication, and skill. VDOE provides training and certification of school bus driver-training instructors through programs developed by the Board of Education.

BCPS transportation training and safety programs are the responsibility of the transportation supervisor and staff and are carried out in compliance with all VDOE requirements. New drivers must successfully complete a minimum of 24 classroom hours and 24 hours of behind-the-wheel training. BCPS bus driver-trainers are required to hold a certificate for completion of an instructor course and be recertified every five years.

BCPS is also required to monitor all safety issues related to student transportation, investigate all accidents, and complete the filing of accident reports with the VDOE Office of Support Services. In 2012-13, BCPS had one preventable accident. The national industry standard on school bus accidents is one

preventable accident per 100,000 miles. Traveling 1,074,151 miles during 2012-13, the accident rate would be below industry standard. BCPS participates with the VDOE Safe Bus Driver Awards program, which recognizes drivers with safe driving records.

Exhibit 6-16 shows a comparison of the school bus accidents of BCPS and the identified peer divisions for 2012-13, the last year for which there are comprehensive records. As shown, BCPS had four bus accidents, only one of which was preventable.

EXHIBIT 6-16
BOTETOURT COUNTY PUBLIC SCHOOLS
SCHOOL BUS ACCIDENTS 2012 - 2013

DIVISION	BUSES IN ACCIDENTS	BUS OCCUPANTS INJURED	INJURY/ PROPERTY ACCIDENTS	BUSES IN FLEET	# /PERCENTAGE PREVENTABLE ACCIDENTS	PERCENTAGE BUSES/ACCIDENTS
Botetourt	4	4	1 / 3	94	1 / 25%	4.26%
Accomack	0	0	0 / 0	112	0	0
Caroline	0	0	0 / 0	86	0	0
King George	1	0	0 / 1	64	0	1.56%
Mecklenburg	0	0	0 / 0	121	0	0
Orange	0	0	0 / 0	104	0	0
Powhatan	0	0	0 / 0	91	0	0
Wythe	0	0	0 / 0	78	0	0
Peer Average	.14	0	0 / .14	94	0	.22

Source: Virginia Department of Education, Office of Support Services, 2014.

FINDING

The transportation department has a school bus driver who has been trained by VDOE as a school bus driver-trainer and certified to be a third-party tester for the Virginia Department of Motor Vehicles (DMV). This trainer leads the classroom training for new school bus drivers and performs as a tester for the on-the-road portion test for a Virginia Commercial Driver License (CDL), a requirement to operate a school bus in Virginia. By having this third-party tester, BCPS is able to test new school bus drivers in-house instead of making appointments at the regional DMV offices, reducing the amount of time it takes to put a new bus driver on the road.

The transportation department also has six VDOE-certified bus driver trainers that assist with the classroom training and the mandatory observation ride time training for all new school bus drivers.

COMMENDATION 6-B:

BCPS is commended for having a VDOE-certified school bus driver trainer program and a DMV certified third-party tester for prospective and new school bus drivers.

FINDING

BCPS school bus mechanics are provided an opportunity to attend and receive vehicle maintenance training at the annual Virginia Association for Pupil Transportation (VAPT) and VDOE conference. The training for vehicle maintenance staff also gives the mechanics a chance to address problems and

concerns to manufacturer representatives. Attending the annual conference is dependent upon budgeted funds, but BCPS has been able to send mechanics for the training in the past.

COMMENDATION 6-C:

BCPS is commended for providing the school bus mechanics vehicle maintenance training during the annual VDOE/VPT conference.

6.F. VEHICLE MAINTENANCE AND BUS REPLACEMENT SCHEDULES

The BCPS transportation department maintains the entire vehicle fleet for the school division. A chief mechanic and four additional mechanics maintain, service, and inspect 94 school buses and 42 “white fleet” (non-yellow) vehicles, tractors, lawn mowers, grass trimmers, and other equipment. The one maintenance facility is centrally located within the county, next to the school board and administrative building. The facility houses the transportation department, maintenance department, and IT department offices, as well as the vehicle repair bays. The space also houses space for county-owned/operated vehicle repair done by a county-paid mechanic.

The school buses are equipped with automatic transmissions, diesel engines, and most have air brake systems and automatic snow chains. All buses have two-way radios, security video systems, and a GPS system.

One of three fueling stations is located at the garage bus lot, providing gas and diesel fuel. The other two fueling stations are located on school sites across the county and only provide diesel fuel.

The current ratio of mechanics per vehicles is 1:33 (buses and white fleet). The transportation industry and majority of school divisions nationwide have a common ratio of one mechanic per 20 to 30 vehicles with the average being approximately 1:25. The mechanic to vehicle ratio in BCPS is in line with the national average. MGT’s **Recommendation 6-10** to reduce the school bus fleet, would put the ratio at 1:29. There is one additional mechanic that only maintains, services, and inspects the Botetourt County government-owned vehicles. There is one dedicated work bay for this mechanic.

FINDING

The BCPS transportation department does not use a computerized vehicle maintenance information system (VMIS).

Presently, all records are kept by hand or are on generic office software by the chief mechanic. The current practice makes it more likely that preventative maintenance will not be completed on schedule or the division will not be able to track warranty claims. Perhaps even more important is the lack of critical management information available to the supervisor of transportation for management decisions. For example, if the information shows that one type of tire is not performing to expectations, the supervisor or the chief mechanic, should be able to discern it in time to change the bid specifications for the next tire purchase.

The finance department can provide an audit report inquiry that will provide cost data paid to specific vendors such as a local auto parts franchise. The format is useful for accounting purposes, but currently there is no way to link the cost shown to a particular vehicle, track consumption rates for particular parts, or determine the nature of the repairs performed in order to determine if that repair should have

been performed by BCPS transportation mechanics rather than a vendor. Such cost information has implications for managing the aging bus fleet and commercial vehicles.

A VMIS system for the fleet maintenance facility could provide reports to measure the operation against peer division and determine accurate benchmarks to gauge the efficiency of the vehicle maintenance facility. **Exhibit 6-17** lists an overview of the types of fleet management reports that a full VMIS system provides.

EXHIBIT 6-17
BOTETOURT COUNTY PUBLIC SCHOOLS
PROPOSED FLEET MANAGEMENT INDICATORS

OVERVIEW OF FLEET MANAGEMENT INDICATORS	PERFORMANCE INDICATOR
Maintenance Performance	<ul style="list-style-type: none"> ◆ Miles between road calls ◆ Accidents per 100,000 miles ◆ Percent of preventive maintenance completed on time ◆ Operational rate/percentage for buses and vehicles ◆ Turnover time per bus repair ◆ Entity performing repairs ◆ Driver requested bus repairs ◆ Type of maintenance performed
Cost Efficiency	<ul style="list-style-type: none"> ◆ Operation cost per mile ◆ Annual operation costs per route for buses ◆ Monthly operational costs for non-bus vehicles ◆ Bus replacement costs ◆ Time mechanics spend repairing vehicle(s) ◆ Fuel
Cost Effectiveness	<ul style="list-style-type: none"> ◆ Parts replacement and dollar amounts ◆ Labor hours ◆ Labor cost

Source: School Bus Fleet, 2014. Compiled by MGT, 2014.

Additional data need to be provided to allow the transportation staff to monitor maintenance costs for each bus and other vehicles, as well as repair parts and obtain consumption rates for the fleet.

A variety of automated fleet information management systems are currently available from a wide number of vendors. MGT does not endorse nor recommend a particular software system or vendor. BCPS must consider the capability of its existing hardware, availability of communications lines, and cost implications in determining which technical approach best meets the needs of the transportation department.

MGT does not believe BCPS needs to invest large resources in any high-end automated systems. At present, considering the small size of the BCPS fleet, a more modest approach to fleet management challenges could be accomplished.

Some of the commercially available VMIS software including these critical components are shown in **Exhibit 6-18**.

EXHIBIT 6-18
 BOTETOURT COUNTY PUBLIC SCHOOLS
 OVERVIEW OF VMIS INFORMATION PROGRAM

OVERVIEW OF FLEET MANAGEMENT INFORMATION SYSTEM	DATA COLLECTED
Fleet Management	<ul style="list-style-type: none"> ◆ Monitor changes in unit performance like increases in fuel and oil consumption. ◆ Retrieve information like Vehicle Identification Number (VIN), body and chassis manufacturer, engine and transmission serial numbers, in service date, warranty information, brake type, and equipment. ◆ Unlimited number of customizable fields. ◆ Current mileage by watching work orders, fuel entries or by direct update. ◆ Meters prompt if discrepancies are found in mileage, reducing mistakes. ◆ Provides for manual or automatic repair and protects the integrity of the records.
Scheduled Maintenance	<ul style="list-style-type: none"> ◆ Schedule preventative maintenance to automatically generate work orders. ◆ Start a schedule immediately or wait for the next work order. ◆ Schedule by time, mileage, hour meter or both meter and time. ◆ Schedule by days, monthly, quarterly or annually.
Sample Reports	<ul style="list-style-type: none"> ◆ Fuel consumption ◆ Cost per mile ◆ Work orders ◆ Work orders (shop) ◆ Schedule status ◆ Unit components ◆ Fuel receipts ◆ Campaign status ◆ Open purchase orders ◆ Inventory activity, cost analysis, history, and performance

Source: School Bus Fleet, 2014. MGT, 2014.

The transportation department does not track the maintenance costs of the school bus fleet. During the onsite visit, MGT reviewed the maintenance files and found the worksheet forms that documented the repairs that had been made. The reports did not capture the cost of the work, with the exception of outside vendor repairs, and that cost was written on the worksheet. The mechanic's work time is not documented, nor is the cost of any parts, tires or fluids used for repairing the vehicle. With the current procedures, the department cannot determine a cost per mile nor an annual cost of repairs for any individual school bus.

Adequate record keeping is essential to a preventive maintenance program. Maintenance records enable garage personnel to plan for and schedule needed maintenance work. Accurate records may also be needed to support warranty claims or to provide information for accident investigations. Even more important, well-kept maintenance records can be used by administrators to monitor the maintenance program and determine its effectiveness. Work orders provide adequate maintenance and cost records for each vehicle. The orders serve as a means of comparing parts used to parts in stock or purchased. The orders should contain all pertinent information and be retained for the life of the vehicle. All labor costs must be included on work orders to provide accurate cost accounting.

Inventory records are essential to provide a means of controlling inventory so as to ensure that parts are being used on authorized vehicles and the part(s) cost can be charged to the proper vehicle.

RECOMMENDATION 6-8:

Purchase and implement a Vehicle Maintenance Information System (VMIS) for the shared Botetourt County and School Division vehicle garage.

The use of VMIS software can help the division avoid costly repairs and make it less likely that they will experience any unexpected surprises. Using this approach, each vehicle receives the right kind of service at the right time. The department will be able to keep track of repairs, problems, fuel usage, and accurately determine the cost effectiveness of equipment repairs.

Given that the County shares the maintenance facility and might have an interest in such a system, BCPS is encouraged to explore joint usage to support greater county-wide efficiencies.

In order to maximize the impact of the VMIS software, BCPS may want to add the position of a shop clerk to implement and maintain the system. The shop clerk would work at the bus garage.

FISCAL IMPACT

A basic VMIS system could be purchased for a cost of approximately \$60,000. After the first year, there will be a software maintenance fee based on approximately eight percent of the purchase cost, estimated at \$4,800 annually. The total cost for five years will be \$84,000. It would be appropriate for the county to share the expenses for the software and the new position, if the county wanted to include their vehicles in the maintenance program. The maintenance data and cost-efficiency reports may be advantageous for the Sheriff's fleet, as well. An agreement would reduce the cost for the school division, and possibly based on the percentage of the number of vehicles in all fleets. The cost for the new shop clerk position to implement and maintain this system is included in **Recommendation 6-10**

RECOMMENDATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Purchase a VMIS program.	(\$60,000)	(\$4,800)	(\$4,800)	(\$4,800)	(\$4,800)

Source: BCPS Transportation Department, 2014.

FINDING

Because the transportation department does not use a digital vehicle maintenance information system (VMIS), all records are kept by hand or are on generic office software, such as a spreadsheet program. The current process does not support modern transportation system planning and information needs.

A new staff position would need to be created to be responsible for the VMIS program, inventory, parts, fuel, and maintenance reports.

RECOMMENDATION 6-9:

Hire a full-time position for the transportation garage to implement and maintain the Vehicle Maintenance Information System (VMIS).

FISCAL IMPACT

This recommendation would cost initially \$34,982 (\$23,030 salary and \$11,952 benefits) annually. The cost for five years would be \$174,910 (\$115,150 salary and \$59,760 benefits). If the VMIS program was not purchased, this position would not be necessary. The purchase and annual cost for the new VMIS system is included in **Recommendation 6-8**.

RECOMMENDATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Hire a new position to maintain the VMIS program	(\$34,982)	(\$34,982)	(\$34,982)	(\$34,982)	(\$34,982)

FINDING

BCPS has a high number of spare buses in the fleet. Depending on which numbers you use, BCPS has either 94 or 86 buses, but only 64 school buses (and one car) are used daily for transporting students, and two additional buses are assigned to the two full-time substitute bus drivers.

The remaining school buses are designated as “spare buses.” The best practice recommendation within the student transportation industry is to retain a 15 to 25 percent spare bus ratio. Other factors that may increase the number of spare buses include the age of the fleet, replacement policies, maintenance or other activities, and the level of maintenance necessary to keep the fleet on the road. Based on data provided, BCPS would need a higher percentage of spare buses, due to the age of the fleet, the high mileage on the buses, the lack of scheduled replacement buses, and a current practice that puts nearly all bus mechanics on the road to drive school bus routes both morning and afternoon almost every day of the school year.

RECOMMENDATION 6-10:

BCPS should maintain no more than a 25 percent spare bus ratio, or 17 spare buses. The additional 11 school buses in the fleet should be sold or used for trade-in value.

Establishing school bus replacement policies is an important activity, since it directly impacts the timeliness of introducing the latest safety, efficiency and emissions improvements into the fleet. The elimination of school buses that do not meet the latest standards or requirements must be planned for within a realistic number of years. Policy makers must realize that school buses will not last forever, regardless of how they are equipped when purchased or maintained during their lives. Improvements in state school bus specifications must be developed with the objective of improving safety and efficiency,

reducing emissions and reducing the operating cost of the bus over the anticipated lifetime. The pupil transportation industry is responsible for the safe and efficient transportation of our children. Accordingly, the timely inclusion of new school bus safety features and new means of improving efficiency or reducing emissions are in the best interest of everyone.

Exhibit 6-19 shows the number and the model year of the BCPS school bus fleet. As described earlier, the total reported to the VDOE annual report for 2013-14 is 94, however, the inventory list provided prior to the on-site review and given again during the MGT review includes only 86 buses. In addition, a 2009 school bus was found to be not included on the VDOE annual report. MGT is using the VDOE count for this section.

EXHIBIT 6-19
BOTETOURT COUNTY PUBLIC SCHOOLS
NUMBER OF SCHOOL BUSES BY MODEL YEAR
1993 THROUGH 2013

MODEL YEAR	VDOE NUMBER	BCPS NUMBER**
1993	1	0
1994	3	1
1995	1	0
1996	6	5
1997	1	0
1998	9	7
1999	1	1
2000	7	7
2001	7	6
2002	1	1
2003	6	6
2004	4	4
2005	8	8
2006	11	10
2007	5	4
2008	3	5
2009	6	7
2010	2	2
2011	6	6
2012	6	6
2013	0	0
TOTAL	94	86

Source: VDOE, Support Services, 2014.

** Information provided by BCPS Transportation Department, 2014.

FISCAL IMPACT

This estimated one year revenue for selling un-needed buses is \$11,000 (11 buses x \$1,000). This value is based on typical auction prices. The estimated revenue could be higher, estimated at \$22,000 if the buses are used as trade-ins. In Year 1 and beyond, there would likely be some cost savings based on

reduced insurance and operational costs for those eleven buses. The annual and total savings over five years are unknown, since the department did not provide an annual operational cost per bus.

RECOMMENDATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Sell 11 buses as surplus at auction.	\$11,000	Unknown	Unknown	Unknown	Unknown

FINDING

BCPS does not have a written school bus replacement policy. Staff interviewed during the onsite visit indicated that the department attempts to follow a 15-year school bus replacement schedule and was able to maintain this practice through the 2012 school year. However, replacement funding has not been budgeted and no new buses have been purchased since 2012.

Establishing school bus replacement policies is an important activity, since it directly impacts the timeliness of introducing the latest safety, efficiency and emissions improvements into the fleet. Policy makers must realize that school buses will not last forever, regardless of how they are equipped when purchased or maintained during their lives.

Improvements in VDOE school bus specifications were developed with the objective of improving safety and efficiency, reducing emissions and reducing the operating cost of the bus over the anticipated lifetime. Accordingly, the timely inclusion of new school bus safety features and new means of improving efficiency or reducing emissions are in the best interest of everyone.

Currently BCPS has 21 school buses that are 15 years or older (five buses are 20 years old or older), 19 buses with more than 150,000 miles, and 24 buses with more than 200,000 miles.

Exhibit 6-20 shows bus replacement data provided by the transportation department, listing the number of buses replaced yearly since 2009.

EXHIBIT 6-20
BOTETOURT COUNTY PUBLIC SCHOOLS
BUS REPLACEMENT DATA
2009 THROUGH 2013 FISCAL YEARS

YEAR OF REPLACEMENT	BUSES REPLACED
2009	7
2010	2
2011	6
2012	6
2013	0
TOTAL BUSES REPLACED	21
AVERAGE YEARLY REPLACEMENT	4

Source: BCPS Transportation Department, 2014.

Exhibit 6-21 shows the cost and pupil carrying capacity (e.g. 64 students) of the replacement buses purchased between 2009 through 2013.

EXHIBIT 6-21
BOTETOURT COUNTY PUBLIC SCHOOLS
COMPARISON OF COST AND CAPACITY OF REPLACEMENT BUSES
2009 THROUGH 2013

YEAR	#	BUS 1	BUS 2	BUS 3	BUS 4	BUS 5	BUS 6	BUS 7	TOTAL
2009	7	\$71,980 (64)	\$68,000 (64)	NO INFO* (65)	NO INFO* (65)	NO INFO* (65)	\$76,433 (77)	\$76,433 (77)	\$292,846*
2010	2	\$76,520 (30)	\$76,520 (30)						\$153,040
2011	6	NO INFO* (30)	\$74,950 (65)	\$74,950 (65)	\$74,950 (65)	\$73,290 (65)	\$74,230 (77)		\$372,370*
2012	6	\$84,970 (30)	\$84,970 (30)	\$84,970 (30)	\$65,000 (64)	\$45,000 (64)	\$76,560 (77)		\$441,470
2013		0	0	0	0	0	0		\$-0-
TOTAL	21								\$1,259,726*

Source: BCPS Transportation Department, 2014.

* The cost of these buses was not included in the total.

The data shown in **Exhibit 6-21** show that the purchase of buses in the division has not been sustained. BCPS did not follow the planned, policy-based 15-year bus replacement program from 2009 through 2013. The division purchased 21 buses, or nine less than the 30 buses required to maintain the replacement cycle.

A bus replacement plan is a valuable planning and management tool that can increase efficiency, reduce costs, and improve inventory. **Exhibit 6-22** shows a proposed 15-year school bus replacement schedule.

EXHIBIT 6-22
BOTETOURT COUNTY PUBLIC SCHOOLS
PROPOSED SCHOOL BUS REPLACEMENT SCHEDULE
2014-2015

YEAR	2014	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
1993	1	X						
1994	3	X						
1995	1	X						
1996	6	4	X					
1997	1	1	X					
1998	9	9	7	X				
1999	1	1	1	1				
2000	7	7	7	7	1			
2001	7	7	7	7	7	1		
2002	1	1	1	1	1	1	X	
2003	6	6	6	6	6	6	1	
2004	5	5	5	5	5	5	5	X

EXHIBIT 6-22 (CONTINUED)
 BOTETOURT COUNTY PUBLIC SCHOOLS
 PROPOSED SCHOOL BUS REPLACEMENT SCHEDULE
 2014-2015

YEAR	2014	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
2005	7	7	7	7	7	7	7	6
2006	11	11	11	11	11	11	11	11
2007	5	5	5	5	5	5	5	5
2008	3	3	3	3	3	3	3	3
2009	6	6	6	6	6	6	6	6
2010	2	2	2	2	2	2	2	2
2011	6	6	6	6	6	6	6	6
2012	6	6	6	6	6	6	6	6
2013	0	0	0	0	0	0	0	0
2014	0	0	0	0	0	0	0	0
2015	0	0	7	7	7	7	7	7
2016				7	7	7	7	7
2017					7	7	7	7
2018						7	7	7
2019							7	7
2020								7
TOTAL	94	87	87	87	86	86	86	86

Source: MGT, 2014.

This schedule factors in the previous recommendation to sell a number of the excess or spare buses, by immediately taking seven (7) buses off of the active list to be sold or traded in. If the overall fleet is reduced, then the number of the annual replacement buses could be changed.

RECOMMENDATION 6-11:

Develop and implement a regular bus replacement schedule to ensure a safe and reliable fleet while also controlling costs.

Older vehicles are less reliable, increasing breakdowns, impacting route schedules, and costing more to maintain. Additionally, these buses do not have the latest technology and safety improvements that are built into new model vehicles.

FISCAL IMPACT

Funding for an outright purchase may come from annual operating budget for the transportation department or be included in the capital improvement funding. However, there are other ways to finance a replacement school bus policy.

There are two options for acquisition of replacement buses:

- ◆ Purchase: using the bid process, purchase through the Virginia Department of General Services, off of the state contract for school buses;
- ◆ Lease the buses, acquiring a lease agreement through the bid process or if the county or school division already has a lease agreement and negotiate an increase in the lease to provide funds for the buses.

Recently, the City of Richmond went out to bid to purchase 78 replacement buses and create a lease financing to pay for the buses. Arlington County purchased school buses for the Arlington County Public Schools and the county leases them back to the school division.

FINDING

BCPS maintains a fleet of support vehicles, often called a “white fleet” (although some of the vehicles are not white in color). There are 42 vehicles in this fleet in BCPS (39 plus three additional vehicles listed as “Out of Service”).

Exhibit 6-23 identifies the BCPS white fleet/non-bus fleet of vehicles.

EXHIBIT 6-23 BOTETOURT COUNTY PUBLIC SCHOOLS NON-BUS FLEET VEHICLES

VEHICLE NO.	MAKE OF VEHICLE	MILEAGE	LICENSE	DESCRIPTION/DRIVER
TRANSPORTATION CARS				
100	2006 CR VIC FORD	135,827	155435L	WHITE/GARAGE
101	2002 CR VIC FORD	178,041	168602L	MAROON/GARAGE
102	2003 CR VIC FORD	127,846	31531L	WHITE/LB/DRIVER1
103	2005 CR VIC FORD	125,387	155436L	WHITE/LB/SPEC. ED.
104	2001 CR VIC FORD	145,088	140081L	WHITE/GARAGE
105	2003 CR VIC FORD	168,242	168604L	SILVER/JR
106	1998 FORD CONTOR	145,088	13322L	WHITE/HOME/SUB1
107	2003 CR VIC FORD	144,922	144284L	GREY/HOME/SUB2
108	1997 FORD TAURUS	169,930	13533L	GREEN/RM/ESL
109	2005 CR VIC FORD	139,253	151621L	WHITE/HOME/SUB3
110	2005 CR VIC FORD	157,748	168603L	SILVER/GARAGE
111	2001 CR VIC FORD	114,773	144270L	WHITE/GARAGE
112	2004 CR VIC FORD	135,637	168619L	GOLD/GARAGE
113	2009 CR VIC FORD	98,436	175870L	WHITE/GARAGE
115	2000 CR VIC FORD	152,600	168620L	GREEN/GARAGE
116	2003 CR VIC FORD	176,964	12901L	WHITE/HOME/SUB4
117	2007 CR VIC FORD	85,868	175871L	WHITE/GARAGE
TRANSPORTATION SERVICE TRUCKS				
200	1996 DODGE 4 x 4	53,682	13324L	WHITE/GARAGE
201	1997 GMC 4 x 4	116,467	13319L	WHITE/GARAGE
202	1995 GMC DUMP TRUCK	150,024	13298L	YELLOW/GARAGE
204	1997 GMC TRUCK	112,901	13337L	WHITE/GARAGE
MAINTENANCE SERVICE TRUCKS				
300	2006 FORD	68,117	86785L	WHITE/SHOP/MAINT1
301	2007 FORD	55,280	126823L	WHITE/SHOP/MAINT2
302	1996 CHEV	205,791	25369L	WHITE/SHOP
304	1988 GMC	150,862	13309L	OUT OF SERVICE
305	2000 GMC 4X4	136,664	13310L	WHITE/SHOP/MAINT3
307	1987 GMC DUMP	129,413	13334L	OUT OF SERVICE
308	2008 FORD VAN	109,520	140083L	WHITE VAN/GARAGE
309	2002 FORD TRUCK	212,495	144269L	WHITE/BUCKET TRUCK/GARAGE
313	2003 CHEVROLET	308,708	126828I	BLACK/BAND TRUCK/LB

EXHIBIT 6-23 (CONTINUED)
 BOTETOURT COUNTY PUBLIC SCHOOLS
 NON-BUS FLEET

VEHICLE NO.	MAKE OF VEHICLE	MILEAGE	LICENSE	DESCRIPTION/DRIVER
OPERATION CARS/TRUCKS				
400	2009 FORD ESCAPE	55,064	144290L	WHITE/HOME/ADMIN2
401	2009 FORD ESCAPE	58,521	144291L	WHITE/HOME/ADMIN3
402	2003 DODGE	129,188	14426L	GOLD/GF/SN
SCHOOL BOARD CARS				
500	2005 FORD EXPLORER	121,038	140096L	SILVER/HOME/ADMIN1
501	2003 CR VIC FORD	148,165	140084L	WHITE/SBO
502	2004 DODGE	165,194	151620L	GREY/SBO
TECHNOLOGY CARS				
600	2006 FORD		151619L	OUT OF SERVICE
601	2006 FORD	121,611	155437L	WHITE/RMMS/TECH5
602	2005 FORD	136,836	151622L	WHITE/RMMS/TECH3
603	2001 FORD	176,406	56291L	WHITE/COLONIAL/TECH2
604	2004 FORD	123,434	155438L	WHITE/GARAGE/TECH1
605	2006 E-150 FORD	40,208	894911L	WHITE/GARAGE/COMP. VAN

Source: BCPS Transportation Department, 2014.

The transportation department has seventeen (17) sedans that are used as follows: two (2) full-time substitute bus drivers (take home); two part-time substitute drivers (take home); four (4) assigned to schools - two (2) at Lord Botetourt High School, and one (1) each at James River High and Read Mountain Middle schools; and nine (9) unassigned and parked at the garage. Transportation also has four (4) service trucks.

Maintenance service has nine (9) vehicles: three (3) assigned to employees; three (3) parked at the maintenance shop or the bus garage; one (1) assigned to the Lord Botetourt high school band; and two (2) trucks listed as "Out of Service".

Operations has three (3): two (2) assigned to administrators (take home); and one (1) to an elementary school.

Technology has six (6): four (4) assigned to technicians; one (1) to transport computers; and one listed as "Out of Service".

School board office has three (3): one (1) assigned to an administrator (take home); and two (2) unassigned.

These cars are used for bus drivers that either use a spare bus or need a vehicle to get to the bus, or a driver who uses one of the sedans to go back home and back to the garage to pick up the bus for the afternoon. Based on the site review and discussion with staff, there are more vehicles than needed. Additionally, the three (3) vehicles listed as "Out of Service" should be sold as surplus.

**RECOMMENDATION 6-12:
Eliminate excessive number of “white fleet” sedans and trucks.**

Based on a review of the existing fleet and their usage, it appears that a minimum five sedans assigned to transportation, one sedan assigned to technology, and two trucks assigned to maintenance could be sold at auction without negatively impacting division work.

FISCAL IMPACT

The sedans (retired sheriff deputy sedans) and trucks are all high mileage and will not bring much at auction, approximately \$600 per each. The vehicles may have a higher value as scrap, and it may be worthwhile to look into benefits of using local salvage yards, rather than vehicle auctions.

Since the garage does not maintain individual vehicle costs or annual costs for maintenance, there are no long range cost savings included with this recommendation.

RECOMMENDATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Sell 6 sedans and 2 trucks as surplus at auction or for scrap.	\$4,800	Unknown	Unknown	Unknown	Unknown

7.0 TECHNOLOGY MANAGEMENT

This section presents the findings, commendations, and recommendations for the Botetourt County Public Schools (BCPS) Technology Services Department (TSD) provides leadership to the division in the area of instructional technology staff development, technology support for both hardware and software, and technology acquisitions. The BCPS includes seven elementary schools, two middle school schools, two high schools, one technical center campus, a STEM-H campus, a transportation facility, and central administration. These locations house more than 4,800 students, 500 employees, and 2,800 computers.

The sections of the section include:

- 7.A. Organization and Staffing
- 7.B. Staff Development
- 7.C. Instructional and Administrative Technology
- 7.D. Technology Planning and Budgeting
- 7.E. Technology Policies and Procedures
- 7.F. Inventory and Control
- 7.G. Systems Infrastructure and Integration
- 7.H. Technical Support and Help Desk Operations
- 7.I. Technology Acquisition, Donation and Surplus Practices

Conditions in Botetourt County of importance to this review include:

- ◆ A planned One-to-One initiative, expected to start in early 2015.
- ◆ Unfilled technology staff positions and the use of the Technology Resource Teachers to support network operations.
- ◆ Technology switch equipment that is nearing end of life.

SECTION SUMMARY

In preparing this section, MGT of America, Inc. (MGT), reviewed extensive documents provided by the division, interviewed the entire technology services staff, building principals at all levels, classroom teachers, library media specialists, and a testing coordinator. Additionally, data were collected through the Virginia Department of Education website, the BCPS website, the Auditor of Public Accounts website, and the Virginia State Statutes.

The following commendations are included in the section:

- | | |
|-------------------------|---|
| Commendation 7-A | The division has planned a One-to-One initiative to start in 2015. |
| Commendation 7-B | The division has established a high-speed, wide-area network (WAN) with the capability to expand its bandwidth, as needed. |
| Commendation 7-C | The school division has chosen a highly rated, extremely low cost enterprise solution for its help desk software. |

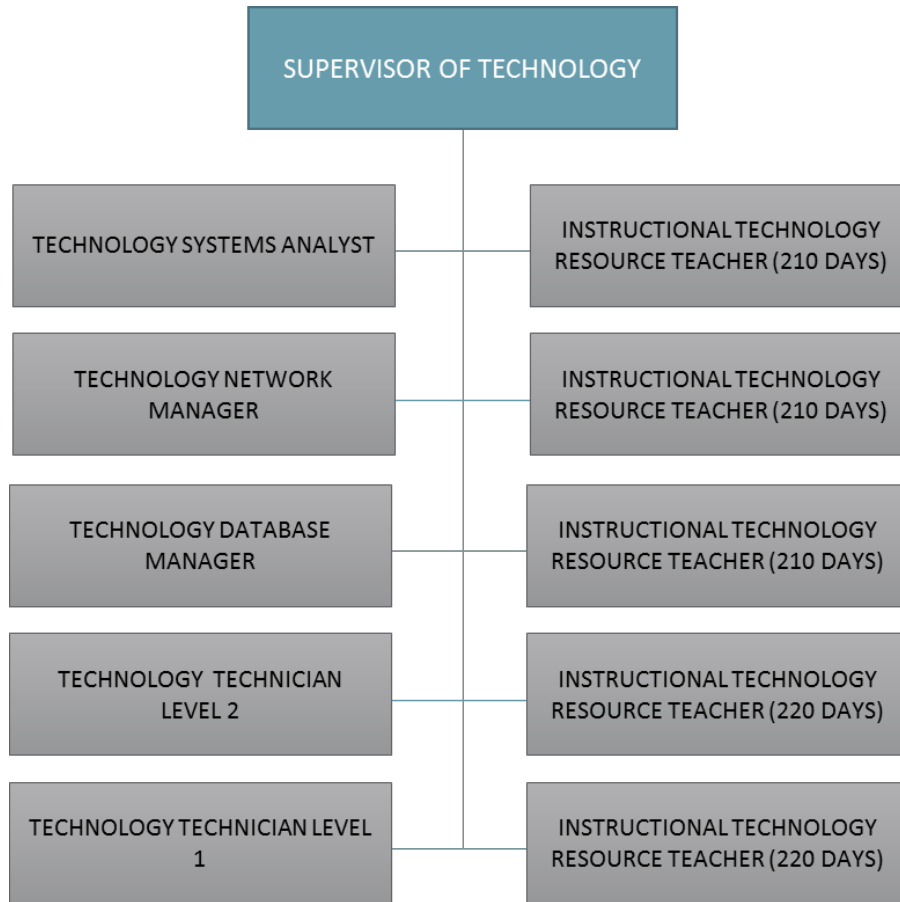
The following recommendations are included in the section:

- | | |
|---------------------------|--|
| Recommendation 7-1 | Appropriately assign technology support and add two new staff members. |
| Recommendation 7-2 | Form a technology committee with broad-based membership. |
| Recommendation 7-3 | Install an ActivBoard in all rooms where it will have instructional value. |
| Recommendation 7-4 | Develop a comprehensive disaster recovery plan. |
| Recommendation 7-5 | Contract with the vendor installing equipment to provide the division with an electronic file containing the necessary information about the equipment. |
| Recommendation 7-6 | Implement a five-year replacement plan for LAN access switches to ensure that no switch in service reaches end of life. |
| Recommendation 7-7 | Create a secure facility to house all mission critical hardware and software with adequate power for both regular service and for a test environment. |
| Recommendation 7-8 | Implement a single central server for the division help desk. |
| Recommendation 7-9 | Create a comprehensive Request for Proposal (RFP) for technology goods and services that define expectations for imaging, inventory coding, and delivery. |

7.A. ORGANIZATION AND STAFFING

The technology services department of BCPS consists of a supervisor of technology services, a technology technician level 1, a technology technician level 2, a technology database manager, a technology systems analyst, and five instructional technology resource teachers (ITRT). The supervisor position is a responsibility that was added this year to the individual who also serves in the Instruction department as the math supervisor. The reporting structure is shown in **Exhibit 7-1**. This configuration meets, but does not exceed the Virginia Standards of Quality for technology support personnel and instructional technology resource teachers.

EXHIBIT 7-1
BOTETOURT COUNTY PUBLIC SCHOOLS
ORGANIZATIONAL CHART
TECHNOLOGY SERVICES



Source: Botetourt County Public Schools, 2014.

FINDING

The individual hired to be supervisor of technology has changed in each of the past seven years. In the past five years, there have been no less than ten changes of personnel on the technical support side of the operation. The ITRT staff has been more stable, but their role has been evolving.

Through interviews conducted during the onsite visit, MGT learned that the ITRTs spend only about 20 percent of their time working with teachers, although that is intended to be their main job responsibility. One of the ITRTs serves as the IT network manager. That work is taking most of the time intended for ITRT duties. This limited time with teachers is a result of ITRTs being assigned technical assignments and responding to teachers' technical, rather than instructional, needs.

There are two people assigned full-time to help desk support, but each ITRT also checks the help desk for his/her school. In addition to the ITRTs' assistance, the technology network manager and the database manager are each assigned two locations for help desk support. The job assignments are made by grade level (elementary, middle, or high), not by geographic location and technicians visit all or

most of their schools each day. One of the technicians currently shadows the IT network manager in an effort to learn more about the networks.

Exhibit 7-2 is an excerpt from the Virginia Instructional Technology Resource Teacher (ITRT), Guidelines for Teachers and Administrators. It defines the specific roles and responsibilities of an ITRT.

EXHIBIT 7-2
VIRGINIA ITRT, GUIDELINES FOR TEACHERS AND ADMINISTRATORS
ROLES AND RESPONSIBILITIES

First and foremost, the ITRT are full-time-equivalent licensed teachers. It is important to note that while ITRT serve as resources to classroom teachers, they should not serve as classroom teachers. Their primary purpose is to train teachers in technology use. In this role, they are also agents of change and actively engaged in curriculum development and lesson planning. It is not the responsibility of ITRT to evaluate a teacher's performance; however, ITRT should work with teachers to assess the effectiveness of technology-based lessons.

In addition, ITRT must be available throughout the school day to plan and implement integration activities. This addresses the time challenge of providing support while meeting teaching obligations.

Duties and responsibilities of an ITRT include, but are not limited to, the following:

- ◆ Working collaboratively with individual teachers or groups of teachers to integrate technology into instruction
- ◆ Assisting with curriculum and content development
- ◆ Disseminating information regarding technology resources, emerging technologies, best practices using technology, and professional development opportunities
- ◆ Facilitating or conducting technology-related professional development for school staff
- ◆ Assessing levels of teacher and student technology use and skills
- ◆ Modeling effective instructional strategies using technology
- ◆ Serving as a member of the school technology committee
- ◆ Supporting implementation of the division and state technology plan

Source: VDOE publication, Instructional Technology Resource Teacher, Guidelines for Teachers and Administrators, 2008.

Exhibit 7-3 provides an overview of the position changes during the last five years. X-signifies a new person in position; 0-signifies position left open; an empty box signifies no change during the school year. As shown, in 2013-14, the Level 1 Technology Technician position was left open for a portion of the year and then filled with a new person.

EXHIBIT 7-3
BCPS TECHNOLOGY ASSIGNMENTS/RESPONSIBILITIES
2014-2015

POSITION	2010-11	2011-12	2012-13	2013-14	2014-15
Supervisor of Technology Services	X	X	X	X	X
Technology Technician Level 1	X	X	X	0 X	
Technology Technician Level 2					
Technology Lead Technician					0
Technology Database Manager	X	X			X
Technology Network Manager	X	0	X	X	
Technology Systems Analyst	n/a	n/a	n/a	n/a	X

Source: Botetourt County Public Schools. Compiled by MGT, 2014.

Exhibit 7-4 lists technology assignments for the 2014-15 school year. As shown, each school has a primary person, but no back-up person identified; division-wide or enterprise activities have both a primary and a back-up person identified.

EXHIBIT 7-4
TECHNOLOGY ASSIGNMENTS/RESPONSIBILITIES
2014-2015

Responsibility	Primary	Backup	Responsibility	Primary	Backup
BRES ITRT	ITRT5		AD / Group Policy	Tech4	Tech3
BUES ITRT	ITRT5		AD accounts	ITRT1	Tech4
CLES ITRT	ITRT3		ARDT	Lewis	Tech2
COES ITRT	ITRT1		Backups	Tech3	Tech1
ERES ITRT	ITRT3		Blackboard Connect	Tech1	Tech4
GRES ITRT	ITRT3		Destiny	Tech4	ITRT5 **
TRES ITRT	ITRT5		Discovery Streaming / eMediaVa	ITRT5 **	ITRT3 **
CAMS ITRT	ITRT4		Division Webpage	ITRT1	Albert

EXHIBIT 7-4 (CONTINUED)
TECHNOLOGY ASSIGNMENTS/RESPONSIBILITIES
2014-2015

Responsibility	Primary	Backup	Responsibility	Primary	Backup
RMMS ITRT	ITRT2		DOE Reports	Tech1	Tech4
JRHS ITRT	ITRT4		Google / Chrome Management	ITRT1	Tech4
LBHS ITRT	ITRT2		IEP Online	Tech1	Tech4
BTEC ITRT	ITRT4		Interactive Achievement	Lewis	ITRT4
STEM-H ITRT	ITRT1		Inventory	Tech2	Tech5
SBO / Ops ITRT	ITRT1		iPads	Tech2	ITRT2-Secondary ** ITRT5-Elementary **
BRES Tech	Tech3		Lightspeed	Tech4	Tech3
BUES Tech	Tech5		Munis	Tech4	Tech1
CLES Tech	Tech5		Network functions (PaloAlto, Packetshaper, etc)	Tech3	Tech4 / Contractor
COES Tech	Tech3		PowerSchool	Tech1	Tech4
ERES Tech	Tech5		PowerTeacher	ITRT4	ITRT5 **
GRES Tech	Tech5		Server Maintenance	Tech3	Tech assigned to school
TRES Tech	Tech5		SIF/ZIF	Tech1	Tech4
CAMS Tech	Tech2		Software Licensure / Purchasing	ITRT1	Tech5 **
RMMS Tech	Tech5		SpiceWorks/Helpdesk	ITRT1	Tech4
JRHS Tech	Tech2		SQL	Tech1	Tech4
LBHS Tech	Tech2		Testing	Tech5	Tech2
BTEC Tech	Tech1		Textbooks	ITRT3 **	ITRT2 **
STEM-H Tech	Tech3 *		VersaTrans	Tech1	Tech assigned to school

EXHIBIT 7-4 (CONTINUED)
 TECHNOLOGY ASSIGNMENTS/RESPONSIBILITIES
 2014-2015

Responsibility	Primary	Backup	Responsibility	Primary	Backup
SBO Tech	Tech4 *		Websmart	Tech4	Tech1
OPS Tech	Tech1				

* A higher level technician performing lower level technician duties;

** An ITRT is performing a technical assignment

Source: Botetourt County Public Schools Technology Services Department, 2014.

RECOMMENDATION 7-1:

Appropriately assign technology support and add two new staff members.

Implementing this recommendation would allow the more skilled technicians and the Instructional Technology Resource Teachers time to perform their primary duties.

The field technician assignments should be made by the geographic regions, not grade levels and their work should be limited to their primary assignment. The division should limit the number of schools visited each day to provide additional support to the buildings served. Instructional Technology Resource Teachers should not have help desk or other technical responsibilities.

By hiring additional staff to support this department, the division will be able to adequately support the technology program. This will be especially important with the implementation of the One-to-One initiative. The two new positions include one IT Manager position, which should be compensated on the same scale as the network manager. One of the ITRTs is currently serving the duties of this role, leaving the ITRT work mostly unachieved. By hiring a new IT Manager, the division would essentially be restoring an Instructional Technology Resource Teacher position.

The second new position should be one additional Level 1 Field Technician. This would provide additional technical support service, freeing the ITRTs to perform their primary function, working with classroom teachers in the area of instructional technology.

This recommendation effectively increases the amount of time that ITRTs can spend on their instructional responsibilities and it supports Goal 2.1.5 of the Division’s Educational Technology Plan for 2010-2015:

Goal 2.1.5 – Increase amount of professional development available by increasing the number of instructional technology staff.

Divisions that appropriately staff IT departments are more able to provide adequate instructional support for teachers and students. Without adequate support, the hardware and software purchases are typically unused or left in boxes.

FISCAL IMPACT

The one year IT Manager costs shown are \$72,213 (salary \$54,329 + benefits \$17,884 = \$72,213). The estimated cost over five years would be \$361,065 (\$72,213 x 5 years = \$361,065).

The one year Field Technician Level I costs are \$44,547 (salary \$30,861 + benefits \$13,686 = \$44,547). The estimated cost over five years would be \$222,735 (\$44,547 x 5 years = \$222,735).

RECOMMENDATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Add the position of IT Manager	(\$72,213)	(\$72,213)	(\$72,213)	(\$72,213)	(\$72,213)
Add one Field Technician I	(\$44,547)	(\$44,547)	(\$44,547)	(\$44,547)	(\$44,547)
TOTAL COSTS	(\$116,760)	(\$116,760)	(\$116,760)	(\$116,760)	(\$116,760)

FINDING

BCPS does not have a Technology Advisory Committee.

There was a division technology advisory committee functioning until the 2013-14 school year. It does not currently exist. Any effective committee is composed of a broad range of stakeholders. A good committee gives input into a division's decisions regarding technology and provides its constituents with relevant technology news put forth at the meeting. The committee's broad representation ensures that the division considers the needs of the entire school community. Many times, divisions that do not have a technology committee fall prey to the desires of small groups or the needs of special interests.

RECOMMENDATION 7-2:

Form a technology committee with broad-based membership.

The committee should provide strategic input, advice, assistance and recommendations in the procurement and implementation of technology while ensuring alignment with BCPS's technology plan, the division's Comprehensive Plan and the Educational Technology Plan for Virginia.

The committee, as a whole, should meet a minimum of three times a year. Ad hoc subcommittees should be formed when significant technology projects are undertaken, i.e., One-to-One initiative.

FISCAL IMPACT

The director of technology should chair this committee as part of on-going work. The work to support technology committees is estimated at 24 hours per year.

7.B. STAFF DEVELOPMENT

Staff development in IT at BCPS is designed to reflect the overall division philosophy of differentiated instruction. Staff professional development opportunities foster continuous improvement through synchronous and asynchronous courses that accommodate multiple learning styles, including conference-style workshops, small group and individualized coaching, professional learning communities, conferences, virtual classes, and “flipped classrooms,” a teaching method where students study a topic on their own, using a variety of resources in addition to their textbooks. They then apply this knowledge by solving problems and doing practical work. The teacher becomes “the guide on the side, rather than the sage on the stage.”

BCPS is planning a significant technology infusion in the fall of 2014 when they plan to issue each of its teachers a Dell Chromebook. Simultaneous with the new hardware is planned staff development that will assist them in being successful with the new devices. Training will range from the basics of using the new technology to the tools associated with its use for instruction. The high school teachers will also have several options for courses on effective ways to use Chromebooks in their classrooms.

The division is also planning to provide each high school student with a Chromebook at the beginning of the second semester. There are significant professional development opportunities planned for teachers in the fall with the arrival of the new equipment. Fall training is in support of Goals 3.2.3 and 4.2.4 of the division’s Educational Technology Plan for 2010-2015, as shown below:

Goal 3.2.3 Provide and support high-quality professional development focused on the acquisition and application of ICT skills for teaching, learning, and school management.

Goal 4.2.4 Continue and expand the use and availability of ActivBoards. Develop professional development for all staff for use of the boards and software.

Exhibit 7-5 shows the professional development opportunities for the Chromebook initiative.

EXHIBIT 7-5
PROFESSIONAL DEVELOPMENT OPPORTUNITIES
STAFF DEVELOPMENT DAY, NOVEMBER 4, 2014
CHROMEBOOKS

COURSE TITLE	DESCRIPTION
Google Classroom/Drive	In this session, teachers learn to create and organize assignments quickly, provide feedback efficiently, and communicate with their classes with ease. Classroom lets students organize their work in Google Drive, complete and turn it in, and communicate directly with their teachers and classmates. With Google Classroom, students can no longer say, "The dog ate my homework."
Fun Apps/Extensions	In this session, teachers will explore the Google Apps using the Chrome Web Store. The Chrome Web Store offers apps and extensions for every educational need, from collaboration tools and video editing, to recorded lessons and math flashcards. Come find an app that works for your classroom!
Screen capture/video	In this session, teachers will use ActivInspire software to create screencast videos, screen shots, and more. A great way to "flip" your classroom.

EXHIBIT 7-5 (CONTINUED)
 PROFESSIONAL DEVELOPMENT OPPORTUNITIES
 STAFF DEVELOPMENT DAY, NOVEMBER 4, 2014
 CHROMEBOOKS

COURSE TITLE	DESCRIPTION
TEDtalks / Incorporating “Flipped Classroom”	In this session, teachers will learn benefits of incorporating “flipped classroom”/TEDtalks. The Ted-Ed platform also allows users to take any useful educational video, not just TED's, and easily create a customized lesson around the video. How could this work in your classroom?
How to's of operating Chromebook/Chrome OS	In this session, teachers will learn the basics of operating a Chromebook and Chrome OS.
Classroom Management with Technology devices	In this session, teachers will focus on 21st Century classroom management. For teachers making the digital leap, one of the greatest hurdles can be figuring out how to manage the tech-infused classroom. This session will help give you the tools you need as you transition from notebook to Chromebook.
Google Sheets/Spreadsheets	In this session, teachers will learn to keep and share lists, track projects, analyze data and track results using Google Spreadsheet. Google Sheets lets you create and format spreadsheets and simultaneously work with other people.
Collaborating with Google presentation/slides	In this session, teachers will create online presentations that allow you to show off your work in a visual way. Google presentation/slides allows user to make presentations on your own or work with others collaboratively.
21st Century Skills in Action	In this session, teachers will see 21st Century Skills in Action. Teachers will learn the process a fellow colleague uses to connect with his students using social media, Google Apps, and Schoology.
Offline Uses	In the session, teachers will learn of the many ways to use a Google Chromebook without wireless access. Hint: A field trip is involved!

Source: Botetourt County Public Schools Technology Services Department, 2014.

MGT has no commendations or recommendations in this area.

7.C. INSTRUCTIONAL AND ADMINISTRATIVE TECHNOLOGY

Instructional and administrative technologies encompass classroom technologies and software as well as the equipment and software need to run the critical functions of the school division. It is no longer adequate just to provide Internet connected computers. Interactive whiteboards and wireless access are essential elements in today's classrooms.

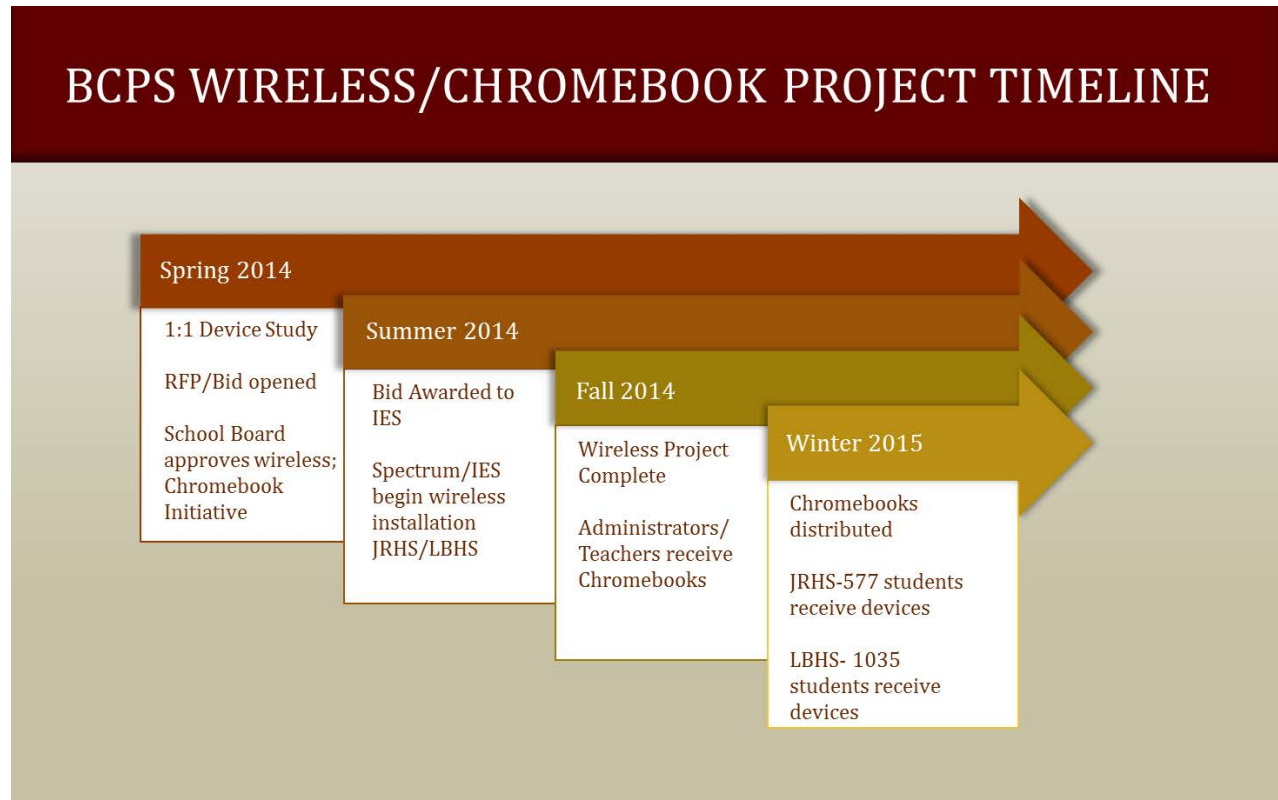
As school budgets have contracted in recent years, school division leadership has turned to technology in an effort to become more efficient. The savings reaped in administrative areas can then be reinvested in the classrooms.

In the spring of 2014, BCPS had more than 2,800 computers but wireless access only in media centers at school sites and the division administration building. At their regular meeting on June 12, 2014, the School Board approved a plan to provide a significant improvement in student access to technology by instituting a One-to-One computer initiative, starting at the high schools. The students at Lord Botetourt and James River High Schools will be the first to receive Chromebooks, with more than 1,600 distributed. In preparation for the increase in the number of devices, the division contracted for the

installation of new wireless infrastructure that features an access point in every classroom at each high school.

Exhibit 7-6 shows the timeline for the implementation of the One-to-One project.

EXHIBIT 7-6
BCPS WIRELESS/CHROMEBOOK TIMELINE



Source: Botetourt County Public Schools Technology Services Department, 2014.

COMMENDATION 7-A:

The division has planned a One-to-One initiative to start in 2015.

BCPS is commended not only for its One-to-One initiative, but also for the selection of the platform for the initiative. Chromebooks are an excellent choice for several reasons: low initial price, low cost software, and low maintenance costs make it the device with the lowest total cost of ownership (TCO) on the market. Another commendable part of this initiative is adding wireless access in every school. The first phase is completed with the wireless installed in the two high schools. These activities support Goals 1.1.3 and 1.2.4 of the Division's Educational Technology Plan for 2010-2015, as shown below:

Goal 1.1.3 Provide division-wide access to web-based content, tools, and collaborative spaces.

Goal 1.2.4 Facilitate the implementation of wireless access to the Internet in every school.

FINDING

In the 2010-2011 school year, the division embarked on a project placing an interactive whiteboard in each classroom. This is a large interactive display that is connected to a computer. The computer is also

connected to a projector. The computer image is shown on the whiteboard and allows the user to interact with the computer while standing in front of a classroom. According to the National Center for Educational Statistics, when the school division began this project only 23 percent of the classrooms in the nation had an interactive whiteboard, projector, and computer linked to the equipment.

Prior to the division initiative, some schools and PTAs purchased a limited number of these devices. There are many different versions of interactive whiteboards in the marketplace, and there were several different types in the school division. The instructional and technology leadership saw the need to establish a standard. To this end they established an ad hoc committee of teachers and administrators and invited a variety of vendors to make a presentation to the committee. The industry leaders in the education space for these boards are SMART Technologies and Promethean. What sets these technology companies apart from the rest of the industry is the instructional software that they have developed for the boards. Both vendors made a presentation. The committee chose Promethean and their ActivBoard for the division standard. The decision was based on the functionality of the boards. They can be used with an ActivPen or intuitive touch or a combination of both. The Activinspire software was also a major factor in the decision. At this time, the school division also established eight years as the replacement cycle.

Since this is a multi-year project, the configuration of the product has changed from a ceiling-mounted projector to one that has the projector attached to the board with an arm that protrudes from the top of the board. The one constant throughout the project has been the software. In fact, Promethean regularly upgrades its software. When it does, a free upgrade is available for all their boards. Teachers are also licensed to use Activinspire on their home computers and in a lab setting. This allows them to develop lessons away from the school campus and to have all their students interact simultaneously with a lesson that they have developed.

Currently, there are no interactive boards of any kind in 21 percent of the rooms in the division. Another six percent have an interactive board other than an ActivBoard. There are currently 133 rooms that do not meet the division standard. Encore Technology Group has provided the division with a quote of \$4,088 for the delivery and installation of each ActivBoard, for a total cost of approximately \$543,704.

Exhibit 7-7 provides an overview of the number of rooms by school with and without interactive boards. The last column provides the percent of rooms without an ActivBoard.

EXHIBIT 7-7
INTERACTIVE BOARD STATUS

SCHOOL	# OF ROOMS WITH ACTIVBOARDS	# OF ROOMS WITH OTHER INTERACTIVE BOARDS	# OF ROOMS WITHOUT INTERACTIVE BOARDS	# OF ROOMS WITHOUT ACTIVBOARD	# OF TOTAL ROOMS	% ROOMS WITH NO ACTIVBOARD
Elementary	186	7	44	51	237	21.52
Breckinridge	26	0	9	9	35	25.71
Buchanan	28	0	6	6	34	17.65
Cloverdale	27	6	5	11	38	28.95
Colonial	29	0	3	3	32	9.38
Eagle Rock	16	0	4	4	20	20.00
Greenfield	30	1	6	7	37	18.92
Troutville	30	0	11	11	41	26.83
Middle	76	9	31	40	116	34.48
Read Mountain	46	5	21	26	72	36.11
Central Academy	30	4	10	14	44	31.82
High and Specialty	97	13	29	42	139	30.22
Botetourt Tech Center	13	0	8	8	21	38.10
Lord Botetourt	47	1	12	13	60	21.67
James River	36	12	6	18	54	33.33
STEM-H Academy	1	0	3	3	4	75.00
Totals	359	29	104	133	492	27.03

Source: Botetourt County Public Schools Technology Services Department, 2014.

RECOMMENDATION 7-3:

Install an ActivBoard in all rooms where it will have instructional value.

During the onsite visits, MGT confirmed with teachers and administrators the interest and need in completing the installation of this technology so that all classrooms meet the identified standard. Implementation of this recommendation would support goal 4.2.4 of the Division's Educational Technology Plan for 2010-2015, as shown below:

Goal 4.2.4 Continue to expand use and availability of ActivBoards. Develop professional development for all staff for use of the boards and software.

FISCAL IMPACT

If all rooms are outfitted with an ActivBoard system, the one-time cost would be \$543,704 (133 units x \$4,088 per unit). The table below shows the fiscal impact of spreading the cost over a five year period. The costs for year 1 has been reduced by the sale of the other interactive boards.

RECOMMENDATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Sell other interactive boards	\$3,045	\$0	\$0	\$0	\$0
Purchase ActivBoard systems for remaining classrooms	(\$108,741)	(\$108,741)	(\$108,741)	(\$108,741)	(\$108,740)
TOTAL	(\$105,696)	(\$108,741)	(\$108,741)	(\$108,741)	(\$108,740)

7.D. TECHNOLOGY PLANNING AND BUDGETING

Five-year technology plans are required by the Virginia Department of Education. These plans need to illustrate the process used to develop the plan. It must also state the particular actions the division intends to take regarding educational technology, i.e. goals, objectives, and strategies.

According to the **2010-15 Education Technology Plan for Virginia**, each school division plan must include the following:

- I. Cover Page (identify division, effective dates of plan, URL)
- II. Table of Contents
- III. Executive Summary
- IV. Process
 - A. Summary of connections to the division’s mission, vision, etc.
 - B. Summary of work of the planning committee and its benchmarks
 - C. Summary of the evaluation process and planned update cycle
 - D. Conclusions from Needs Assessment
- V. Actions (goals, objectives, strategies, and evaluation strategies)
 - A. State goals and objectives with local strategies and measures
 - B. Any additional local goals, objectives, strategies, and measures tied to division mission, vision, etc.
- VI. Appendix 1:
 - Timetable and Budget for goals, objectives, strategies, and measures (at a minimum, Appendix 1 must be updated after three years, even if the plan covers six years)
- VII. Appendix 2:
 - Division AUP (with most recent date it was amended): As required by law, it must include all elements.
- VIII. Appendix 3:
 - Summary of Internet safety program for 2008-10 (including process for adjusting program based on evaluation)

In Virginia, technology planning and budgets are greatly influenced by several factors. The Standards of Quality (SOQ) define a minimum of technical support and instructional assistance to teachers. The federal No Child Left Behind Act (NCLB) has defined the standards for technology literacy by the end of grade eight. The Virginia Standards of Learning for Computer Technology are guidelines for curriculum in grades K-12. State funding is dependent upon meeting the requirements of the preceding items. The universal service Schools and Libraries Program, commonly known as “E-rate,” provides discounts of up to 90 percent to help eligible schools and libraries in the United States obtain affordable telecommunications and internet access. Divisions must comply with E-rate regulations so that they will be partially reimbursed for telecommunication and internet fees.

Botetourt County Public Schools has an approved technology plan and has met all the necessary criteria to receive full funding from the state. It contracts with E-rate Central to ensure that it receives maximum E-rate reimbursement. The division is also taking advantage of a Virginia regulation for textbook funding that allows it to use those dollars to fund the Chromebooks One-to-One initiative.

FINDING

BCPS does not have a disaster recovery plan. In the event that the main data center was rendered inoperable, there is no plan for recovering back-up data or continuing mission-critical functions.

The division has a Barracuda back-up appliance which will accommodate 3 TB of data. The device can be configured to replicate the back-up to a cloud environment provided by Barracuda. Currently, BCPS is storing 1.7 TB locally. Only finance data is being uploaded to the cloud. All other school division data is stored locally with no back-up or disaster recovery plan.

There is a room in the operations center, a building that houses the division's transportation department and is separate from the School Board Office that could function as a back-up site for the division's main data center. There is a fiber connection between these two sites. However, currently, the back-up generator for this space is not functioning.

Today's school divisions rely heavily on the use of technology to run their business operations. When disaster strikes, divisions without a disaster recovery plan will not be able to function. Attendance will not be recorded, bills will not be paid, human resources programs will be impacted, and both intra-division communication and the communication with the community will be lost.

RECOMMENDATION 7-4:

Develop a comprehensive disaster recovery plan.

The disaster plan needs to include back-up and recovery procedures, technical information, equipment, and staff capacity, and schedules for monitoring and testing the plan and equipment on a regular schedule.

The most efficient way to have continuous service available after a disaster is to have a mirror site that can continue to provide IT functionality to the division should the main site be disabled. With the server room in the Operations Center that is located near, but not at, the division offices, BCPS has an opportunity to make this happen. The Operations Center Room is currently located upstairs in the building that houses transportation. It should be used to house the test environment for the central IT function and house one of the domain controllers for Active Directory. It can also serve as the mirror site. All mission critical software should be on both the production virtual servers in the School Board Office and on the test environment virtual servers in the Operations Center. Using the fiber between the two facilities and the remote access features available in the software gives the user not only the ability to treat these two rooms as one unified space, but also the capacity to function from one, should the other be unavailable for any reason.

In addition to having mirrored servers, the division should take steps to ensure that critical data are backed up off-site using the cloud. There are many different cloud services available. Essentially, they all perform the same function: store division data to servers provided by a vendor. The back-up is executed over the Internet using a secure connection. All School Board Office data should be replicated in the cloud.

Exhibit 7-8 lists recommended key elements for a disaster recovery plan.

EXHIBIT 7-8 KEY ELEMENTS OF A DISASTER RECOVERY PLAN

<p>Build the disaster recovery team.</p> <ul style="list-style-type: none"> Identify a disaster recovery team that includes key policy makers, building management, end users, key outside contractors, and technical staff. <p>Obtain and/or approximate key information.</p> <ul style="list-style-type: none"> 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. <p>Perform and/or delegate key duties.</p> <ul style="list-style-type: none"> 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. <p>Specify details within the plan.</p> <ul style="list-style-type: none"> 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. <p>Test the plan.</p> <ul style="list-style-type: none"> Test the plan frequently and completely. Analyze the results to improve the plan and identify further needs. <p>Deal with damage appropriately.</p> <ul style="list-style-type: none"> 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. <p>Give consideration to other significant issues.</p> <ul style="list-style-type: none"> 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.
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Source: The National Center for Education Statistics, 2003.

The division should place a high priority on creating a recovery plan to ensure continuity of mission-critical work, including student and business records. A sub-group of the Technology Committee could be charged with developing the plans for review and approval by the administration and the board.

The plan should be implemented and monitored regularly with equipment and procedures tested and adjusted, as needed. If the equipment is purchased in year one, per this recommendation, there will be no recurring cost until year six since this will be part of the division's five year replacement cycle.

FISCAL IMPACT

It is highly recommended that this equipment be purchased in Year 1. Each piece is needed for the disaster recovery strategy outlined above. The division will not be fully prepared for a disaster until all of these components are put in place.

RECOMMENDATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Purchase four virtual servers with storage array.	(\$70,000)	\$0	\$0	\$0	\$0
Purchase seven servers	(\$105,000)	\$0	\$0	\$0	\$0
Repair generator at operations center	(\$5,000)	\$0	\$0	\$0	\$0
Total Cost	(\$190,000)	\$0	\$0	\$0	\$0

7.E. TECHNOLOGY POLICIES AND PROCEDURES

School divisions that are efficient and effective have enacted clear policies and adopted procedures to implement those policies that make clear how technology is to be used and managed in the division.

BCPS provides a computer system to promote educational excellence by facilitating resource sharing, innovation, and communication. The term “computer system” includes, but is not limited to, hardware, software, data, communication lines and devices, terminals, printers, CD-ROM devices, flash drives, servers, mainframe and personal computers, tablets, cellular phones, smart telephones, the internet, and other internal or external networks.

The use of a division’s computer system is expected to be (1) in support of education and/or research, or (2) for legitimate school business. Divisions have identified the use of the computer system as a privilege, not a right. Any communication or material generated using the computer system, including electronic mail, instant or text messages, tweets, or other files deleted from a user’s account, may be monitored, read, and/or archived by school officials. Divisions require all users to agree to these limitations and sign an “appropriate use permit” (AUP) on a regular basis.

BCPS has School Board Policies and Regulations, IIBEA/GAB, IIBEA-R/GAB-R, and IIBEA-E2/GAB-E1 that govern Acceptable Computer System Use and an Acceptable Computer System Use Agreement. The latter has to be completed by each student at the beginning of the new school year. If the agreement is not signed within the first two weeks of school, access for that student is terminated until the signed agreement is returned.

BCPS has developed standards and a replacement schedule for computer equipment. Purchases made throughout the division must adhere to these standards.

MGT has not identified the need for any recommendations in this area.

7.F. INVENTORY CONTROL

Accounting for technology assets is an important part of the stewardship responsibility of the technology services department. The purpose of tracking technology assets are: to safeguard the sizeable investment, to provide physical and accounting controls for the investment, and to assist in the formulation of policies dealing with acquisition, maintenance, and replacement of technology assets.

The computer ratio ranges from Breckenridge Elementary School which has a computer for every 1.62 students to Read Mountain Middle School with a ratio of 2.69. The division average is 1.9 students for every computer. There are also a number of iPads in each building that are not included in the calculation for the student-to-computer ratio. This ratio will drop to 1.2 with the introduction of the Chromebooks during the 2014-15 school year.

Exhibit 7-9 shows the 2014 student-to-computer ratio in BCPS by school. Botetourt County Public Schools has an excellent student-to-computer ratio in every school. According to the National Center for Educational Statistics, in 2009, the national average was 5.3 students per computer. The division's ratio will improve and continue to drop as the One-to-One initiative is implemented.

EXHIBIT 7-9
BOTETOURT COUNTY PUBLIC SCHOOLS
COMPUTER RATIO BY SCHOOL

	# OF STUDENTS	# OF INSTRUCTIONAL COMPUTERS	# OF IPADS	STUDENT TO COMPUTER RATIO
Elementary				
Breckenridge	225	139	18	1.62
Buchanan	289	165	30	1.75
Cloverdale	313	122	28	2.57
Colonial	415	229	29	1.81
Eagle Rock	153	84	21	1.82
Greenfield	400	193	33	2.07
Troutville	274	163	30	1.68
Middle				
Read Mountain	737	274	23	2.69
Central Academy	470	267	29	1.76
High & Specialty				
Botetourt Tech Center		147	43	0.00
Lord Botetourt	1,033	436	67	2.37
James River	578	289	20	2.00
STEM-H Academy		67	0	0.00
Division Totals	4,887	2575	371	1.90

Source: Botetourt County Public Schools, Technology Services, 2014.

FINDING

BCPS maintains an electronic inventory file for its technology assets. Replacement decisions are formulated based on the information in this file. Although the file is electronic, the inventory is maintained manually by the Technology Services department. When a computer, or other piece of technology, is received, it is tagged and then entered into the database. This is a very time consuming process that is subject to errors.

RECOMMENDATION 7-5:

Contract with the vendor installing equipment to provide the division with an electronic file containing the necessary information about the equipment.

This can be accomplished by making it a requirement of the technology Request for proposal. Requiring this will free the technology services staff from a mundane task and allow them to provide more service

FISCAL IMPACT

This recommendation can be implemented by the technology director based on two hours of research and review to create RFP template language regarding vendor expectations for equipment information. It will allow the staff to be more efficient.

7.G. SYSTEMS INFRASTRUCTURE AND INTEGRATION

Education in the 21st Century requires technology connections and systems that are integrated. It is imperative that the division office is connected to each school by not only telephone, but also data lines to ensure that important information about students and systems can be communicated securely, quickly, and easily. Given the need for such systems, it is imperative that the infrastructure meet these data demands for security, speed, and ease.

FINDING

The school division's fourteen locations are inter-connected with a high-speed data network. The division contracts with Lumos for these services. The only exceptions to this are the connections between Operations and the School Board Office, the Tech Center and the School Board Office, and Central Academy Middle School and the School Board Office. These are all 1 GB connections over a division-owned fiber. Lord Botetourt HS, the largest school in the division, has a 100MB connection. James River HS and Read Mountain MS each have a 50MB connection. Each elementary school is connected with a 10MB link. The school division also receives its Internet service through Lumos. The connection speed for this service is 100MB. BCPS has the ability, for a fee, to increase the bandwidth between any of its locations and its connection to its Internet Service Provider (ISP).

COMMENDATION 7-B:

The district has established a high-speed wide-area network (WAN) with the capability to expand its bandwidth, as needed.

This commendation is in support of Goal 1.2.3 of the Division's Educational Technology Plan for 2010-2015, as shown below:

Goal 1.2.3 Facilitate the implementation of fiber and 100 MBPS to 1 GBPS Ethernet to every school.

FINDING

Like most technology systems, each building in BCPS has a routing switch and a number of access switches. The latter will vary in number, according to the size of the building served. The routing switch is the device that controls all wide-area network (WAN) traffic coming to and flowing from the local-area network (LAN). The access switches control the network traffic within each building.

As part of the planned implementation of their One-to-One initiative, Botetourt County Schools retained a contractor to perform a study of the existing facilities and technology infrastructure. The study, Botetourt County Public Schools, Wireless IT Facility, provided specifications necessary to install a wireless network in each building. In addition, it recommended the replacement of the LAN/WAN routing switches, but is silent on replacing existing access switches, as shown in the pricing charts on page 3-1 of their report. According to the manufacturers of the switches in use in BCPS, CISCO Systems and Hewlett Packard, 50 percent of the routing switches and 97 percent of the access switches have reached their “last day of support” or their “end of service life,” respectively. These terms both mean that there is no hardware or software support for the device so designated. Another description is that they are “running to failure.”

Exhibit 7-10 displays the status of the network access switches and the connection speed by location as documented by BCPS technology services staff.

EXHIBIT 7-10
STATUS OF ACCESS SWITCHES AND CONNECTION SPEED
BY LOCATION

LOCATION	NUMBER OF ACCESS SWITCHES	END OF LIFE - ACCESS SWITCHES	END OF LIFE - WAN SWITCHES	CONNECTION
School Board Office	4	4	1	100 MB
Operations	3	3	1	1GB fiber backbone
Lord Botetourt High School	17	16	0	100 MB
James River High School	24	21	1	50 MB
Read Mountain Middle School	14	14	1	50 MB
Central Academy Middle School	11	11	0	1GB fiber backbone
Botetourt Tech Center	7	7	0	1GB fiber backbone
Breckinridge Elementary School	3	3	0	25 MB
Buchanan Elementary School	5	5	0	25 MB
Cloverdale Elementary School	5	5	0	25 MB
Colonial Elementary School	5	5	0	25 MB
Eagle Rock Elementary School	4	4	0	25 MB
Greenfield Elementary School	14	14	1	25 MB
Troutville Elementary School	5	5	1	25 MB
Totals	121	117	6	
Percentage at End of Life		97%		

Source: Botetourt County Public Schools Technology Services Department, 2014.

RECOMMENDATION 7-6:

Implement a five-year replacement plan for LAN access switches to ensure that no switch in service reaches end of life.

The five-year replacement plan for the 121 switches outlined below is a best practice. This plan initially replaces all switches because they will all reach end of life during this five-year cycle. This should then become a continuing item in future budgets to ensure that key infrastructure components are replaced regularly before they fail. Although all the identified switches in **Exhibit 7-10** have reached or will reach end of life, it is recommended that only 20 percent be replaced each year. After the Year 1 round of replacements, spares should be kept to replace switches that may fail before they are able to be replaced during the next four years.

FISCAL IMPACT

The table below demonstrates the cost of replacing all access switches in the division over a five-year period. It does not include staff time, since this should be part of their regular duties. This item should become part of the ongoing technology budget. In Year 1, the division should replace the 25 oldest access switches at a total cost of \$13,750 ($\$550 \times 25 = \$13,750$). The next 25 oldest access switches should be replaced in Year 2, etc.

RECOMMENDATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Replace switches, as shown	25	25	25	25	25
Total Cost	(\$13,750)	(\$13,750)	(\$13,750)	(\$13,750)	(\$13,750)

FINDING

The head end room and main data center for the school division does not have adequate power, equipment, or infrastructure to support all the technology in the division and serve as the “backbone” for the system.

The room contains the following important technology appliances:

- ◆ Palo Alto PA-2050, which provides the firewall for the division.
- ◆ Barracuda systems Backup Server 690, which provides onsite and division-wide back up.
- ◆ Lightspeed Systems Bottle Rocket, which filters content and is required by the Internet Safety Protection Act.
- ◆ Blue Coat Packet Shaper 7500, which allows division personnel to control set limits on the different types of traffic that flow into the organization. Having this ability is crucial during Virginia’s SOL testing time.

The data center also houses both switches and servers.

- ◆ **Four switches.** There are two for LAN/WAN access (a CISCO Systems Catalyst 3750 POE 48 and a Hewlett Packard 2810 24G) and two for network access (Hewlett Packard Procurve 2610 and

Procure 2650) within the building. The Procurve 2650 has reached its end of life and is no longer supported by the manufacturer.

- ◆ **Seven servers.** There are seven servers in the Operations building housing a variety of applications, the most important of which are the Domain Controller and the backup Domain Controller for the entire school division.
 - Three servers are five years old or older. The fourth server is for the HVAC systems and was purchased September 1, 2014. The older servers provide critical functions, including PowerSchool (the division’s student record system), the Spiceworks help desk, file and print for the School Board Office, and Dynamic Host Configuration Protocol, DHCP.
 - Three additional Poweredge R710 servers and a four terabyte storage array is running VMware. The functions that these virtual servers provide include PowerSchool, SIF integration, SMTP email, Destiny library, Moodle, MUNIS financial, Tyler transportation, and B Tech file and print.

The servers and switches provide critical infrastructure to ensure business continuity in the division. Student records and financial data must be available at all times, regardless of weather or power or equipment. During the onsite interviews, MGT learned that the latest release for PowerSchool could not be installed applied because of inadequate server processing power and capacity.

Of additional concern, with the exception of MUNIS, there is no test environment where new software or new versions of software can be applied and tested prior to implementation. MUNIS was purchased as a package from a vendor and that package included a test environment. All upgrades have to be applied directly to the production system. This approach is not a recommended practice and divisions that do not have the capacity to test implementation in a controlled environment are subject to mission-critical failures if one application crashes another and, without back-up off site, from which recovery is very difficult.

Finally, the main data center, located in the School Board Office, is not a secure room. It currently also serves as a storage room and “catch all” room for the building. It has a dedicated HVAC system that is adequate for the size of the room and the equipment housed in the space and all the servers are attached to an uninterruptible power supply (UPS) that provides two to four hours of service. However, there is no generator back-up available to support these vital components should the power be out for an extended period.

RECOMMENDATION 7-7:

Create a secure facility to house all mission critical hardware and software with adequate power for both regular service and for a test environment.

The head end room and main data center is the originating point in a communications system along with providing IT services to the entire school division. The key elements of this type of facility are security, adequate power, even in times of power outages, adequate cooling, sufficient resources to provide mission critical programs division-wide. Upgrading the room to meet these conditions is critical.

The room should be a single-purpose room and all general storage items removed. The lock should be changed and access to the room should be limited to the technology personnel responsible for the equipment in the room. A generator back-up system should be installed. Without this generator, the availability of technology WAN services, and mission critical applications would be non-existent during a prolonged power outage.

The school division should place all mission critical equipment on a five-year replacement cycle. Finally, the division should purchase server(s) to provide for a test environment and also serve as a disaster recovery site.

When all mission critical services are in one location, the organization is better able to provide security and adequate power in a conditioned space.

FISCAL IMPACT

RECOMMENDATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Purchase generator for Main Data Center	(\$30,000)	\$0	\$0	\$0	\$0

This is the only fiscal impact during the first five years. The other equipment referenced in this recommendation is also needed for **Recommendation 7-4** and referenced in the Fiscal Impact for that recommendation.

7.H. TECHNICAL SUPPORT AND HELP DESK OPERATIONS

Having technology without having support would be useless. All divisions need to ensure that there is support for both equipment and software applications to ensure that users can complete their work, take advantage of the opportunities technology provides, and enhance learning.

The support function of the BCPS technology services department consists of a Field Technician Level 1 and a Field Technician Level 2, a Technology Database Manager, and a Technology Systems Analyst. In addition, five Instructional Technology Resource Teachers (ITRTs), have also been made available and spend a significant amount of time resolving technical issues, although their main job responsibility is to support instructional programming in classrooms.

FINDING

The division uses Spiceworks for two help desk related purposes: receiving trouble calls for hardware and software, and inquiries about PowerSchool, the division's student information system. All PowerSchool tickets are routed to the PowerSchool administrator for the division. There is a single server for the entire division. The hardware and software issues are resolved by the technology support team. Problems can be reported by either the computer contact person at each school or by an individual teacher.

The backbone of any technology system support is its help desk software. The school division currently uses Spiceworks for its help desk, a product that PC Magazine gives four out of five stars. This is a free product that has a large user base. There are three ways to access help for the product: the online help, emailing the support team, or asking the Spiceworks community. In fact, the online user community and associated forums are the most valuable assets of the support function.

According to help deskreviews.com the most popular features, those needed most by technicians and end users are: ticket management, web-based, single sign on, search and indexing, mobile app, email integration and automated responses, and analytics and reporting. Spiceworks has all these features, and more. There is also an inventory control component to the software. This is useful because it will

query the network and automatically pull these assets into an inventory. Having an accurate inventory is vital to tracking equipment and developing a replacement schedule.

Spiceworks has a user-friendly, web-based front end, as shown in **Exhibit 7-11**.

EXHIBIT 7-11
SPICEWORKS
USER INTERFACE SCREEN SHOT

The screenshot shows a web-based form titled "Create a new ticket". The form is organized into several sections:

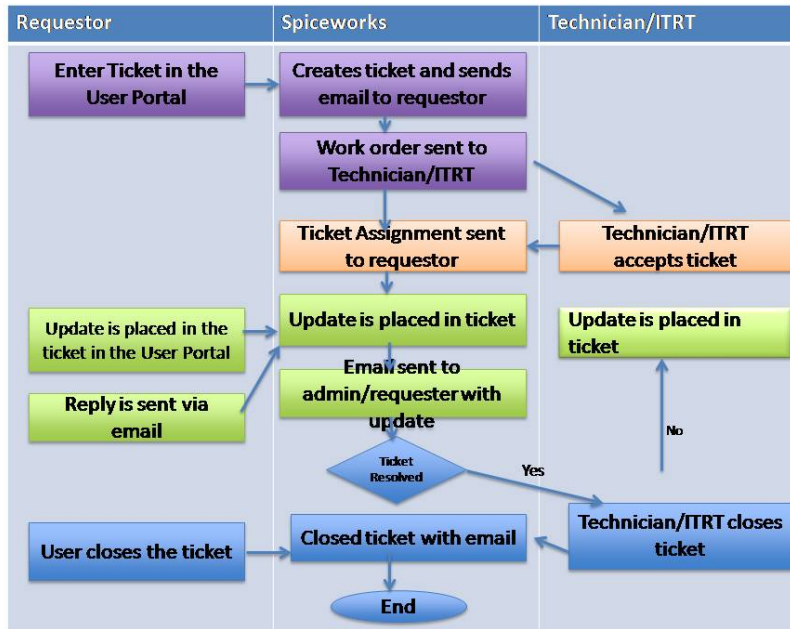
- Contact:** A text input field containing "beth@bcps.k12.va.us".
- Related to:** A text input field with the placeholder "Type item name..."
- Summary:** A large text area for entering a brief overview of the ticket.
- Description:** A larger text area for providing detailed information about the issue.
- Assigned to:** A dropdown menu currently set to "Unassigned".
- CC Users:** A text input field for adding additional users to the ticket.
- Due Date:** A date picker field.
- Priority:** Radio buttons for "High", "Med" (which is selected), and "Low".
- Category:** A dropdown menu.
- Attachment:** A "Choose File" button and the text "No file chosen".
- Tip:** A note that says "Tip: Record the data you need by adding a [Custom Attribute](#)".
- Footer:** A "What is this?" link and "Save" and "Cancel" buttons.

Source: Botetourt County Public Schools Technology Services Department, 2014.

Spiceworks provides teachers with a user-friendly system to enter help desk tickets and receive feedback as problems are being resolved.

Exhibit 7-12 shows the Spiceworks workflow plan, from ticket creation to resolution. As shown, the goal is quick and seamless resolution of technology issues.

EXHIBIT 7-12
SPICEWORKS



Source: Botetourt County Public Schools Technology Services Department, 2014.

Based on the flowchart above, MGT reviewed the Help desk tickets to understand whether the system was working to support technology needs. **Exhibit 7-13** provides an analysis of 4,236 help desk tickets. As shown, help desk tickets seem to be resolved quickly, perhaps due to the use of ITRTs performing technical duties. Of the 4,236 work orders examined, 67 percent were closed within 24 hours, 74 percent were closed within two days, and 92 percent were closed within one week. The great majority of the remaining eight percent were for work that required parts for the repair to be completed.

EXHIBIT 7-13
ANALYSIS OF HELP DESK TICKETS
SPICEWORKS

NUMBER OF DAYS TO CLOSE A TICKET	NUMBER OF TICKETS	PERCENTAGE OF TICKETS CLOSED
Closed within 1 day	2,824	67%
Closed within 2 days	290	7%
Closed within 7 days	804	19%
Closed over 7 days	318	8%
Total Tickets	4,236	100 %

Source: Botetourt County Public Schools Technology Services Department, 2014.

COMMENDATION 7-C:

The school division has chosen a highly rated, extremely low cost enterprise solution for its help desk software.

FINDING

The division uses Spiceworks for its help desk and there is a help desk server at each location. It is a PC that is over ten years old that has been adopted for this use. The current configuration requires the technician to login onto to the server at each location. Spiceworks is designed to be a unified system for the entire organization, but it is being implemented as 12 separate systems. This is highly inefficient for several reasons. The Field Technician who is checking tickets needs to sign on to several different servers and evaluate the tickets in each system in order to prioritize the needs. If this is not done then the technician might drive to one location only to check the rest of the systems and discover that there is a more urgent need at another school. This results in high drive-time costs. Additionally, each system contains a knowledge base of problems and the solutions applied to resolve the problem and part of the system identifies the equipment models. In a unified system, problem models and/or common issues will become apparent very quickly. This is not the case when there are twelve unique systems. Finally, if division-wide statistics are needed, a report must be generated from each system and then manually merged.

RECOMMENDATION 7-8:

Implement a single central server for the division help desk.

There is no need to have a help desk server at each school building throughout the school division. In fact, it is a detriment to do so. A single server system would eliminate the need for a technician to sign on multiple times during a day, would allow for improved tracking of division assets, and provide a service history in one unified space. Spiceworks can be setup centrally, using an existing server located at the School Board Office.

FISCAL IMPACT

Since the servers in the schools are over ten years old and in need of replacement, this new configuration could save the division \$9,600 (\$800 x 12 locations). This does not represent an actual savings. It reflects a reduction in need for future expense, while maintaining and improving service and efficiency to the sites.

RECOMMENDATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Eliminate 12 school-based servers	\$9,600	\$0	\$0	\$0	\$0

7.1. TECHNOLOGY ACQUISITIONS, DONATION, AND SURPLUS PRACTICES

As of the writing of this report, BCPS maintained a computer inventory of more than 2,800 computers and 400 iPads. The inventory also includes 25 servers, 388 interactive boards. A bring your own device (BYOD) program is supported by the division. BYOD is a trend that most divisions support. It is when students bring their own devices to use in class. There currently is not a large use of BYOD, and it will become even less of an issue when the One-to-One initiative rolls out.

School division technology purchases are generally scrutinized because of the expense of the equipment and a general lack of understanding of the “behind the scenes” cost of the infrastructure. Getting the best value for technology is essential if the division is to garner the public trust.

Donations are always a delicate subject when it comes to technology. Many times an individual or a business wishes to donate equipment that is equivalent to machines that the division has already taken out of service. A best practice is to develop and publish a minimal requirement for donated equipment that is updated every year. Whenever a piece of equipment is offered for donation, the division should determine if or how the equipment can be included in division activities and, if not, how to appreciate the offer, and gain any financial value that the equipment might provide when sold by the offeror.

Used technology has very little value in today’s marketplace. In fact, in some cases there is a charge to dispose of certain pieces of equipment. It is possible to develop a relationship with a vendor who will rebate a small amount for each surplus machine or, at the very least, remove existing equipment as they install new purchases. This is usually negotiated during the Request for Proposal process.

FINDING

BCPS purchases most of its hardware from state contracts. It does not use the Request for Proposal (RFP) process to find local vendors or add local supply requirements. The state contract merely provides reduced costs for hardware that is shipped to the division. As a result, the division either uses its personnel or hires a vendor to install computer hardware and software on purchased equipment.

In the summer of 2014, BCPS contracted with Ethos Technology for computer installation at a cost of \$11,000. The state contract arrangement with Dell requires a technician to become Dell-certified and to maintain this certification each year. Equipment in need of repair during the three-year warranty period requires a technician to diagnose the problem before either calling the help desk or making an entry online. In most instances, the defective part is shipped to the division, where a technician then makes the repair. In many cases, the defective part is then returned to Dell.

Divisions that use the state contract get a good per-unit price for equipment, but they are responsible for receiving, inventory-tagging, imaging, and providing warranty repairs for these items. Divisions that issue an RFP for technology equipment and services can typically build these services (and costs) into the RFP to reduce division costs and still maintain the low per-unit pricing available through the state contract. Under these conditions, the local contractor provides equipment that has already been imaged, as described/required through the RFP and provides warranty repair and replacement services, as needed. All of these services reduce the need for division staff to handle, repair, and replace equipment that is new or under warranty.

Many divisions use only the state contract, but effective divisions consider the development of an RFP for a competitive technology bidding process based on specific needs.

RECOMMENDATION 7-9:

Create a comprehensive Request for Proposal (RFP) for technology goods and services that define expectations for imaging, inventory coding, and delivery.

The division may find it helpful to refer to state documents or review RFPs issued by other divisions in support of this recommendation.

As described in the Virginia State Statutes, the purchasing of products should be done well by school divisions:

To the end that public bodies in the Commonwealth obtain high quality goods and services at reasonable cost, that all procurement procedures be conducted in a fair and impartial manner with avoidance of any impropriety or appearance of impropriety, that all qualified vendors have access to public business and that no offer or be arbitrarily or capriciously excluded, it is the intent of the General Assembly that competition be sought to the maximum feasible degree, that procurement procedures involve openness and administrative efficiency, that **individual public bodies enjoy broad flexibility in fashioning details of such competition**, that the rules governing contract awards be made clear in advance of the competition, that specifications reflect the procurement needs of the purchasing body rather than being drawn to favor a particular vendor, and that the purchaser and vendor freely exchange information concerning what is sought to be procured and what is offered. **Public bodies may consider best value concepts when procuring goods and nonprofessional services**, but not construction or professional services. **The criteria, factors, and basis for consideration of best value and the process for the consideration of best value shall be as stated in the procurement solicitation.**⁶

It is clear that the state sees value in using the RFP process in lieu of using just the state bid. The governing body enjoys greater flexibility in the crafting of the document and defining the basis for the award.

In most cases, by using the Request for Proposal process, the division will obtain the hardware for the same or lower cost than state contract pricing. Competing vendors could, based on the RFP requirements or contract negotiations, also provide value-added services (i.e., computer installation and onsite warranty) at little or no additional cost.

FISCAL IMPACT

The exact savings from those activities are unknown. However, using the summer of 2014 when the division contracted with a vendor for services as a benchmark, BCPS could save \$11,000 annually for hardware installation costs. It could also save the cost of the technician time associated with reviewing and repairing equipment that is still under the three-year warranty.

The one year savings shown are \$11,000. The estimated savings over five years would be \$55,000 (\$11,000 x 5 years= \$55,000).

RECOMMENDATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Create a RFP for new equipment and warranty support services.	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000

⁶ (Virginia State Statutes, § 2.2-4300)

8.0 FOOD SERVICES

This chapter presents findings, commendations, and recommendations regarding management and operations of Botetourt County Public Schools (BCPS) School Nutrition program. The major sections of this chapter are:

- 8.A. Organization and Staffing
- 8.B. Policies, Procedures, and Compliance
- 8.C. Planning and Budgeting
- 8.D. Management and Facility Operations
- 8.E. Qualifying Students for Free and Reduced-Price Meals
- 8.F. Student Participation
- 8.G. Nutrition and Nutrition Education Programs
- 8.H. Purchasing, Warehousing, and Contracting

OVERVIEW

The United States Department of Agriculture (USDA) and the Commonwealth of Virginia provide rules and guidelines that school divisions must follow when providing food to students through participation in federal programs. BCPS offered meals and snacks to over 4,800 students and served 423,921 meal equivalents (servings that constitute a reimbursable meal with the USDA) during the 2013-14 school year. The division participates in the following food and nutrition programs:

National School Lunch Program (NSLP) - a federally-assisted program for free or reduced-price school lunch offered to eligible students, based on family income levels. To demonstrate eligibility for free lunch, the student's family income must be at or below 130 percent of the poverty level. Reduced-price lunches are provided to those students whose family incomes are 130-185 percent of the poverty level. For 2013-14, the following rates are provided to the school division as reimbursement for meals, including the additional \$0.06 for complying with the newly adopted healthy meals:

- ◆ Free lunch: \$2.99
- ◆ Reduced-price lunch: \$2.59
- ◆ Paid lunch: \$0.34

School Breakfast Program (SBP) - a federally-assisted free or reduced-price school breakfast offered to eligible students based on NSLP family income levels. For 2013-14 the following rates are provided to the school division as reimbursement for these meals:

- ◆ Free breakfast: \$1.58
- ◆ Reduced-price breakfast: \$1.28
- ◆ Paid breakfast: \$0.28

The programs above are administered by the Food and Nutrition Service at the federal level. At the state level, the NSLP is usually administered by state education agencies, which operate the program through agreements with school food authorities. These programs require that divisions provide oversight on competitive foods as they may jeopardize their reimbursements from the federal programs. All meals must meet meal pattern requirements and have established minimum portions for each meal

component served to each child in order for the division to receive reimbursement. The Healthy Hunger-Free Kids Act (HHFKA), enacted in 2010, establishes an additional six cents per reimbursed lunch to school divisions that are certified and in compliance with the new meal patterns. These new patterns provide for healthier meals for students. BCPS is in compliance with the HHFKA per documentation provided and observed during the meal service at each of the schools within the division.

BCPS also participates in the USDA commodities program that provides basic foods to school divisions in mass quantities at reduced rates so that prices for meals can remain low.

In addition to specific regulations and guidelines with these programs, the BCPS School Nutrition Department has internal procedures and nutritional guidelines that cafeterias must follow to ensure students receive a well-balanced and nutritious meal, using safety standards that are more stringent than many restaurants. The school kitchens and cafeterias must adhere to Virginia Health Department rules and can be shut down, like a restaurant, if standards are not met. Therefore, BCPS and other school divisions work hard to ensure that kitchens and cafeterias are in compliance with health department rules and regulations regarding food safety.

The division is struggling with the financial aspect of the program and transfers from the general fund in excess of \$100,000 have been ongoing for the past few years, as shown later in this section.

CHAPTER SUMMARY

In preparing this section, MGT of America, Inc., reviewed extensive documents provided by the division, conducted interviews, and observed staff and students at each of the schools. Additionally, data was collected from the Virginia Department of Education and the USDA along with the School Nutrition Association.

The following commendations are included in the chapter:

- | | |
|-------------------------|--|
| Commendation 8-A | BCPS has conducted extensive evaluations of food costs and has selected the best purchasing cooperative for school nutrition operations. |
| Commendation 8-B | The division has implemented an efficient and effective approach to capturing and calculating inventory for USDA commodities and purchased goods. |

The following recommendations are included in this chapter:

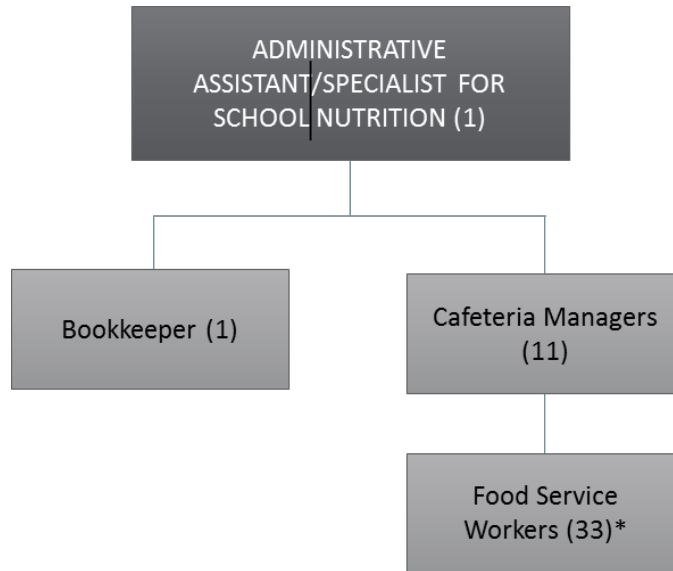
- | | |
|---------------------------|---|
| Recommendation 8-1 | Generate and disseminate monthly MPLH reports for cafeteria managers along with senior management in order to improve food preparation efficiency. |
| Recommendation 8-2 | Develop, adopt, and train staff in formal procedures for school nutrition operations. |
| Recommendation 8-3 | Develop and implement a formal plan for reducing the deficit financial position of the school nutrition program. |
| Recommendation 8-4 | Create a mission statement and strategic plan for child nutrition services. |

Recommendation 8-5	Create and submit a detailed budget for child nutrition on an annual basis while analyzing the actual versus budget for both revenue and expenditures on a monthly basis.
Recommendation 8-6	Incorporate a more open process of menu planning with cafeteria staff and allow for student input to improve the planning and student participation.
Recommendation 8-7	Conduct a review of the benefits for outsourcing the school nutrition program.
Recommendation 8-8	Consider creating centralized kitchens at two of the division's schools in order to be more cost efficient with food and staff time until student participation rates are improved.
Recommendation 8-9	Implement, train, and monitor a required process for cash drawer counts and deposits.
Recommendation 8-10	Define a coding system for free, reduced, or full-priced meals and print student rosters to retain at each point-of-sale register.
Recommendation 8-11	Implement aggressive incentives for students to participate in the breakfast and lunch programs offered in the division.
Recommendation 8-12	Add more nutrition education instruction at all schools.

8.A. ORGANIZATION AND STAFFING

The department is run by the Administrative Assistant/Specialist of School Nutrition who reports to the director of operations. In addition to the specialist position in the central office, the department includes a bookkeeper, who handles the accounts payable/accounts receivable along with financial reporting, timesheets and income statements related to school nutrition. The division has 11 schools serving student meals. **Exhibit 8-1** shows the division's departmental organizational chart.

EXHIBIT 8-1
BOTETOURT COUNTY PUBLIC SCHOOLS
SCHOOL NUTRITION DEPARTMENT
ORGANIZATIONAL CHART



*Includes two assistant managers and two vacant positions.
Source: BCPS School Nutrition Department, 2014.

In addition, the division maintains a list of substitutes who can assist during personnel absences or vacancies. As shown in **Exhibit 8-1**, there is a total of 46 positions assigned to the school nutrition department. However, only 13 are full-time employees with benefits; the remaining staff work approximately four hours per day and do not earn benefits.

With respect to the cost of operations, labor costs often equal the cost of food in school divisions. The National Food Service Management Institute (NFSMI), a recognized organization that operates from federal grants, provides research and training for child nutrition programs and is a valuable resource for school divisions. The Institute recommends that school nutrition salary and benefits not exceed 40 percent of the total expenditures for the operation of food services. This section will address how BCPS is aligned with this labor standard, since many factors must be considered.

FINDING

The meals per labor hour (MPLH) is not calculated and disseminated monthly in the division, therefore not providing the director with information needed to help understand why costs may be excessive. The division is not calculating and then disseminating MPLH reports on a monthly basis to help manage staff in the department. They are creating this report on an annual basis, but a more timely and regular report is needed for school systems to be able to make changes during the year and to adjust costs when needed. These changes can be for under- and over-staffing in each cafeteria.

Exhibit 8-2 shows the industry standard for meal equivalents for kitchens like those found in BCPS.

EXHIBIT 8-2
MEALS PER LABOR HOUR INDUSTRY STANDARDS

INDUSTRY STANDARD MEALS PER LABOR HOUR		
MEAL EQUIVALENTS	LOW PRODUCTIVITY	HIGH PRODUCTIVITY
Up to 100	8	10
101-150	9	11
151-200	10-11	12
201-250	12	14
251-300	13	15
301-400	14	16
401-500	14	17
501-600	15	17
601-700	16	18
701-800	17	19
801-900	18	20
901+	19	21

Source: School Foodservice Management for the 21st Century, 5th Edition.

Exhibit 8-3 shows the most current student enrollment, MPLH for September 2014 for the division, industry standards per NFSMI, and variance of September 2014 with NFSMI standards for each school.

As shown:

- ◆ Four of the schools are above the industry standard for productivity.
- ◆ Seven of the schools are below industry standard for productivity.
- ◆ Read Mountain Middle School had the lowest MPLH performance during the month.

EXHIBIT 8-3
CURRENT ENROLLMENT AND MPLH BY SCHOOL
COMPARED TO INDUSTRY STANDARDS

MEALS PER LABOR HOUR COMPARISON TO THE INDUSTRY STANDARD					
SCHOOL	2014 ENROLLMENT	SEPTEMBER PARTICIPATION	BCPS 2014-15 MPLH	INDUSTRY STANDARD - HIGH PRODUCTIVITY	VARIANCE SEPT. 2014 TO INDUSTRY STANDARD
Breckinridge Elementary	226	167	10.4	12	(1.6)
Buchanan Elementary	243	248	14.6	14	0.6
Cloverdale Elementary	326	236	11.2	14	(2.8)
Colonial Elementary	419	370	16.8	16	0.8
Eagle Rock Elementary	130	145	11.2	11	0.2
Greenfield Elementary	385	243	13.5	14	(0.5)
Troutville Elementary	274	214	11.9	14	(2.1)
Central Academy Middle	461	338	14.7	16	(1.3)
Read Mountain Middle	716	445	12.0	17	(5.0)
James River High	563	454	19.8	17	2.8
Lord Botetourt High	1,052	540	14.2	17	(2.8)

Source: created from data provided by BCPS Child Nutrition Office, 2014.

As described earlier, the school division is struggling financially with the school nutrition program. Although the division reduced staff hours prior to the 2013-14 school year, **Exhibit 8-3** shows that seven of eleven schools do not meet the high productivity standard, even with the reduction in staff hours. A MPLH report needs to be generated on a monthly basis and provided to cafeteria managers and senior division management. Meetings could be held to discuss the reports and see where changes are needed and possible, which will also assist in the effort for the program to be truly self-sustaining, as expected in this and other school systems.

Changes could include sharing of more efficient practices across schools. For example, MGT observed one of the high schools serving orange chicken with rice and broccoli along with a fresh apple. It took students an average of nine minutes to go through the line, which is too long for a 30-minute lunch period.

The photos in **Exhibit 8-4** show how other secondary schools in the division took a more efficient approach, by preparing food ahead of time to move students more quickly through the lines.

EXHIBIT 8-4
BOTETOURT COUNTY PUBLIC SCHOOLS
EFFICIENT SERVING OBSERVATIONS DURING ONSITE VISIT



Source: MGT photos of Botetourt County Public Schools, 2014.

This example makes clear that the cafeteria manager could have workers prepare cups of rice, chicken and broccoli to hand the students when they come through the line. This type of service preparation was seen at James River High School, where students were going through the line in an average of four minutes, or less than half the time observed during several lunch periods at Lord Botetourt High School.

RECOMMENDATION 8-1:

Generate and disseminate monthly MPLH reports for cafeteria managers along with senior management in order to improve food preparation efficiency.

The Specialist for School Nutrition needs to create a MPLH report by cafeteria on a monthly basis. This report should be viewed as data showing success or areas still needing adjustment and then staff can explore ways to continually increase meals served by personnel by hour. This report can document progress or continuing concerns in the effort to reduce expenditures, while ensuring that the division has the appropriate staff at each school cafeteria.

Reports need to be disseminated among cafeteria managers and a monthly meeting organized to review the data so that there are no surprises for managers and the division can better manage the program. A copy of the report should also be provided to senior management within the division in order to keep them abreast of the staffing levels in relation to meals served, which is a key indicator of how the program is doing financially.

FISCAL IMPACT

The Specialist for school nutrition needs to prepare and review these reports monthly. The time necessary is estimated at two hours per month. There may be some reductions in labor costs incurred based on this review. These potential savings cannot be estimated until the division begins producing timely reports and reviewing staffing and work practices, as needed.

8.B. POLICIES, PROCEDURES, AND COMPLIANCE

School boards adopt policies governing food service operation. Policies provide staff the authority to establish controls and run the operations for the school division. Procedures allow for carrying out operations in compliance with the policies. They should be crafted with staff input and provided to all to ensure their adherence to identified procedures. This program requires compliance from a division level, as well as the state and federal guidelines that govern food service operation when school divisions participate in the School Breakfast Program and/or the National School Lunch Program provided by the USDA. Development of clear policies and adherence to adopted procedures are especially important regarding vending machines and competitive food sales since they must be in compliance with the USDA program requirements.

FINDING

The division is lacking formal, written procedures for school nutrition regarding various required tasks, including proper stacking of inventory in freezers and thermometer usage to verify food temperatures between meal periods, along with other essential duties associated with the program.

While there are some limited checklists posted for a variety of functions, such as who is responsible for specific duties and closing kitchen checklists, there are no formal procedures written for the various functions, including menu planning, ordering of commodities and other inventory items, field trip protocols, and temperature checks and calibration schedules of thermometers.

The following issues were observed during the onsite work in the division:

- ◆ Boxes on the floor in a walk-in freezer and cooler
- ◆ Inconsistent checking of food temperatures between servings
- ◆ Use of the same towel to wipe off a thermometer while checking temperatures of different prepared foods
- ◆ Inconsistent checking of refrigerated goods
- ◆ Chemicals kept in same shelving area as dry goods storage
- ◆ Lack of verbal verification of student names when the cashier was entering student numbers in point-of-sale keypad

Exhibit 8-5 shows some photos of observations of the above list during the onsite visit.

EXHIBIT 8-5
 BOTETOURT COUNTY PUBLIC SCHOOLS
 OBSERVATIONS DURING ONSITE VISIT



Source: MGT photos of Botetourt County Public Schools, 2014.

The industry standard in food service operations identifies expectations for procedures for the following key topics:

- ◆ Cleaning and sanitizing food contact surfaces
- ◆ Controlling time and temperature during preparation and between serving times
- ◆ Dating of all food
- ◆ Handling of food recalls
- ◆ Holding hot and cold foods
- ◆ Personal hygiene
- ◆ Preventing cross-contamination during storage and preparation
- ◆ Receiving deliveries
- ◆ Reheating foods
- ◆ Serving foods
- ◆ Storing chemicals
- ◆ Transporting to other sites
- ◆ Washing fresh fruits and vegetables
- ◆ Hand washing
- ◆ Cooking and reheating temperature logs
- ◆ Damaged or discarded products
- ◆ Production logs
- ◆ Inventory logs
- ◆ Verifying student identification when they enter identifying code

RECOMMENDATION 8-2:**Develop, adopt, and train staff in formal procedures for school nutrition operations.**

Procedures are essential to any job function and are especially important for staff handling food. As in the case with restaurant food handling procedures, safety protocols are needed in school systems and are a requirement of the USDA child nutrition program.

The school nutrition specialist could list the detailed procedures needed and begin to develop them over a period of 3-6 months. Alternatively, the procedures could be assigned to staff to draft them for review by the specialist and other cafeteria managers. Other divisions, including Roanoke could be contacted to provide copies of their current procedures to assist BCPS. The specialist could then review and revise procedures to match BCPS' needs. Once completed, these should be disseminated among all cafeteria workers and posted in each kitchen.

FISCAL IMPACT

This recommendation could be implemented by the school nutrition supervisor over a period of 3-6 months through development of procedures by food service staff or review and revision of procedures from other divisions.

8.C. PLANNING AND BUDGETING

In order to successfully implement and manage food service programs, effective planning and budgeting practices are required. Planning documents include mission statements and strategic plans, as well as performance expectations. Budgeting allows for these plans to be placed into specific categories that can be tracked to determine if performance is met in terms of budget. For child nutrition programs, student participation is critical so that the program can be self-supporting based on revenue produced by full-paid meals and free or reduced-paid meals that are offset by expenses to purchase, prepare, and deliver the meals.

This portion of the section reviews the planning documents used in BCPS as well as the budgeting tools used to both prepare budgets and to review performance throughout the school year.

The child nutrition program for BCPS has been operating at a deficit for at least three years. **Exhibit 8-6** shows the balance transfer needed from BCPS to offset the deficits in child nutrition revenue over the past three years. As shown, the transfer amount has been decreasing since 2011-12, but is still in excess of \$140,000. The school nutrition fund in BCPS is intended to be self-supporting, with no transfer of general funds.

EXHIBIT 8-6
BCPS FUND BALANCE TRANSFERS
TO ASSIST SCHOOL NUTRITION FUND

	SCHOOL YEAR		
	2011-12	2012-13	2013-14
Fund Balance Transfer	\$181,209	\$163,355	\$142,203

Source: BCPS Comprehensive Annual Financial Report, 2011-12 through 2013-14.

Despite the division's reduction in staff hours in 2014-15 (decreased from full time with benefits to four hours per day) in order to balance the budget for the child nutrition fund, those reductions may need further analysis to ensure self-sufficiency once updated profit and loss reports are compiled.

FINDING:

The division lacks a formal plan to reduce the deficit financial position of the school nutrition program.

The division has reduced staff hours for line-staff working in the schools, but has not created a comprehensive plan to ensure the improvement of the school nutrition program. These enterprise fund operations need to be self-sufficient, so that the division's resources can be used in the classrooms.

RECOMMENDATION 8-3:

Develop and implement a formal plan for reducing the deficit financial position of the school nutrition program.

FISCAL IMPACT

The formal plan should be developed by the Specialist for School Nutrition in consultation with the superintendent and the directors of administration and finance and human resources. The plan should address how and when the program will be monitored and what adjustment(s) would be made based on progress. The time needed to develop a formal plan is estimated at 8 hours.

FINDING:

The department is lacking a strategic plan or mission statement that provides an overall direction for child nutrition.

The department has not created a strategic plan or mission statement that shows how the division will accomplish the new regulations associated with child nutrition while increasing student participation. Currently, the department operates in a reactive, rather than pro-active, mode, a situation attributed by many school divisions to the recent changes from the federal government related to the food service program.

RECOMMENDATION 8-4:

Create a mission statement and strategic plan for child nutrition services.

Strategic planning assists the division as a whole to ensure alignment between the department and the overall division's strategic plan. Additionally, these plans assist personnel throughout the division, including cafeteria managers and workers as well as the principals, to know what the goals are for child nutrition.

The plan could be created with input from all school nutrition and other division staff, and include the prioritized goals for the department, the steps needed to accomplish these goals, the responsible personnel, and any costs. Items should be detailed in such a way that performance of the steps can be measured appropriately.

The plan should be submitted to the superintendent for approval and then reviewed by the child nutrition specialist and all cafeteria managers on a regular basis to monitor for implementation.

FISCAL IMPACT

The implementation of this recommendation will require approximately 100 hours of staff time to meet and create a mission statement and strategic plan that includes timelines, responsibilities, and performance indicators.

FINDING

The division lacks a detailed, line item program budget, which makes it difficult to understand how child nutrition is doing in a specific category.

The department does not prepare and provide a detailed budget proposal to the division each year. Instead, they are told what their budget will be for the following school year. After discussions among central office personnel, a budget was provided by the division for the school nutrition department that shows the breakdown as follows:

- ◆ Salary for Food Service Supervisor
- ◆ Salary for Bookkeeper
- ◆ Classified staff salaries
- ◆ Benefits
- ◆ Conference fees
- ◆ Equipment repair
- ◆ Materials and supplies
- ◆ Food supplies

The department is not aware of what makes up all of the components. These items do not have any detail to show what is budgeted and for which school so that the school nutrition specialist can make clear decisions on how to improve the departmental costs. This current process does not allow the specialist or cafeteria managers to determine the best way to reduce costs in their program, as mentioned previously since much of the data resides in the central office (budget and school nutrition offices) and not shared with school cafeteria managers.

RECOMMENDATION 8-5:

Create and submit a detailed budget for child nutrition on an annual basis while analyzing the actual versus budgeted for both revenue and expenditures on a monthly basis.

Detailed budgets with supporting documentation assist departments in determining specific needs to run the operations throughout the school year. Additionally, detailed or line item budgets also provide the information needed to compare budgeted revenue and expenditures to actual data on a monthly basis. In doing so, management can quickly detect an issue or concern and implement corrective measures, if needed.

The bookkeeper could assist in this effort and provide the monthly actual versus budget report so that the child nutrition specialist can review and take any needed action. This recommendation may assist the division in heading off potential problems so that they can be remedied without having to transfer funds each year to cover food service operations.

FISCAL IMPACT

The food service bookkeeper could create this regular report, estimated to take eight hours per month.

FINDING

Meal planning is done by the child nutrition specialist and, while in compliance with the new HHFKA, the process includes minimal input from cafeteria managers and students.

The menus are created by the child nutrition specialist and then provided to the cafeteria managers to review. Most school systems expect a more interactive process to promote creativity in the selection of menu items and so that managers and workers can provide key input into this decision-making process.

In BCPS, the students at each school are allowed to provide input into the menu selection one day per month. However, when MGT spoke to students while onsite, students stated that they are not asked for their input and would like that opportunity. This was especially important to the high school students. These students did not know that recent federal regulations required more nutritional options, but stated they would like to have more healthy food options, such as salads, fresher vegetables, and more options on breads, and a better selection of sandwiches. Most divisions have found that the school level staff are well informed of what their students request and are in a good position to develop menu offerings that will promote student participation.

RECOMMENDATION 8-6:

Incorporate a more open process of menu planning with cafeteria staff and allow for student input to improve the choices and potentially increase student participation.

By opening up the process to include cafeteria personnel, the staff will be able to offer choices that they know their students want on a regular basis. This will also make staff feel engaged in this important aspect of food service operations.

Additionally, students are willing and able to provide input into menu planning, which could result in more student participation and increase the federal reimbursements to help offset the deficit in the program.

Students could participate through a brief web-based survey by giving them access to a few laptops with internet connection to only the survey. It could be done during a brief bi-annual (fall and spring) window to allow for long-range planning of menus. Another option is to provide a written survey, should the division not be able to accommodate the laptops in the cafeteria due to infrastructure concerns. Another option is to hold a food fair and present either vendors or different menu items prepared by internal staff following the USDA guidelines and let students vote for their preferences and their willingness to participate in meals at the school.

Additionally, a paper comment slip could be added to the secondary level kitchens for when students want other items, they could provide the written comment to the cafeteria manager to use for future planning.

FISCAL IMPACT

The Specialist should develop and propose menu planning input processes to implement at the schools. The time to develop a proposal is estimated at 4 hours and the time to implement the proposal is six hours annually.

8.D. MANAGEMENT AND FACILITY OPERATIONS

This sub-section presents the review and evaluation of productivity standards, such as managing facility costs, cash management controls for deposits, product-on-hand, revenue and expenditure controls, and fund balance at the end of each school year.

FINDING

Outsourcing the school nutrition program may assist the division in getting the program into an acceptable financially self-sufficient operation. While the USDA does not suggest or recommend whether outsourcing is better or not, the overseeing entity does state that a division –

“...must have a system in place to ensure full compliance with the law, as well as be responsible for the quality of the program offered. The division is still accountable for compliance and cannot assign liability errors that result in fiscal sanctions for noncompliance to the contractor.

The cost of this oversight, including the need for the district to continue to directly employ an administrator with signature authority for the program, should be weighed into the costs of the contract. Furthermore, it is important for the district to check the contractor’s record for managing foodservice programs in other school districts.”⁷

Another approach for improving the operation would be to outsource to another school division. Some divisions in California have successfully implemented this joint school system operation. Alternatively, BCPS may want to consider moving to centralized cooking services, at least until student participation improves (see **Recommendation 8-10**).

RECOMMENDATION 8-7:

Conduct a review of the benefits for outsourcing the school nutrition program.

The division should thoroughly research the positive and negative impacts of outsourcing the school nutrition services. It should also consider whether a joint operation with another area school system, including Roanoke, since they are members of their purchasing cooperative, would be positive solution. The division could solicit school systems and private companies through a Request for Proposal process to explore options, and if deemed in the best interest of the division and the students, to select the best option for the division.

Implementing this recommendation may not relieve the division of the need for some of the staff to be retained, because the division would still need oversight of the program. However, if outsourcing through a joint operation with another local school system, the oversight could be given to that division, since they must also follow the federal and state guidelines.

FISCAL IMPACT

The fiscal impact of this recommendation is not known at this time but could allow the division to have food services as a self-sustaining enterprise fund for the division. The contract between BCPS and the selected vendor could state that the operation must be self-sufficient within a specified time period to

⁷School Nutrition Association, The Journal of Child Nutrition and Management, Spring 2006.

help with the financial impact of the recommendation. Once this school year is completed, the division will be able to better determine the break-even point for child nutrition services.

FINDING

Regardless of school size, each Botetourt County school has a cooking kitchen. The division is currently not using a centralized kitchen approach. Some school divisions have used this approach to help reduce expenditures.

Each of the schools has its own full kitchen where food is made from scratch for both breakfast and lunch. Eagle Rock Elementary School has approximately 150 students, yet the cafeteria manager and staff prepare cooked meals each day. Therefore, the division is paying staff to prepare specific meal plans each day for only a few students and there may be other approaches that could help the division utilize resources in a more efficient way.

Centralized kitchens are generally considered when there is a need for one or more of the following:

- ◆ Production of mass quantities of food
- ◆ Reduction in labor costs
- ◆ Utilization of raw USDA commodities
- ◆ Consistency in the preparation, quality, and presentation of food
- ◆ Utilization of production facility
- ◆ Reduction in equipment costs
- ◆ Reduction in maintenance and repair
- ◆ Reduction in utilities.

Although BCPS does not need to be producing “mass quantities” of food, nearly all of the advantages listed above could address the current financial problems with the BCPS school nutrition program. Centralized kitchen(s) could prepare the food for satellite kitchens or those kitchens warming or cooling and then serving the food. This centralized kitchen concept could be used if the student participation does not increase, as described in **Section 8.E** of this chapter.

RECOMMENDATION 8-8:

Consider creating centralized kitchens at two of the division’s schools in order to be more cost efficient with food and staff time until student participation rates are improved.

Centralized kitchens could be considered should the student participation rates not increase to more acceptable levels or unless the division outsources services as described in **Recommendation 8-5**. This recommendation could further help the division if they still are struggling financially with the program.

Based on observations and school facilities, the schools to consider for central and satellite kitchens are as follows:

Central Kitchens

Lord Botetourt High

Proposed Satellite Kitchens

Greenfield Elementary
Read Mountain Middle
Cloverdale Elementary

Central Academy Middle

Eagle Rock Elementary
Colonial Elementary
Breckinridge Elementary

FISCAL IMPACT

The exact cost of this recommendation is unknown. The division could consider the use of one or more centralized kitchens to help reduce costs that are currently not being paid by the child nutrition operation. In considering centralized kitchens, the division may have to purchase two vans (minimum) to transport food and those costs can range from \$30,000 for a used, controlled-temperature van to \$70,000 for a new one. Two drivers would also be needed at an hourly rate for transporting food to and from the centralized kitchen. The division would need to determine the routes and schools involved to solidify a true cost to the division for the vehicles and drivers.

Staff could possibly be reduced to only the cafeteria manager at each of the satellite schools, thus reducing a need for part-time staff. In this option, the division could look at retaining the cafeteria manager at each satellite school along with one other part-time assistant. This recommendation is to consider this option should the current school year financial statements show a loss for the program.

FINDING

During the review process, the MGT team found some schools using a dual control process to monitor the daily cash received. However, this practice is not always used daily and not used at every school.

Consistent dual control is needed for cash drawer reconciliation and deposits at each school. While the MGT team is not suggesting that there are or have been fraudulent activities taking place, best practices dictate a dual control process when handling cash.

RECOMMENDATION 8-9:

Implement, train, and monitor a required process for cash drawer counts and deposits.

Best practices dictate having two child nutrition personnel sign off and reconcile the daily cash in each point-of-sale drawer. This recommendation will eliminate any concern over the accuracy of cash reporting and provides essential protection for employees responsible for funds.

FISCAL IMPACT

The Director of Administration and Finance should work with the Specialist for School Nutrition to develop written procedures for cash drawer counts. The Specialist should provide training to appropriate staff and monitor implementation. The process to develop procedures is estimated to take 2 hours, training is estimated at 1 hour for staff, and appropriate monitoring at 8 hours per year as part of regular site visit monitoring activities.

8.E. QUALIFYING STUDENTS FOR FREE AND REDUCED-PRICE MEALS

The process for qualifying students for free and reduced-price meals is a labor-intensive and important task. This portion of the section will address how well the division is utilizing tools available to ensure all children who may qualify are captured in the program so that the federal government will reimburse the division for a portion of the meals being served to students in need. School systems need to have an effective process since the federal government can reduce or eliminate reimbursements if federal procedures are not followed.

BCPS is consistent with industry standards in reaching out to parents and having online processing. The 2013 federal audit showed no errors in the processing of applications. The division also has implemented a best practice for when students may be placed in foster care or become homeless during the year.

The division has a less than 22 percent of the students attending BCPS who are eligible for a free or reduced-price breakfast and lunch. Therefore, it is imperative that all eligible students are qualified quickly, in order to receive the accurate and timely reimbursement from the federal government.

FINDING

Food service staff do not have access to printed student rosters at each point-of-sale register. During onsite visits to each school, MGT asked if they had this type of roster and none of the schools had access to this type of report, which is considered a best practice, as seen in Orange County Public Schools (FL) and Dry Creek Joint Elementary School District (CA).

School systems need to have a business continuity plan in place should the point-of-sale system go down or the power go out in the cafeteria. Rosters can assist with capturing free and reduced-priced meals for reimbursement and ensuring that eligible students get required services. Having a printed roster at each register is a best practice seen in school divisions across the country.

RECOMMENDATION 8-10:

Define a coding system for free, reduced-, or full-priced meals and regularly print updated student rosters to retain at each point-of-sale register.

These printed rosters would use a coding system so that the information remains confidential should the roster be misplaced. An example of a best practice is to use A, B, C or 1, 2, 3 for coding full price, free, or reduced-price meals. The roster can be kept in a locked drawer at each point-of-sale register.

Printed rosters with the appropriate coding can allow schools to continue serving meals while capturing data to later input into the system in order to receive the reimbursable percentage. Once this process has been established, the school nutrition specialist would meet with all staff to review coding and the use of the rosters, as well as how to properly store each roster.

By implementing this best practice, the division will be in full compliance should a federal auditor be onsite and request the printed copy if the power were out at the school or if the point-of-sale system becomes inoperable during a meal period. These rosters would be updated on regular basis, especially during the beginning of the school year or when students are entering or leaving the school.

FISCAL IMPACT

This recommendation can be implemented by the Specialist for Nutrition Services and site-based food service staff creating rosters on a monthly basis. Time necessary to complete this work is estimated at 1 hour per month.

8.F. STUDENT PARTICIPATION

Student participation is critical to the success of a food service program in school systems. This portion of the section will review how well BCPS incorporates tactics and campaigns to attain and maintain the needed student participation rate in order to meet revenue projections on food service operations.

FINDING

The division lacks an adequate student participation rate for meals served in order to break even for this enterprise fund. As described earlier, the division has supplemented the child nutrition fund by over \$100,000 per year during the last three years. This amount does not include the utilities, custodial, or labor for equipment repairs. Most food service operations are expected to be self-supporting, including covering costs for those items identified above (utilities, custodial, labor for equipment repairs) and including a set-aside for capital equipment replacement.

Exhibit 8-7 shows the participation percentages for the National School Nutrition Program for BCPS and the peer divisions. BCPS had the second lowest percentage of total participation in lunch programs, and was lower than the state average as well. This was true for both free and reduced-price lunches. Only Orange County had a lower participation rate than BCPS, but both divisions share a relatively low free- and reduced-price percentage rate that could partially account for the low participation.

EXHIBIT 8-7
BOTETOURT COUNTY SCHOOLS AND PEER DIVISIONS
NATIONAL SCHOOL LUNCH PROGRAM PERCENTAGE PARTICIPATION
2013-14 SCHOOL YEAR

DIVISION	LUNCH			% TOTAL PARTICIPATION
	% FREE	% REDUCED	% PAID	
Botetourt County	16.53	5.63	77.85	22.15
Accomack County	64.78	5.95	29.27	70.73
Caroline County	44.62	7.95	47.43	52.57
King George County	28.67	4.08	67.24	32.76
Mecklenburg County	52.85	9.17	37.98	62.02
Orange County	14.37	3.86	81.78	18.22
Powhatan County	40.34	8.85	50.81	49.19
Wythe County	44.62	7.95	47.43	52.57
Peer Average	41.90	6.65	51.45	48.55
*State Average	34.47	6.72	58.81	41.19

* Excludes RCCI's

Source: Virginia Department of Education website, 2014.

Exhibit 8-8 shows the average daily participation rates for breakfast and lunch at each school for the two most recent school years. MGT calculated these averages (annualized the monthly percentages) based upon the SNP monthly ADP reports provided by the division. As shown, participation rates have declined from 2012-13 to 2013-14 in all but one school.

EXHIBIT 8-8
BOTETOURT COUNTY PUBLIC SCHOOLS
AVERAGE DAILY PARTICIPATION RATES
2012-13 AND 2013-14 SCHOOL YEARS

SCHOOLS	2012-13		2013-14	
	BREAKFAST	LUNCH	BREAKFAST	LUNCH
Buchanan Elementary	18.25%	64.83%	18.31%	59.06%
Eagle Rock Elementary	36.33%	69.42%	31.28%	56.87%
Troutville Elementary	19.13%	51.52%	18.44%	46.37%
Breckinridge Elementary	16.51%	61.74%	13.59%	53.56%
Cloverdale Elementary	13.64%	43.43%	8.68%	44.45%
Colonial Elementary	12.02%	54.10%	13.00%	46.55%
Central Academy Middle	6.22%	57.90%	6.07%	50.63%
James River High	8.72%	40.40%	7.46%	37.66%
Lord Botetourt High	4.85%	25.44%	1.65%	24.74%
Read Mountain Middle	2.32%	43.08%	3.59%	36.47%
Greenfield Elementary	17.00%	47.14%	14.09%	41.02%

Source: MGT calculations from detailed data provided by BCPS School Nutrition Department, 2014.

As can be seen in **Exhibit 8-7**, the division has been struggling to maintain an adequate average daily participation. While the division has a low percentage of free and reduced-priced meals, participation needs to be closely monitored since students need to be more enticed to eat at schools.

Of note when calculating these figures, there were data showing a participation rate that dropped substantially during the 2012-13 school year. For example, Cloverdale Elementary showed only a 3.43 percent rate in February 2013, when the average was between 30 and 50 percent participation for lunch. This is an example of how important it is for the cafeteria manager and child nutrition specialist to review daily and monthly reports from the point-of-sale system to ensure accuracy in calculating participation. A similar event was recorded during the same school year with Read Mountain Middle School. In order to capture federal reimbursements correctly, it is extremely important to verify entries each day to notice and correct any errors so that the division can receive the full reimbursable amount. If divergent entries such as these are accurate, report notes need to be provided to explain events, when possible.

School cafeterias need to be inviting places where kids want to go and know they can get food that they want (need) to eat. Observations during the onsite visit at each cafeteria included the lack of posters or enticing menu displays, especially at the secondary schools. Students were asked their opinions of the food service offerings and provided the following comments:

- ◆ Portions are too small

- ◆ Food is not healthy enough (greasy at times)
- ◆ French fries should be baked not fried
- ◆ Pizza is a good choice but others should be offered
- ◆ The wait is too long for lunch
- ◆ Food was better in the middle school and had healthier choices
- ◆ Bread is too stale
- ◆ Sandwich options should be healthier
- ◆ We don't get asked our opinions

Participation is essential for the division to break even financially while offering students breakfast and lunch on a daily basis. More incentives or other program adjustments are needed to lure students to the cafeteria so that the division can capture a higher reimbursable rate and offset the cost of total food operations.

RECOMMENDATION 8-11:

Implement aggressive incentives for students to participate in the breakfast and lunch programs offered in the division.

The following proven techniques could be implemented to improve student participation throughout the division:

- ◆ Utilize food service promotional giveaways during various times each year.
- ◆ Invite parents to breakfast, especially in the elementary schools.
- ◆ Hold contests for best poster or cereal box design.
- ◆ Host a celebrity day in which local celebrities eat with students during lunch.
- ◆ Hold theme days (i.e. turn the cafeteria into a tropical paradise one day and offer pineapple, Hawaiian pizza, etc.).
- ◆ Decorate and celebrate special months like American Heart Month, Super Bowl, etc.
- ◆ Serve breakfast at lunch (good for Ground Hog Day).
- ◆ Conduct taste testing with students from each grade and school.
- ◆ Have vendors come in to showcase their options following the school nutrition guidelines and have the students vote on which they would like to have at their lunches.
- ◆ Add posters with celebrities or athletes eating healthy foods.
- ◆ Add poster puzzles with what food groups provide which nutrients/vitamins.
- ◆ Provide much larger menu selection signs in the secondary to make it look more like a restaurant and give the nutritional information for each option.
- ◆ Utilize parent-teacher conference days to offer sampling to parents.
- ◆ Plan a health fair and let professionals explain how the new menu selections help students be more alert for classroom work and perform better in athletics or other extracurricular programs.

- ♦ Create more colorful or appropriate lighting in the cafeteria in some sections and lower dimming lights in smaller areas to create a more restaurant feel.
- ♦ Have a la carte or “breakfast in a bag” carts at different locations of the high school so that students would not have to go to the cafeteria to purchase or eat. Warming bags like those used for delivery services and a refrigerated cart for cold fruit or drinks could be used and have a wireless point-of-sale or hard wired set up in each of these locations. (Note: This option would require another point-of-sale register as well as a position to run the register.)

There are a number of resources available to research on other ideas for the division and since BCPS is part of the Roanoke Purchasing Consortium, they will likely have proven ideas to assist the division. Other resources include the National School Nutrition Association, USDA, VDOE, and private outsourcing companies.

With the local revenue budget for the 2014-15 school year reduced by over \$300,000, this recommendation should have top priority for the division and be implemented immediately.

FISCAL IMPACT

The fiscal impact cannot be determined since the division would need to choose which options to implement. The Child Nutrition Office could contact the Botetourt Tech Center to see if they could help with the lighting by making it a class project. They may also be able to help with different signage and painting in the secondary cafeterias to make it more enticing for students to “order” through the food service line.

If the division chose to improve the décor of the facilities, expected costs of \$5,000 would include the purchase of posters, paint, and promotional items.

Aggressive campaigns could increase revenue by at least \$304,483 or 25 percent in years two through five (\$1,217,931 x 25%) with one-half that amount (\$152, 241) for the current year less the \$5,000 cost for incentives.

RECOMMENDATION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Implement incentives for students to participate in the breakfast and lunch programs offered in the division.	\$147,241	\$299,483	\$299,483	\$299,483	\$299,483

8.G. NUTRITION AND NUTRITION EDUCATION PROGRAMS

In order for students, teachers, staff, and parents to understand the nature of the food service program and the impact of the recent passage of Healthy Hunger-Free Kids Act (HHFKA), school systems need to promote the meals served in a manner that shows healthy and nutritious options. Some school divisions are providing nutrition campaigns in the classroom as well as providing students with knowledge of the relationship between more nutritious meals and performance. This portion of the section describes how divisions can educate students, staff, and parents in order to gain acceptance of the delicious and nutritious campaign, which could result in increased participation in the program.

FINDING

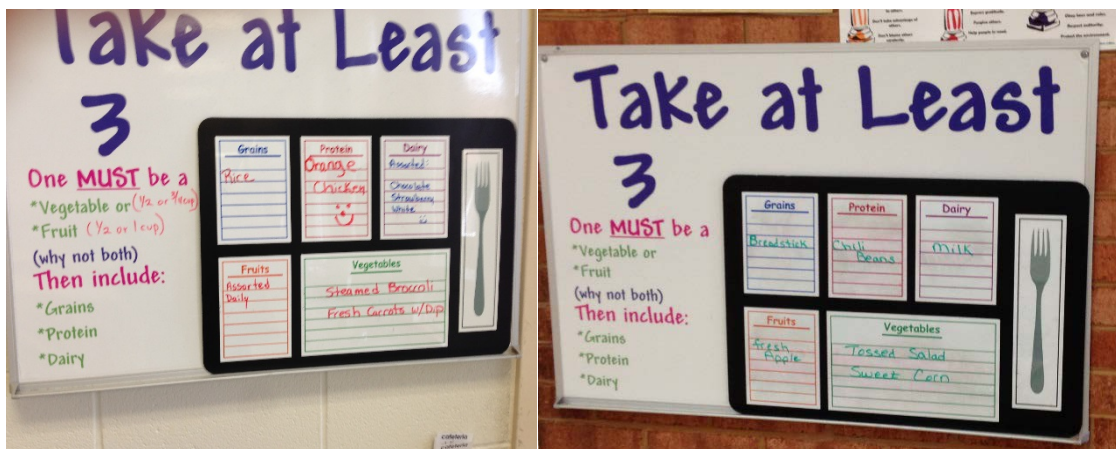
The division is lacking a comprehensive approach to work with students regarding healthy nutrition and the impact on their bodies.

While the division has successfully implemented the Healthy Hunger-Free Kids Act (HHFKA) nutritional guidelines in its approach to offering a federally-compliant meal, there has been very little information provided to students and families on how this new guideline impacts the breakfast and lunch offerings at each school.

The division offers elements of nutritional instruction in a few of the high school courses, however, students need to learn more of how the food choices in their respective schools help provide a healthy breakfast and lunch during the school day. There are very few posters or other informational displays in the schools explaining how the meals are planned and how they support student nutrition.

Exhibit 8-9 shows how some schools provide the information as far as which offerings are available to meet the needed nutritional guidelines.

EXHIBIT 8-9
BOTETOURT COUNTY PUBLIC SCHOOLS
DISPLAY OF OFFERINGS PER NUTRITIONAL GUIDELINES



Source: MGT photos, Botetourt County Public Schools, 2014.

RECOMMENDATION 8-12:
Add more nutrition education instruction at all schools.

Nutrition education should be provided through the physical education program, especially by offering health-related courses in the secondary level. Food service staff should enhance the presentation of meals that follow the nutritional recommendations through signage and in-class discussions with students.

By providing nutritional information from instructional staff, e.g., physical education instructors and health teachers, or nursing staff, students are more likely to learn about nutrition and understand the choices offered by food service operations. The current health curriculum includes a component of this information and this information can be shared with all students with a school nutrition campaign throughout the division.

FISCAL IMPACT

Implementing this recommendation should include staff from the instruction department regarding the health and physical education curriculum. The instruction department should review existing nutrition lessons and identify any grade levels or subject areas where further content development is needed. The review is estimated to require 4 hours by instruction department staff. Identified needs for new or different content should be met through the regular curriculum development process and timelines.

8.H. PURCHASING, WAREHOUSING, AND OPERATIONS

Purchasing for food service operations vary by state and school division. Purchasing is often dictated by the space limitations for storing food and supplies and the budget available for the purchases. Commodities and purchasing cooperatives or shared purchasing is used in many systems to help reduce costs. The maintenance of the inventory is critical in order to utilize as much food as possible and procedures regarding the operations of purchasing and warehousing are critical in order to utilize inventory properly.

FINDING

The division uses a purchasing cooperative to reduce the cost of food purchases and limit excess inventory.

The division had previously created a purchasing cooperative, but joined the Roanoke purchasing cooperative once the School Nutrition Specialist verified that the cost of items they had been purchasing were cheaper using Roanoke's cooperative.

Best practices confirm that purchasing cooperatives save school systems approximately 10 percent of costs, due to the bulk purchasing. This type of purchasing also allows the division to order as needed, and not stockpile and keep inventory on hand.

COMMENDATION 8-A:

BCPS has conducted extensive evaluations of food costs and chose the best purchasing cooperative for school nutrition operations.

FINDING

The division has created and implemented a technology-savvy inventory for both USDA commodities and purchased goods. The School Nutrition bookkeeper created an electronic spreadsheet that provides the following information based upon invoices received during the school year:

- ◆ Item number
- ◆ Product description
- ◆ Package amount or size of container
- ◆ Vendor or brand
- ◆ Price per item

The cafeteria manager and staff at each school input the amount on hand in a provided quantity column. At the end of each month, the spreadsheet can be used to calculate the value for each product.

For commodities, the division uses a similar spreadsheet with the following columns based upon commodities received:

- ◆ Commodity code
- ◆ Commodity description
- ◆ Unit size
- ◆ Unit price
- ◆ Portion of unit in inventory

The cafeteria manager or staff input the portion of units in inventory, based on products purchased or delivered through USDA commodities to define the total of inventory on hand. These spreadsheets are used to calculate the total inventory at the end of each month and are entered into the division's financial system. This is an efficient system, significantly reducing process time from previous practices.

COMMENDATION 8-B:

The division has implemented an efficient and effective approach to capturing and calculating inventory for USDA commodities and purchased goods.

Appendix A

Chapter-by-Chapter Summary of Potential Savings (Costs)

CHAPTER REFERENCE		ANNUAL SAVINGS (COSTS)					TOTAL FIVE YEAR SAVINGS (COSTS)
		YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	
CHAPTER 1: DIVISIONAL ADMINISTRATION							
Rec 1-1	Provide for an annual self-evaluation of the School Board	N/A	N/A	N/A	N/A	N/A	
Rec 1-2	Re-organize the division office staff as shown in Exhibit 1-6.	\$6,956	\$6,956	\$6,956	\$6,956	\$6,956	\$34,780
Rec 1-3	Improve decision making process and the communications strategies regarding decisions.	N/A	N/A	N/A	N/A	N/A	
Rec 1-4	Develop a comprehensive administrative procedures manual to guide the implementation of Board policies.	(\$20,000)	\$0	\$0	\$0	\$0	(\$20,000)
Rec 1-5	Establish a regular process to evaluate and communicate progress on the comprehensive plan.	N/A	N/A	N/A	N/A	N/A	
CHAPTER 1 TOTAL SAVINGS (COSTS)		\$ (13,044)	\$ 6,956	\$ 6,956	\$ 6,956	\$ 6,956	\$ 14,780
CHAPTER 2: EDUCATIONAL SERVICE DELIVERY							
Rec 2-1	Reorganize the instructional department, create an Assistant Superintendent of Instruction, reduce the three coordinator positions to two.	\$103,349	\$103,349	\$103,349	\$103,349	\$103,349	\$516,745
Rec 2-2	Develop and gain approval for annual departmental goals that are aligned with division targets and are clear to all staff.	N/A	N/A	N/A	N/A	N/A	
Rec 2-3	Develop an annual, detailed instruction department budget that clearly defines annual, regular spending as well as any new or one-time planned expenditures.	N/A	N/A	N/A	N/A	N/A	
Rec 2-4	Review the need for and current status of School Leadership Teams.	N/A	N/A	N/A	N/A	N/A	
Rec 2-5	Develop job descriptions for each position and an evaluation structure for central office support staff.	N/A	N/A	N/A	N/A	N/A	
Rec 2-6	Create a structure for program monitoring plans that identify annual or required tasks on a calendar and outline annual and long-range goals for the program or curricular area(s).	N/A	N/A	N/A	N/A	N/A	
Rec 2-7	Reduce the administrator position at Eagle Rock Elementary School to a half-time position.	\$61,818	\$61,818	\$61,818	\$61,818	\$61,818	\$309,090
Rec 2-8	Develop and implement processes to manage, review, revise, and monitor curriculum based on data from student performance and staff input.	N/A	N/A	N/A	N/A	N/A	
Rec 2-9	Identify the records that must be regularly accessed and remove all non-essential records to a new secure storage area in an off-site location.	(\$40,000)	\$0	\$0	\$0	\$0	(\$40,000)
Rec 2-10	Create a short- and long-term plan to recruit and retain qualified bi-lingual and ESL teachers and support staff.	N/A	N/A	N/A	N/A	N/A	
Rec 2-11	Develop and prepare an annual gifted program report for the board and the community.	N/A	N/A	N/A	N/A	N/A	
CHAPTER 2 TOTAL SAVINGS (COSTS)		\$ 125,167	\$ 165,167	\$ 165,167	\$ 165,167	\$ 165,167	\$ 785,835

CHAPTER REFERENCE		ANNUAL SAVINGS (COSTS)					TOTAL FIVE YEAR SAVINGS (COSTS)
		YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	
CHAPTER 3: HUMAN RESOURCES							
Rec 3-1	Move the payroll function and the position of payroll supervisor to the Finance Department and provide cross training with other finance department staff.	N/A	N/A	N/A	N/A	N/A	
Rec 3-2	Develop a plan to create and approve job descriptions.	N/A	N/A	N/A	N/A	N/A	
Rec 3-3	Develop a human resources procedures manual that complements human resources policies.	N/A	N/A	N/A	N/A	N/A	
Rec 3-4	Develop plans for recruiting staff, especially hard to staff programs – special education and CTE – and Hispanic and/or Spanish-speaking, to work in Botetourt County in both professional and support staff positions.	\$0	\$0	(\$5,000)	(\$5,000)	(\$5,000)	(\$15,000)
Rec 3-5	Develop a series of HR-provided professional development programs that are provided annually to all staff groups.	N/A	N/A	N/A	N/A	N/A	
Rec 3-6	Conduct a wage and staffing review with both peer and neighboring divisions at least every two years.	N/A	N/A	N/A	N/A	N/A	
CHAPTER 3 TOTAL SAVINGS (COSTS)		\$ -	\$ -	\$ (5,000)	\$ (5,000)	\$ (5,000)	\$ (15,000)
CHAPTER 4: FACILITIES USE AND MANAGEMENT							
Rec 4-1	Use multiple methodologies to project enrollments.	N/A	N/A	N/A	N/A	N/A	
Rec 4-2	Examine closing 1-2 elementary schools as part of a long-range facilities master plan strategy.	\$0	\$680,000	\$680,000	\$680,000	\$680,000	\$2,720,000
Rec 4-3	Write and implement a policy requiring the development of a ten-year facility master plan.	(\$120,000)	\$0	\$0	\$0	\$0	(\$120,000)
Rec 4-4	Purchase and utilize work order software to track work order completion rate and worker productivity	(\$10,000)	(\$7,000)	(\$7,000)	(\$7,000)	(\$7,000)	(\$38,000)
Rec 4-5	Determine the productivity level of the maintenance workers and then staff the maintenance department at a level to allow the implementation of work order completion goals and a preventive maintenance program.	\$0	(\$98,000)	(\$98,000)	(\$98,000)	(\$98,000)	(\$392,000)
Rec 4-6	Implement all recommendations contained in the 2012 <i>Energy Conservation and Efficiency Study</i> .	(\$1,001,925)	\$149,000	\$149,000	\$149,000	\$149,000	(\$405,925)
CHAPTER 4 TOTAL SAVINGS (COSTS)		\$ (1,131,925)	\$ 724,000	\$ 724,000	\$ 724,000	\$ 724,000	\$ 1,764,075

CHAPTER REFERENCE		ANNUAL SAVINGS (COSTS)					TOTAL FIVE YEAR SAVINGS (COSTS)
		YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	
CHAPTER 6: TRANSPORTATION							
Rec 6-1	Provide all transportation department employees with a written job description and job responsibilities.	N/A	N/A	N/A	N/A	N/A	
Rec 6-2	Hire three additional, full-time substitute school bus drivers and review the high absenteeism of the school bus drivers.	(\$54,330)	(\$54,330)	(\$54,330)	(\$54,330)	(\$54,330)	(\$271,650)
Rec 6-3	Develop a formal process for adopting and reviewing key performance indicators, including safety, cost efficiency, cost effectiveness, and customer service in the transportation department operations and document and annually report activities and progress.	N/A	N/A	N/A	N/A	N/A	
Rec 6-4	Develop standards for evaluating the potential for outsourcing transportation operations.	N/A	N/A	N/A	N/A	N/A	
Rec 6-5	BCPS should review and revise all school bus routes which have a ride-time more than 60 minutes; and any routes with a ride-time of 90 or more minutes would receive top priority.	N/A	N/A	N/A	N/A	N/A	
Rec 6-6	Reduce the current deadhead mileage by ten percent and develop policy and procedures for an annual review process to reduce deadhead mileage in order to control costs.	\$110,749	\$110,749	\$110,749	\$110,749	\$110,749	\$553,745
Rec 6-7	Establish a committee and develop a written procedure for reviewing and evaluating the VDOE annual Warnings Report.	N/A	N/A	N/A	N/A	N/A	
Rec 6-8	Purchase and implement a Vehicle Maintenance Information System (VMIS) for the shared Botetourt County and School Division vehicle garage.	(\$60,000)	(\$4,800)	(\$4,800)	(\$4,800)	(\$4,800)	(\$79,200)
Rec 6-9	Hire a full-time position for the transportation garage to implement and maintain the Vehicle Maintenance Information System (VMIS).	(\$34,982)	(\$34,982)	(\$34,982)	(\$34,982)	(\$34,982)	(\$174,910)
Rec 6-10	BCPS should maintain no more than a 25 percent spare bus ratio, or 17 spare buses. The additional 11 school buses in the fleet should be sold or used for trade-in value.	\$11,000	Unknown	Unknown	Unknown	Unknown	\$11,000
Rec 6-11	Develop and implement a regular bus replacement schedule to ensure a safe and reliable fleet while also controlling costs.	N/A	N/A	N/A	N/A	N/A	
Rec 6-12	Eliminate excess white fleet sedans.	\$4,800	Unknown	Unknown	Unknown	Unknown	\$4,800
CHAPTER 6 TOTAL SAVINGS (COSTS)		\$ (22,763)	\$ 16,637	\$ 16,637	\$ 16,637	\$ 16,637	\$ 43,785

CHAPTER REFERENCE		ANNUAL SAVINGS (COSTS)					TOTAL FIVE YEAR SAVINGS (COSTS)
		YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	
CHAPTER 7: TECHNOLOGY MANAGEMENT							
Rec 7-1	Appropriately assign technology support and add two new staff members. (Add the position of IT Manager)	(\$72,213)	(\$72,213)	(\$72,213)	(\$72,213)	(\$72,213)	(\$361,065)
	Add one Field Technician I	(\$44,547)	(\$44,547)	(\$44,547)	(\$44,547)	(\$44,547)	(\$222,735)
Rec 7-2	Form a technology committee with broad-based membership.	N/A	N/A	N/A	N/A	N/A	
Rec 7-3	Sell other interactive boards	\$3,045	\$0	\$0	\$0	\$0	\$3,045
	Install an ActivBoard in all rooms where it will have instructional value.	(\$108,741)	(\$108,741)	(\$108,741)	(\$108,741)	(\$108,740)	(\$543,704)
Rec 7-4	Develop a comprehensive disaster recovery plan. (Purchase four virtual servers with storage array.)	(\$70,000)	\$0	\$0	\$0	\$0	(\$70,000)
	Purchase seven servers	(\$105,000)	\$0	\$0	\$0	\$0	(\$105,000)
	Repair generator at operations center	(\$5,000)	\$0	\$0	\$0	\$0	(\$5,000)
Rec 7-5	Contract with the vendor installing equipment to provide the division with an electronic file containing the necessary information about the equipment.	N/A	N/A	N/A	N/A	N/A	
Rec 7-6	Implement a five-year replacement plan for LAN access switches to ensure that no switch in service reaches end of life.	(\$13,750)	(\$13,750)	(\$13,750)	(\$13,750)	(\$13,750)	(\$68,750)
Rec 7-7	Create a secure facility to house all mission critical hardware and software with adequate power for both regular service and for a test environment.	(\$30,000)	\$0	\$0	\$0	\$0	(\$30,000)
Rec 7-8	Implement a single central server for the division help desk.	\$9,600	\$0	\$0	\$0	\$0	\$9,600
Rec 7-9	Create a comprehensive Request for Proposal (RFP) for technology goods and services that define expectations for imaging, inventory coding, and delivery.	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000	\$55,000
CHAPTER 7 TOTAL SAVINGS (COSTS)		\$ (425,606)	\$ (228,251)	\$ (228,251)	\$ (228,251)	\$ (228,250)	\$ (1,338,609)

CHAPTER REFERENCE		ANNUAL SAVINGS (COSTS)					TOTAL FIVE YEAR SAVINGS (COSTS)
		YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	
CHAPTER 8: FOOD SERVICES							
Rec 8-1	Generate and disseminate monthly MPLH reports for cafeteria managers along with senior management in order to improve food preparation efficiency.	N/A	N/A	N/A	N/A	N/A	
Rec 8-2	Develop, adopt, and train staff in formal procedures for school nutrition operations.	N/A	N/A	N/A	N/A	N/A	
Rec 8-3	Develop and implement a formal plan for reducing the deficit financial position of the school nutrition program.	N/A	N/A	N/A	N/A	N/A	
Rec 8-4	Create a mission statement and strategic plan for child nutrition services.	N/A	N/A	N/A	N/A	N/A	
Rec 8-5	Create and submit a detailed budget for child nutrition on an annual basis while analyzing the actual versus budgeted for both revenue and expenditures on a monthly basis.	N/A	N/A	N/A	N/A	N/A	
Rec 8-6	Incorporate a more open process of menu planning with cafeteria staff and allow for student input to improve the choices and potentially increase student participation.	N/A	N/A	N/A	N/A	N/A	
Rec 8-7	Conduct a review of the benefits for outsourcing the school nutrition program.	N/A	N/A	N/A	N/A	N/A	
Rec 8-8	Consider creating centralized kitchens at two of the division's schools in order to be more cost efficient with food and staff time until student participation rates are improved.	N/A	N/A	N/A	N/A	N/A	
Rec 8-9	Implement, train, and monitor a required process for cash drawer counts and deposits.	N/A	N/A	N/A	N/A	N/A	
Rec 8-10	Define a coding system for free, reduced, or full-priced meals and print student rosters to retain at each point-of-sale register.	N/A	N/A	N/A	N/A	N/A	
Rec 8-11	Implement aggressive incentives for students to participate in the breakfast and lunch programs offered in the division.	\$147,241	\$299,483	\$299,483	\$299,483	\$299,483	\$1,345,173
Rec 8-12	Add more nutrition education instruction at all schools.	N/A	N/A	N/A	N/A	N/A	
CHAPTER 8 TOTAL SAVINGS (COSTS)		\$ 147,241	\$ 299,483	\$ 299,483	\$ 299,483	\$ 299,483	\$ 1,345,173
TOTAL SAVINGS (COSTS) BY YEAR		\$ (1,328,930)	\$ 975,992	\$ 970,992	\$ 970,992	\$ 970,993	
TOTAL FIVE YEAR NET SAVINGS (COSTS) INCLUDING ONE TIME SAVINGS (COSTS)							\$ 2,560,039