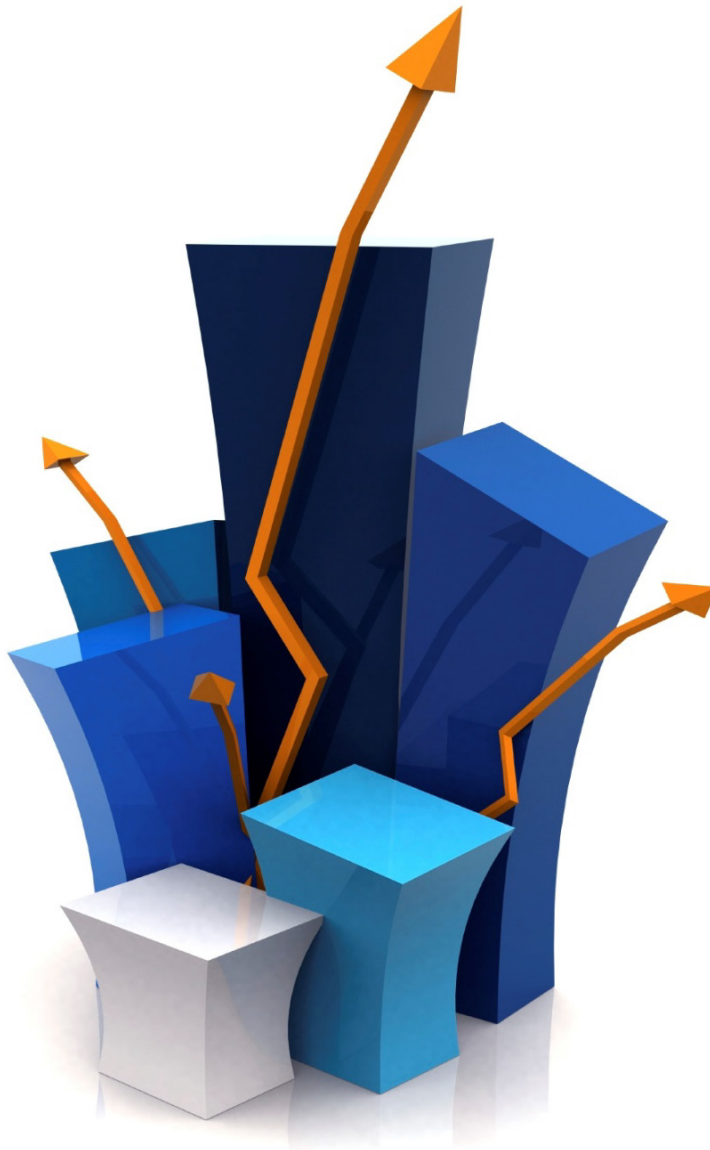**Final Report
May 2012**

School Efficiency Review of Arlington Public Schools

Submitted by:

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CONSULTING GROUP

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Introduction

State of Virginia's Efficiency Program

In 2005, as part of the then governor's *Education for a Lifetime* initiative, a comprehensive school efficiency review program was created in the Commonwealth of Virginia to ensure that Virginia's education dollars were being spent wisely and effectively. The goal of the efficiency review program is to identify administrative savings achievable through the examination and implementation of best practices and operational improvements in school division administration, educational service delivery, human resources, facilities use and management, financial management, transportation, technology management, food services, and other non-instructional expenditures, thereby allowing the school division to return administrative savings to the classroom to more directly benefit Virginia's children.

Review of Arlington County Public Schools

In September 2011, Gibson Consulting Group, Inc. (Gibson) was contracted by the Virginia Department of Planning and Budget to conduct an efficiency review of Arlington County Public Schools (the APS). The purpose of this project was to conduct an objective review of operational areas within the division and to determine whether savings can be achieved through increased efficiencies.

Because the division was in the midst of conducting two comprehensive reviews – one in special education and one in transportation – these two areas were excluded from this review. Additionally, in April 2011 a comprehensive technology department review was conducted, so the review team and the Virginia Department of Planning and Budget staff determined that the technology section of this report will contain a status update on the recommendations set forth in that review.

There are opportunities for greater efficiencies that should be implemented by the APS. Some of these issues have resulted from lagging information systems, procedures, and training to support consistent application across the division. The division has not routinely measured and reported on its efficiency, and would benefit from incorporating efficiency measures into its budget process to further increase transparency and provide more meaningful insights as to what is going on behind the numbers. This report contains 26 recommendations for improving the efficiency and effectiveness of the APS operations, including the opportunity for several new investments.

Potential Savings and Investments

The review team anticipates that the recommendations contained in this report will be implemented over the next five years (2013-17). Once fully implemented, these recommendations will result in gross savings of $8,491,111 over the next five years. This report also includes recommended investments by the APS to achieve high degrees of efficiency or to generate savings. If fully implemented, recommendations contained in this report will require an investment of approximately $5,315,800 for net five-year savings achievable by the APS of $3,175,311.

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Appendix A lists all recommendations made as a result of the review, by operational area, priority level for implementing each recommendation, as well as estimated savings, investments, and net fiscal impacts.

Methodology

Data Collection

To conduct a comprehensive review of the APS, Gibson used a variety of data collection and analysis approaches. This comprehensive review of the APS' non-instructional areas included the following data collection approaches:

- Existing APS data

- Interviews

- Focus group sessions

- School visits

- Washington Area Boards of Education (WABE) guide

Existing APS Data

To provide proper context for the review, Gibson requested from the APS a broad spectrum of data and documents related to the operational areas under review. Gibson collected over 1,000 documents from the APS staff. The purpose of this data request and subsequent analysis was to gain a deeper understanding of the APS operations and provide background and context for the review. In addition, these data and documents were utilized to help formulate questions for the interviews and focus group sessions held with division administrators, department heads and staff, school administrators and staff, and teachers. Data analyses, discussed later, were conducted to determine levels of efficiency within the organization.

Interviews with Division Staff

To ensure that the review team had a complete and thorough understanding of division processes, procedures, operations, and issues, interviews of key staff involved in day-to-day operations in the APS were conducted (November 14, 2011 to November 18, 2011). Interviews included School Board members, division leadership, department heads and staff, operational leads, and support staff among others.

Since some preliminary data analysis had been completed prior to the site visit, interview time was dedicated more to understanding performance trends, in addition to learning about system processes and staff responsibilities. Through these interviews and focus groups, the review team was able to develop a better overall understanding of divisional operations and clarify any data questions that arose during preliminary analysis, including investigation of possible causes of unfavorable variances, current efficiency or performance measurement systems, current plans and initiatives, current approach to cost

savings, recent cost savings or cost cutting measures, decision-making frameworks, and additional areas of concern for the staff.

School Site Visits

A sample of the APS' schools was selected for site visits based on geographic location within the division. The review team conducted site visits to five of the APS' 37 schools and programs. The purpose of the school visits was to gather information on school operations, as well as staff members' perceptions of the services provided by the central office. The site visits, which were conducted over the November 14, 2011 to November 18, 2011 period, included two elementary schools, two middle schools, and one high school in the division. Following is a list of the campuses visited during this review:

- Randolph Elementary

- Henry Elementary

- Jefferson Middle School

- Gunston Middle School

- Wakefield High School

Focus Group Sessions

Focus groups are an effective way of obtaining more in-depth information from staff than a one-on-one formal interview or other data collection instruments. In addition, the dynamics of a focus group often stimulate the expression of ideas that might otherwise go unstated. The project team conducted focus group sessions with varying groups of stakeholders (e.g., principals, teachers, operational area leads, departmental and campus staff). These focus groups were conducted during the fall 2011 site visit.

Analysis

Data Analysis

As discussed previously, existing APS data were requested and analyzed to provide background and context for this review. During the assessment phase of this project, each functional area was reviewed individually to determine whether efficient financial and operational management practices were in place. For the analysis of each functional area, the review team applied the Department of Planning and Budget's protocols for developing well-supported findings and recommendations. Qualitative interview and focus group data were analyzed by functional area leads conducing the focus group sessions to determine common trends across the various stakeholder groups (e.g., division administration, school leaders and staff, department heads and staff). Other sources of input (e.g., observations, divisional data, and industry best practices) were also included in analyses.

Comparative Cost Analysis

The Virginia Department of Planning and Budget has established clusters of divisions to support comparability of selected criteria across similar school divisions. Comparative costs analyses were conducted for the APS and the three peers. For this review, peer comparisons were conducted for the APS against Alexandria City Public Schools, Falls Church City Public Schools, and Loudoun County Public

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Schools. Where appropriate, comparisons were conducted using additional peer districts from the WABE guide – Fairfax County Public Schools, Manassas City Public Schools, Manassas Park City Public Schools, Montgomery County (MD) Public Schools, Prince George's County (MD) Public Schools, and Prince William County Public Schools. Peer data comparisons were analyzed for staffing levels, fund sources, disbursements, and expenditures, among others. Appendix B – Peer Comparison includes all peer analyses conducted for this review.

Interview and Focus Group Data

Qualitative interview and focus group data were analyzed by functional area leaders conducting the focus group sessions to determine common trends across the various stakeholder groups (e.g., division administration, school leaders and staff, department heads and staff).

Organization of Report

The remainder of this report is organized into the following chapters:

- 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 – Technology Management
- Chapter 7 – Food Services

Chapter 6, Technology Management, delivers an update of the information services department's progress towards implementing the recommendations for a report that resulted from a review conducted in April 2011.

Additionally, Chapter 2, Educational Service Delivery, does not include a review of the special education office, since a separate, comprehensive review is currently underway.

A review of transportation is not included, since the division has procured a separate comprehensive review for this area.

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Chapter 1 – Divisional Administration

Introduction

The effective and efficient education of students depends on a division's governance structure, staff management, and planning processes. The role of the board is to set goals, objectives, and policies, and to approve the plans and funding necessary to achieve division goals and objectives. The superintendent is responsible for managing division operations, recommending staffing levels, and preparing a plan for spending financial resources in order to carry out the board's goals and objectives. The board and superintendent should function as a leadership team to effectively meet student needs.

The Arlington Public Schools (APS) serves residents of Arlington County. In 2011, the division had 21,276 students in 36 schools, including 22 elementary schools, five middle schools, four secondary and high schools, two special education facilities, and three alternative campuses. The APS has a diverse student population that speaks more than 98 languages.

Table 1.1 shows a comparison of the APS' student membership counts and number of schools to divisions in the Washington D.C. area.

Table 1.1.Comparison to other Washington D.C. area school divisions

School Division	FY 2011 Actual Membership	Total Number of Schools
Alexandria	11,999	20
Fairfax	174,933	194
Falls Church	2,096	4
Loudoun	63,220	80
Manassas City	6,979	9
Manassas Park City	2,998	4
Montgomery County, MD	144,064	200
Prince George's County, MD	128,172	196
Prince William	79,339	90
Peer Division Average	**68,200**	**88.6**
Arlington	21,276	36

Source: Washington Area Boards of Education Guide FY 2012, pgs. 5-15.

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For FY 2012, the APS employs approximately 3,937.4 full-time equivalent (FTE) employees, including 2,130.9 FTE teachers, and has an FY 2012 operating budget of $475.1 million.

Table 1.2 shows a comparison of the APS to other Washington D.C. area divisions for non-school based leadership staff per 1,000 students. For leadership team members, the APS falls within the average of all school divisions in this comparison; however, in regards to management staff per 1,000 students, the APS – at 2.5 staff per 1,000 students – is higher than the group average of 1.7.

Table 1.2.Comparison to other Washington area school divisions – leadership team and management

School Division	FY 2012 Approved Membership	Leadership Team Per 1000 Students	Management Per 1000 Students
Alexandria	12,381	0.3	2.2
Fairfax	177,629	0.1	0.9
Falls Church	2,177	1.4	3.0
Loudoun	66,266	0.1	1.5
Manassas City	7,131	0.3	1.4
Manassas Park City	2,998	0.7	2.3
Montgomery County, MD	146,709	0.1	1.9
Prince George's County, MD	125,168	0.2	0.9
Prince William	81,411	0.1	1.4
Peer Division Average	**69,097**	**0.4**	**1.7**
Arlington	22,245	0.4	2.5

Source: Washington Area Boards of Education Guide FY 2012, pgs. 34, 35.

Table 1.3 shows the APS compared to other school divisions for the number of technical/support staff per 1,000 students and office support staff per 1,000 students. At 4.1 technical/support staff per 1,000 students, the APS is well above the average of 2.7. The APS has 2.7 office support staff per 1,000 students, which is more in line with but still above the peer average of 2.0.

Table 1.3 Nonschool-based, technical/support and office support staff per 1,000 students

School Division	FY 2012 Approved Membership	Technical/Support Per 1000 Students	Office Support Staff Per 1000 Students
Alexandria	12,381	5.1	2.0
Fairfax	177,629	3.4	1.3
Falls Church	2,177	4.1	1.6

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School Division	FY 2012 Approved Membership	Technical/Support Per 1000 Students	Office Support Staff Per 1000 Students
Loudoun	66,266	1.7	2.2
Manassas City	7,131	3.3	1.4
Manassas Park City	2,998	1.7	3.0
Montgomery County, MD	146,709	0.8	2.1
Prince George's County, MD	125,168	1.8	2.6
Prince William	81,411	2.0	1.8
Peer Division Average	**69,097**	**2.7**	**2.0**
Arlington	22,245	4.1	2.7

Source: Washington Area Boards of Education Guide FY 2012, pgs. 34, 35.

The APS is governed by an elected, five-member board with staggered, four-year terms (Table 1.4). Board member terms commence on January 1 of the year following election. Regular board meetings are generally held the first and third Thursdays of the month in the board room of the Arlington Education Center located at 1426 North Quincy Street.

Table 1.4 The APS school board members

School Board Member	Board Position	Joined Board	Term Expires
Abby Raphael	Board Chair	January 1, 2008	December 31, 2015
Emma Violand-Sanchez	Board Vice Chair	January 1, 2009	December 31, 2012
Libby Garvey	Board Member	January 1, 1997	December 31, 2012
Sally M. Baird	Board Member	January 1, 2007	December 31, 2014
James Lander	Board Member	January 1, 2010	December 31, 2013

Source: The APS website, http://www.apsva.us/page/3048.

The board appoints the superintendent for a four-year term. The current superintendent has held the position since July 2009.

This chapter provides commendations and recommendations related to two aspects of divisional administration:

A. Division Management
B. Planning and Evaluation

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Although procedures were examined during the review, no significant commendations or recommendations were discovered.

Several significant commendations are made in this chapter:

- The board and the administration have an excellent communication model that improves the effectiveness and efficiency of governance.

- The division has become increasingly focused on using data to tackle problems and further self-improvement at both the board and administration levels.

- The division takes great effort to obtain a broad base of community input on its strategic plan.

Table 1.5 provides a summary of divisional administration recommendations and resulting fiscal impacts over the next five years.

Table 1.5. Fiscal impacts of divisional administration recommendations

Recommendation	Priority	One-Time Cost/ Savings	2012-13	2013-14	2014-15	2015-16	2016-17	Total Fiscal Impact
Division Management								
1-1 Consider downgrading two to three assistant superintendent positions over the next three years to more closely align position titles with responsibilities.	Medium	$0	$0	$0	$0	$0	$0	**$0**
Planning and Evaluation								
1-2. Improve the division's ability to match resources to needs by incorporating a performance-based budgeting system.	High	$0	$0	$0	$0	$0	$0	**$0**
Net Fiscal Impact		**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**

Note: Costs are negative. Savings are positive.

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A. Division Management

A school division's superintendent is responsible for recommending staffing levels and a staffing organization to the board. The primary goal of division management is to provide support for the instruction of students.

Figure 1.1 shows the organizational structure of the division. The superintendent has eight assistant superintendents reporting to him. Instructional functions of the division are handled primarily by the assistant superintendents for administrative services, instruction, and student services. The assistant superintendent for school and community relations is responsible for media relations, community outreach, public information, and maintenance of the division's web site. This position also coordinates the volunteers and partners in education programs and oversees the division's print shop.

The division has four assistant superintendent positions responsible for the oversight of operations, including facilities, construction, maintenance, transportation, finance, budget, purchasing, food and nutrition, information services, and personnel management.

At the time of the review team's site visit to the APS, two of the assistant superintendents had been in their positions for one month or less (the assistant superintendent for instruction and the assistant superintendent for finance and management services). The assistant superintendent for information services had held the position for just over one year at the time of the site visit.

Figure 1.1. Divisional organization structure

Source: The APS School Board's Adopted Budget FY 2012

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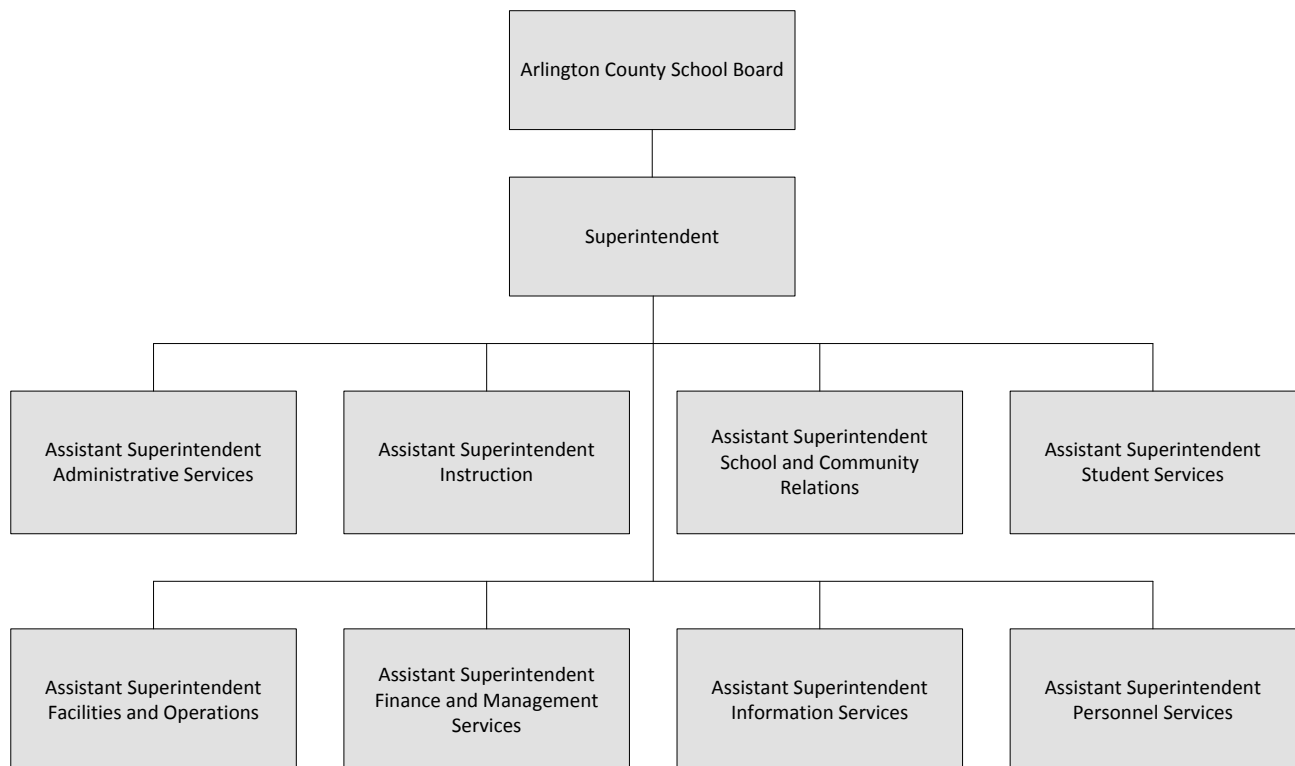
Commendation: The board and the administration have an excellent communication model that improves the effectiveness and efficiency of governance.

The division employs various methods to ensure an open channel of communication between the board and administration:

- The superintendent provides frequent progress reports on division initiatives to board members as well as administrators.

- The division holds "two-by-two" meetings on a regular basis. The two-by-two meeting format includes two board members and administrators who then have the opportunity to have in-depth discussions on issues of concern.

- The division holds weekly meetings that include the board chair plus one other rotating board member who meet with the superintendent to discuss the agenda and prepare for the upcoming meeting.

- The superintendent actively uses voicemail to inform board members of weekly meetings and to inform administrators of major meeting items.

Commendation: The division has become increasingly focused on using data to tackle problems and further self-improvement at both the board and administration levels.

In its 2011-17 strategic planning documents, the APS acknowledges the critical value of using data-driven processes to ensure that the division achieves its goals. The strategic plan states:

An underlying district priority for all five goals is information-driven decision-making and managing data in order to turn it into usable information. Staff members depend on measurement and analysis of performance as indispensable parts of the decision-making process and for continuous improvement of all aspects of the district. Parents and the community rely on timely and understandable information to make good choices and hold the school system accountable for reaching its goals.

A comprehensive and integrated fact-based system—one that includes input data, implementation data, performance data, comparative/competitive data, workforce data, cost data, process performance, and operational performance measurement should be designed, deployed, and improved over time… The outcome is to manage resources more effectively and efficiently and to manage operations to maximize productivity and eliminate waste.[1]

In addition, the board adopts annual priorities to inform its budgeting decisions. The board's FY 2012 priorities for developing the FY 2013 budget include four priorities. One of these priorities – evaluation and accountability – states:

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[1] Arlington Public School Strategic Plan (2011-17).

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The Board is committed to continuous improvement in a cost-effective manner to assist in achieving each of our strategic plan goals and will…review reports on the progress of the State Efficiency Review, the evaluation of transportation, and the continuing work on process management and performance.[2]

In keeping with these stated priorities, during 2011 the division has embarked on several studies, including transportation, special education, and technology. The board has exhibited a great deal of transparency in providing the results of these studies to the community. For instance, at its November 15, 2011 board meeting, the consultant hired to conduct the transportation study made a presentation of his findings and recommendations.

In addition, the division has adopted the American Productivity and Quality Center's (APQC) framework for process improvement and efficiency. The APQC is an organization that focuses on process and performance improvement, and assists its members in improving productivity and quality. The organization collects and disseminates to its members benchmarking data, best practices, and expertise in process improvement.

Recommendation 1-1: Consider downgrading two to three assistant superintendent positions over the next three years to more closely align position titles with responsibilities

The APS has a large number of assistant superintendent positions for a school system its size. The review team conducted a comparative analysis examining the organizational structures and staffing patterns of Virginia school divisions similar in size to the APS. Based on this analysis, the APS has more assistant superintendent (or equivalent) positions (8) than any of the comparable districts. The number of direct reports to the superintendent is not the issue – it is the senior level of the positions reporting directly to the superintendent.

Because the divisions in the APS peer groups provided by the Virginia Department of Planning and Budget as well as the divisions in the Washington D.C. area from the WABE guide are not comparable in size to the APS, the review team selected alternative peers for evaluating the APS staffing levels. Divisions having student enrollments (as measured by the 2011 fall membership count) between 22,000 and 33,000 were used in this section for comparison purposes. A summary of this analysis is presented in Table 1.6.

Of the six comparison divisions examined, two had structures similar to that of the APS. Spotsylvania County Schools and Stafford County Public Schools each have five assistant superintendent positions (all reporting to the superintendent) who oversee the functions of finance, administration, instruction, facilities, technology, and human resources. Two divisions, Hampton City Schools and Newport News Public Schools, maintain structures with some similarities: each division has two assistant

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[2] Arlington Public Schools School Board FY 2012 Priorities and FY 2013 Budget Direction.

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superintendent positions and several executive director and director positions to oversee division functions.

Both Norfolk Public Schools and Richmond City Public Schools use the chief academic officer model. Richmond City Public Schools appears to have the leanest senior leadership structure in terms of direct reports to the superintendent, having a chief academic officer, a chief operating officer, and a chief of staff. These are the only positions in Richmond reporting directly to the superintendent.

Norfolk Public Schools has four officer positions reporting to the superintendent - chief operations officer, chief information officer, chief academic officer, and chief financial officer. Two executive directors (for human resources and strategic evaluation and assessment) and a senior director for communications also report to the superintendent.

Table 1.6. Organizational structure comparative analysis summary

Division	2011-12 Enrollment	# Direct Reports to Superintendent
Arlington Public Schools	21,892	▪ **8 assistant superintendents (admin services, facilities & operations, finance & management services, information services, instruction, personnel, school and community relations, student services)**
Hampton City Schools	21,588	▪ **2 deputy superintendents (curriculum & instruction, facilities & business support)** ▪ 4 executive directors (elementary schools, elementary schools & Title I, secondary schools, HR, public relations and marketing) ▪ 2 Directors (instructional accountability, community & legislative relations)
Newport News Public Schools	29,948	▪ **2 assistant superintendents (business & support services, HR & staff support)** ▪ 4 executive directors (school leadership) ▪ 3 executive directors (student advancement, youth development, curriculum & development) ▪ 2 directors (corporate & government relations, public & community Involvement)
Norfolk Public Schools	33,461	▪ **chief operations officer** ▪ **chief information officer** ▪ **chief academic officer** ▪ **chief financial officer** ▪ 2 executive directors (strategic evaluation & assessment, HR) ▪ senior director communications

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Division	2011-12 Enrollment	# Direct Reports to Superintendent
Richmond City Public Schools	23,336	**chief academic officer** **chief operating officer** **chief of staff**
Spotsylvania County Schools	23,817	**5 assistant superintendents (finance, administration, instruction, HR, technology services)** - director public information
Stafford County Public Schools	27,333	**5 assistant superintendents (facilities, financial services, instruction, secondary ed support services, elementary ed support services)** - executive director administrative & legal services

Source: Virginia Department of Education, comparative school division websites, phone interviews with comparative division staff, and the APS School Board Adopted Budget FY 2012

Note: Bolded positions represent those that are assistant superintendent or equivalent senior leadership positions.

Over the next several years, the APS should consider reducing its leadership team by two to three assistant superintendent positions to more closely align position titles to responsibilities and accordingly reduce senior leadership costs. The superintendent should develop a transition plan to achieve position adjustments over the next three years, noting which positions should be designated as assistant superintendent positions and which positions could be downgraded to director or executive director positions based on the following criteria:

- The degree of responsibility of the position. This includes the amount of the budget(s) and staff counts for which the position is responsible, as well as the level of risk of the functions supervised by the position.

- Whether the position is a line or staff function. Line functions handle the primary activities of an organization and are directly related with the objectives of the school division; they have decision-making authority and oversee staff. Staff functions handle secondary activities and support line functions by conducting research and analyses and offering advice to management. Generally staff functions are not assistant superintendent positions.

- Logical alignment of functions beneath the position.

- Ability to attract talent if the position is downgraded.

- Priority or importance of the position in supporting the superintendent and the division's goals and objectives.

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In developing this transition plan, the superintendent should review peer division organizational data as well as consult the APS strategic plan. The changes related to this restructuring could be implemented at the time that there is turnover in the positions.

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The salary and benefits savings associated with this recommendation cannot be determined at this time since it is not known what positions will be downgraded or when that will occur.

B. Planning and Evaluation

Planning and evaluation are critical processes to ensuring improvement in student performance for all student groups. Virginia school divisions are required to prepare annual division improvement plans to support the objectives contained in school improvement plans.

Each year, all Virginia school division campuses are to prepare a school improvement plan that addresses goals, objectives, and strategies for student improvement at the individual campus level.

At least every other year, divisions are to evaluate the effectiveness of their decision-making and planning policies, procedures, and staff development activities to ensure that they have a positive impact on student performance.

The APS uses a variety of planning processes to accomplish its planning and evaluation tasks. The division's current superintendent was appointed to his position in July 2009. As a first step to gaining an understanding of the current and future state of the school division, the superintendent prepared a document referred to as the Superintendent's Entry Plan. The plan was prepared with the help of division staff and included interviews with a broad base of division employees and all board members, as well as community forums to obtain perceptions and gather information from parents and community groups.

The superintendent's entry plan includes a set of findings and "next steps" related to division-wide planning and evaluation processes. One of the outcomes detailed in the superintendent's entry plan is the development of a "cycle of improvement" model. The model can be summarized as:

- Redesign the current accountability system in relationship to the strategic plan, including school management plans, department plans, work plans, and program evaluations.

- Provide continual support to schools to enhance and evaluate instructional practices, teacher effectiveness, and use and need of resources and materials.

- Provide ongoing professional learning experiences to enhance administrator and teacher effectiveness and student learning.

- Use the plan, do, study, act model to evaluate all areas of focus:
  - Student achievement plan
  - Student service models

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- Communication framework

- Business operation practices

The division prepares a six-year strategic plan for identifying school system focus areas for improvement. The most recent strategic planning process occurred during 2010 and 2011, with the board approving the 2011-17 strategic plan on September 22, 2011. For this most recent strategic planning effort, the division sought the assistance of an outside professional to guide the process, and assigned an employee in the planning and evaluation office to oversee and coordinate internal planning functions.

Each APS school principal, along with school staff and planning committees with community membership, prepares a school improvement plan and a school management plan annually. The school improvement plans outline the goals and objectives for improving student achievement at the campus and spell out the steps necessary to accomplishing and measuring the goals and objectives. Each school management plan links to the division's strategic plan goals and contains specific, measureable, attainable, realistic, and timely (SMART) goals to meet division-wide goals.

The board adopts a set of annual priorities to assist in keeping its work focused, effective, and aligned with the division's strategic plan. The board priorities for FY 2012 are:

- Student achievement and success

- Strategic planning for enrollment growth

- Teacher and staff quality

- Evaluation and accountability

Commendation: The division takes great effort to obtain a broad base of community input on its strategic plan.

The division obtained community input on its strategic planning process in a variety of ways. To begin with, the division had a steering committee that was charged with the development of the plan. The steering committee for the most recent plan included 26 members from all sectors of the community. Co-chairs of the committee were parents of APS students who had previous experience in serving on similar committees in the past. The advisory committee also had two division employees: the superintendent and the director of planning and evaluation, as well as some teachers and a counselor.

The committee held a series of forums between November 2010 and January 2011 to gather ideas on four topics:

- Greatest challenges and issues facing the division

- Skills and abilities student must master to be successful

- Measures or evidence used to evaluate the division

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- Financial priorities

The steering committee obtained participation from approximately 250 community members, teachers, parents, and division staff through these forums. The information obtained was then used to focus on the priorities that were most important to the division.

During February and March 2011, the steering committee met with stakeholder groups, including advisory committees, parent-teacher associations (PTA), civic associations, student organizations, and interest and advocacy groups, to provide an overview of the strategic planning process and administer a brief survey to assess priorities of the various interests. In late March 2011, the steering committee met to review all the input received from the various input methods.

The information obtained was included in a draft strategic plan. The draft was again presented to participants at two community forums held in March and April 2011 for additional input. The steering committee also reviewed the draft plan with at the annual multicultural parent conference. Like the other forums, the event was translated into Spanish.

After modifying the plan based on the additional input received, the steering committee presented the plan to the APS school board, which conducted two work sessions and two public hearings.

This broad range of input will help the division to better attain its goals and objectives by garnering the backing from a broad base of supporters (parents, teachers, staff and community members).

Recommendation 1-2: Improve the division's ability to match resources to needs by incorporating a performance-based budgeting system.

A school system's budget is the vehicle for allocating financial resources to meet student needs. The budget should be a financial reflection of the division's goals and priorities and should demonstrate a level of efficiency.

Although the division has a commendable strategic planning process and has received awards related to its budget presentation materials, there is little evidence that there are established links between the planning and budgeting processes. The division's budget preparation largely focuses on incremental increases or decreases, but does not provide information to justify spending levels, and schools are largely locked into staffing and spending levels prescribed by funding formulas which are called "planning factors".

By implementing performance measures and showing a five-year trend of performance for each area, readers of the division's budget get a better sense of the efficiency levels and trends behind the numbers. Performance measure targets can be used to establish budget levels for the following year.

A sample of performance measures relating to custodial and maintenance functions that could be implemented in the APS are presented in Table 1.7. Performance measures should be developed for all school division areas.

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Table 1.7. Sample performance measures

Performance Measures	Level of Detail
Staffing-related measures	
Gross square feet per total maintenance FTE	Division
Gross square feet per total custodial FTE	Site
Acres per total groundskeeper FTE	Division
Expenditure-related measures	
Custodial expenditures per gross square feet (including portables)	Division
Grounds expenditures per acre	Division
Maintenance expenditures per gross square feet (including portables)	Division
Utility usage and cost-related measures	
Electricity cost per square foot	Division
Kilowatts usage (electric) per square foot	Division
Water cost per square foot	Division
Water usage per square foot	Division
Natural gas cost per square foot	Division
Occupancy and building-related measures	
Gross square feet per student	School
Percentage of square footage that is portable	School
Maintenance Department service level-related measures	
Percentage of maintenance work orders that are completed each year	Division
Percentage of "wrench time" for the maintenance department	Division
Percentage of maintenance work orders that are compliant with SLA priority level (1-4) response times	Division
Percentage of maintenance work orders that are preventative	Division
Average completion time of maintenance work orders, by priority	Division
Average response time for maintenance work orders, by priority	Division
Top and bottom 20 schools in terms of maintenance costs due to vandalism (labor and materials)	School
Top and bottom 20 schools in terms of total maintenance costs per student	School
Top and bottom 20 schools in terms of total maintenance cost per square foot.	School
Input-related measures	
Total maintenance FTE trend	Division
Total custodial FTE trend	Division

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Performance Measures	Level of Detail
Total grounds FTE trend	Division
Total division gross square feet trend	Division
Total enrollment trend	Division
Customer satisfaction-related measures	
Customer satisfaction mean value for the maintenance department (three categories: quality of work, service provided, attitude)	Division

Source: Gibson Consulting Group, Inc., 2012

The budget process and related documents should be changed to incorporate performance measurement. The following elements should be implemented:

- Develop /update five-year performance measures by August 31st of each year

- Begin departmental performance assessment on September 1st of each year, conducting trend, peer, and benchmark analysis

- Identify cost reductions and service improvement opportunities through performance analysis by November 1st of each year

- For each department/cost center, disclose in the budget document the top 10 performance measures that provide the most transparency into departmental spending

- Modify budget formulas to reflect results of efficiency analysis

FISCAL IMPACT

The implementation of this recommendation will require effort on the part of finance and management services staff as well as division staff having budget development responsibilities. The assistant superintendent for finance and management services, along with the director of budget, should oversee the process. A recommendation for reorganizing responsibilities and conducting cross-training in the finance and budget functions of the APS will allow the division the added capacity to implement this recommendation. Therefore there will be no fiscal impact to implementing this recommendation.

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Chapter 2 – Education Service Delivery

Introduction

The primary function of any school division is educating children. The extent to which this goal is achieved is dependent largely on the effective and efficient use of the division's human and financial resources. The division must also have a well-designed and well-managed process for directing instruction, maintaining the curriculum, and providing the resources needed to support its programs. In addition, assessment data must be collected and used to evaluate and monitor its educational programs.

The Arlington Public Schools (the APS) provides educational services to 22,245 students in grades pre-K to 12 in four secondary and high schools, five middle schools, 22 elementary schools, two special education facilities, and three alternative facilities. All schools in the APS are accredited based on academic standards; however, one high school is not fully accredited because of changes related to the graduation completion index.

The Virginia Standards of Learning (SOL) establish the expectations for student learning and achievement for various subjects in grades 3-12. These tests determine the extent to which students have mastered the specific knowledge and skills contained in the curriculum frameworks for core subject areas.

Table 2.1 presents the division's 2010-11 SOL passing rates and advanced passing rates by grade and subject compared to the state. The lightly shaded boxes indicate subjects where the APS' grade levels and subject area passing rates were at or above the state average. The darkly shaded boxes with white text indicate where the state average was higher. In 2010-11, the passing rates and advanced passing rates for the APS' students were at or above state averages on approximately three-fourths of the grade level/subject area combinations.

Table 2.1. SOL passing rates by grade and subject, the APS and state, 2010-11

Grade Level	Subject	APS Passed	State Passed	APS Advanced	State Advanced
Grade 3	English Reading	87	83	50	41
Grade 3	Mathematics	94	91	69	55
Grade 3	Science	93	90	56	39
Grade 3	History	88	85	49	37
Grade 4	English Reading	89	87	49	42
Grade 4	Mathematics	90	89	65	55
Grade 5	English Reading	91	89	49	40
Grade 5	English Writing	91	87	36	25

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Grade Level	Subject	APS Passed	State Passed	APS Advanced	State Advanced
Grade 5	Mathematics	94	89	74	57
Grade 5	Science	89	87	34	29
Grade 6	English Reading	86	87	48	42
Grade 6	Mathematics	65	73	25	31
Grade 7	English Reading	90	89	46	40
Grade 7	Mathematics	78	77	40	34
Grade 8	English Reading	91	90	51	44
Grade 8	English Writing	93	88	6	5
Grade 8	Mathematics	81	82	52	47
Grade 8	Science	91	92	54	40
Grades 9-12	Algebra I	98	94	35	28
Grades 9-12	Algebra II	90	91	27	22
Grades 9-12	Biology	92	90	26	19
Grades 9-12	Chemistry	89	93	23	19
Grades 9-12	Earth Science	85	89	14	23
Grades 9-12	English Reading	94	94	53	47
Grades 9-12	Geography	86	85	20	15
Grades 9-12	Geometry	88	87	33	22
Grades 9-12	VA & US History	83	83	12	14
Grades 6-8	US History to 1877	83	81	45	37
Grades 7-8	US History since 1877	86	85	35	33
Grades 4-5	Virginia Studies	90	89	55	48
Grades 9-12	World History I	81	81	9	15
Grades 9-12	World History II	85	82	25	15
Grades 9-12	Writing	96	93	48	36

Source: Virginia Department of Education

Table 2.2 provides peer comparisons for selected instructional staff – measured as the ratio of students to staff – for principals and assistant principals, instructional assistants, and guidance directors. Generally, the APS has lower ratios (indicating higher staff levels) than its peers. The APS has the second lowest ratio for principals and assistant principals, the second lowest for instructional assistants, and second lowest (of the six school systems reporting) for guidance director staffing compared to its peer divisions. For each staffing category, the APS is below the peer average.

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Table 2.2. Pupil-staff ratios for selected positions, FY 2012

School Division	Approved Enrollment	Principals/ Assistant Principals	Instructional Assistants	Guidance Directors
Alexandria	12,381	281.4	66.9	6190.5
Fairfax County	177,629	319.5	61.6	3351.5
Falls Church	2,177	275.6	36.5	2177.0
Loudoun	66,266	345.1	56.5	5097.4
Manassas City	7,131	339.6	63.7	3565.5
Manassas Park City	2,998	374.8	115.3	0.0
Montgomery County, MD	146,709	305.0	62.9	0.0
Prince George's County, MD	125,168	259.7	103.1	0.0
Prince William	81,411	399.1	124.1	7401.0
Peer Average	**69,097**	**322.2**	**76.7**	**3,087.0**
Arlington	22,245	274.6	41.8	2780.6

Source: Washington Area Board of Education Guide, FY 2012, pgs. 17, 34-37

The remainder of this chapter provides commendations and recommendations related to the deployment of instructional resources and the factors that affect this deployment. The scope of this chapter does not include a review of the quality of instructional programs or their impact on student achievement. Four aspects of educational service delivery were assessed during this project:

A. Organization and Management
B. School Administration and Decision Making
C. Curriculum Policies and Management
D. Special Programs

The division is currently in process of conducting a separate comprehensive study of its special education program. Accordingly, to avoid possible duplication of effort and reporting, this report does not include an analysis of special education programs.

Two commendations are made in this chapter:

1. Curriculum area staff is actively supporting teacher recruitment and observation.

2. The APS is implementing procedures to improve minority representation in the Gifted Services Program.

Table 2.3 provides a summary of education service delivery recommendations and resulting fiscal impacts over the next five years.

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Table 2.3. Fiscal impact of recommendations

Recommendation	Priority	One-Time Costs/ Savings	2012-13	2013-14	2014-15	2015-16	2016-17	Total Fiscal Impact
Organization and Management								
2-1. Evaluate effectiveness of APS' low pupil-teacher ratio	High	$0	$0	$0	$0	$0	$0	**$0**
2-2. Reduce span of control for instructional leadership	High	$0	($350,000)	($350,000)	($350,000)	($350,000)	($350,000)	**($1,750,000)**
School Administration and Decision Making								
2-3. Develop site-based decision-making framework	High	($25,000)	$0	$0	$0	$0	$0	**($25,000)**
Curriculum Policies and Management								
2-4. Standardize elements of division curriculum	High	($25,000)	$0	$0	$0	$0	$0	**($25,000)**
Net Fiscal Impact		**($50,000)**	**($350,000)**	**($350,000)**	**($350,000)**	**($350,000)**	**($350,000)**	**($1,800,000)**

Note: Costs are negative. Savings are positive.

A. Organization and Management

Recommendation 2-1: Evaluate effectiveness of the APS' low pupil-teacher ratio.

The APS assigns teacher resources to schools based on formulas that prescribe target class sizes for each grade level. The APS has been able to support smaller class sizes and lower pupil-teacher ratios (indicating higher staff levels) than almost all of its peer divisions. Compared to its nine peers, the APS has the second lowest overall pupil-teacher ratio, the fourth lowest pupil-teacher ratio for elementary grade levels, the second lowest for middle/intermediate schools, and the lowest for high schools. Table 2.4 presents this comparative analysis based on data from the 2011-12 school year.

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Table 2.4. Comparative pupil-teacher ratios, FY 2012

School Division	Approved Student Enrollment	2011-12 Total Teachers	Overall Students per Teacher[1]	FY 2011-12 Students per Classroom Teacher[2]		
				Elementary	Middle / Intermediate	Secondary / High
Alexandria	12,381	1,215.8	10.2	18.1	19.9	21.7
Fairfax County	177,629	14,689.2	12.1	21.5	24.4	25.1
Falls Church	2,177	194.2	11.2	22.6	24.7	24.3
Loudoun	66,266	5,048.2	13.1	23.3	23.1	24.3
Manassas City	7,131	565.9	12.6	21.8	20.5	20.7
Manassas Park City	2,998	198.0	15.1	18.6	29.1	27.7
Montgomery County, MD	146,709	11,404.3	12.9	22.6	28.0	29.5
Prince George's County, MD	125,168	8,248.1	15.2	19.8	23.1	31.2
Prince William	81,411	5,584.4	14.6	22.5	28.3	28.8
Peer Average	**69,097**	**5,238.7**	**13.2**	**21.2**	**24.6**	**25.9**
Arlington	22,245	2,130.9	10.4	20.3	20.6	19.9

Source: The Washington Area Board of Education Guide, FY 2012, pgs 29, 34-35

Notes: Chart excludes teachers and students in pre-k, kindergarten, alternative schools, and self-contained special education

[1] Teacher includes teacher-scale positions such as classroom teachers and other teachers (ESOL/ESL, librarians, reading, coaches, mentors, music, art, physical education, etc.)

[2] Classroom teachers are positions used to determine class size.

The APS teacher staffing formulas do not suggest extraordinarily small class sizes. The document "Fiscal Year 2012 Adopted Budget Planning Factors" contains formulas for school staffing, including teachers. While there are many formulas for different types of academic programs, the general teacher formulas are 23.4 to 1 for middle school and 25.4 to 1 for high school. In elementary schools the formula applies the lower of two amounts based on target class sizes on the low end ranging from 20 (Grade 1) to 25 (Grade 5).

Other factors which warrant further study could be contributing to the low pupil-teacher ratio at the APS:

▪ Small class sizes due to smaller schools – approximately one-third of the APS' elementary schools (7 of 22) have less than 500 students, but none have less than 400 students. Smaller

schools mean lower enrollment at each grade level, making it more difficult to hit the targets for class size.

- Large number of low-enrollment courses – the particularly low ratios at the APS' secondary schools could be due in part to a large number of course offerings that do not have the student participation needed to attain full classes.

- Longer teacher planning period – according to the staffing formulas, the APS' secondary teachers have two planning periods each day. Some school systems have moved to a single planning period, and this may explain the wide disparity among the APS' peers.

- Exceptions to formula staffing – while formulas are used to drive staffing allocations, many school systems make exceptions to meet the unique needs or situations at each school. This can lead to a larger number of teachers than expected.

- Large number of non-classroom teacher positions – while the data in Table 2.4 suggests that the bulk of the difference between the APS and its peers relates to classroom teachers, the number of non-classroom teacher positions is likely a contributing factor.

In educational research, small classes are generally defined as those with fewer than 18 to 20 students. There is mixed evidence regarding the benefit of small class sizes. While some research documents small to moderate academic gains for some children, under some conditions other research has failed to find any evidence that small class sizes are optimal.

The more rigorous, experimental research in this field has found a connection between small class size and academic achievement under the following conditions[1,2]:

- For children in younger grades (specifically for children in grades K through 3)
- When enrollment in small classes is continuous over the K through 3rd grade period
- For Black/Hispanic students
- For students from low-income families
- For students attending urban schools in low-income districts
- When impact is measured in terms of reading and math scores (as opposed to writing and science)

It is important to note that for many of these conditions, there are other studies published showing no impact of small class sizes on students' academic achievement. In fact, most of the literature suggests that class size research has been inconclusive, mixed, or failed to show positive effects. Various authors have explained these mixed findings and inconclusive results, in the following ways:

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[1] http://www.coffinseducationcenter.com/?p=218
[2] http://www.centerforpubliceducation.org/Main-Menu/Organizing-a-school/Class-size-and-student-achievement-At-a-glance/Class-size-and-student-achievement-Research-review.html

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- While class size generally matters, teacher experience and quality matters more[3]. It is better to have three exceptional teachers teaching large classes then six average teachers teaching six classes that are each half that size.

- Small class sizes are only effective if teachers take advantage of the small size and modify their instructional approaches. Many null or negative findings in this area are likely due to the fact that teachers in those small classes are not properly trained in how to make the most of their small class environments. Thus, potential gains are never realized[4].

- When the effects of class size are measured individually for each grade level, positive effects can be seen in the early grades, but they diminish as the grades increase (starting in about fourth grade). Research that does not measure or report findings by grade level are averaging across the grades, resulting in null findings, when in fact they may be masking gains in early grades[5].

This efficiency study does not second guess APS' academic strategy of having more teachers. The intent is to point out the cost of this strategy so that the APS leadership can decide if an alternate use of these funds (e.g., teacher professional development, after-school tutoring) could have a greater impact on student achievement.

The cost of a lower pupil-teacher ratio is significant in terms of staffing. If the APS determined overall teacher positions based on a ratio of 12:1 – a 15 percent increase from the current level of 10.4:1, but still below all but one of its peers - it would need 277 fewer teachers. At an average teacher salary and benefits cost of $99,801[6], this represents an investment of $27.6 million, or approximately six percent of the APS' adopted budget for FY 2012. For this level of expenditure, the APS should validate that it is getting an academic return on its investment.

Lower pupil-teacher ratios caused by smaller classes also has a significant facilities cost. Smaller classes dictate a larger number of classroom teachers, which in turn requires more classrooms. The APS has over four million square feet of space serving 22,245 students. In 2011, the Virginia Department of Planning and Budget conducted a similar efficiency review of Hanover County Public Schools (Hanover). Hanover's enrollment was 19,231 (12 percent less than APS); at the time of the review, the division had 2.7 million square feet of space (32.5 percent less than APS). The APS' peer data for square footage was not available.

The 2011 school construction report issued by School Planning and Management provides data on new schools constructed throughout the United States. Table 2.5 shows that even for the smaller schools constructed, the APS has significantly more square footage per student in its elementary, middle and high schools.

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[3] Ehrenberg, R.G.; Brewer, D.J.; Gamoran, A. & Willms, J.D. (2001). Does Class Size Matter? *Scientific American, v285,* 78-85.

[4] Ehrenberg, R.G.; Brewer, D. J.; Gamoran, A. & Willms, J.D. (2001). *Psychological Science in the Public Interest, 2(1), 1-30.*

[5] http://www.coffinseducationcenter.com/?p=218

[6] Washington Area Boards of Education Guide, FY 2012, pg. 44

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Table 2.5 Comparison of APS' square feet per student to U.S. 2011 school construction

Data	Gross Square Feet of Space per Student
Elementary	
National Median	125.0
Smallest quartile (fewer than 493 students)	133.3
APS (excludes special purpose schools)	146.5
Middle School	
National Median	149.0
Smallest quartile (fewer than 750 students)	162.5
APS (excludes special purpose schools)	241.2
High School	
National Median	156.3
Smallest quartile (fewer than 1,200 students)	134.0
APS (excludes special purpose schools)	215.9
APS Overall Space per Student (based on 4,038,673 square feet of school space)	**184.9**

Sources: The 2011 School Construction Report; School Planning and Management; APS enrollment data (Mem09-31-11.xls); APS school square footage data (69_Gross Square Feet by Location.pdf), fall 2011

In FY 2011, the APS' facility-related expenditures for maintenance, custodial, utilities, and other costs were approximately $27 million or $6.66 per square foot. If the district reduced square footage by 10 percent (3.6 million square feet), its facility-related cost would be $2.7 million lower annually than it is today.

The APS' total cost of the investment in a smaller pupil-teacher ratio (10.4:1 versus 12:1) is $30.4 million annually. Additionally, other related cost savings, such as school administration expenditures, could be achieved.

Over the next year, the APS should analyze the causes of all factors affecting its current pupil-teacher ratio and reconsider the substantial annual investment resulting from this form of educational programming. Other investment options for improving student achievement should be considered. Based on these results, long-term academic and facility plans may need to be modified.

FISCAL IMPACT

The APS should conduct its own analysis of the pupil-teacher ratio and evaluate other strategic options over the next 12 months. Any actual savings cannot be determined until the APS completes its analysis and planning efforts. Accordingly, this recommendation can be accomplished with existing resources.

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Recommendation 2-2: Reduce the span of control for instructional leadership.

An effective organization structure should logically align functions, have reasonable spans of control, and support accountability for performance. A span of control is the number of direct reports to a supervisory position.

Most of the APS' instructional programs and curriculum development activities are organized under the assistant superintendent for instruction. The division's current organization structure is presented in Figure 2.1.

Figure 2.1. Organization structure – department of instruction
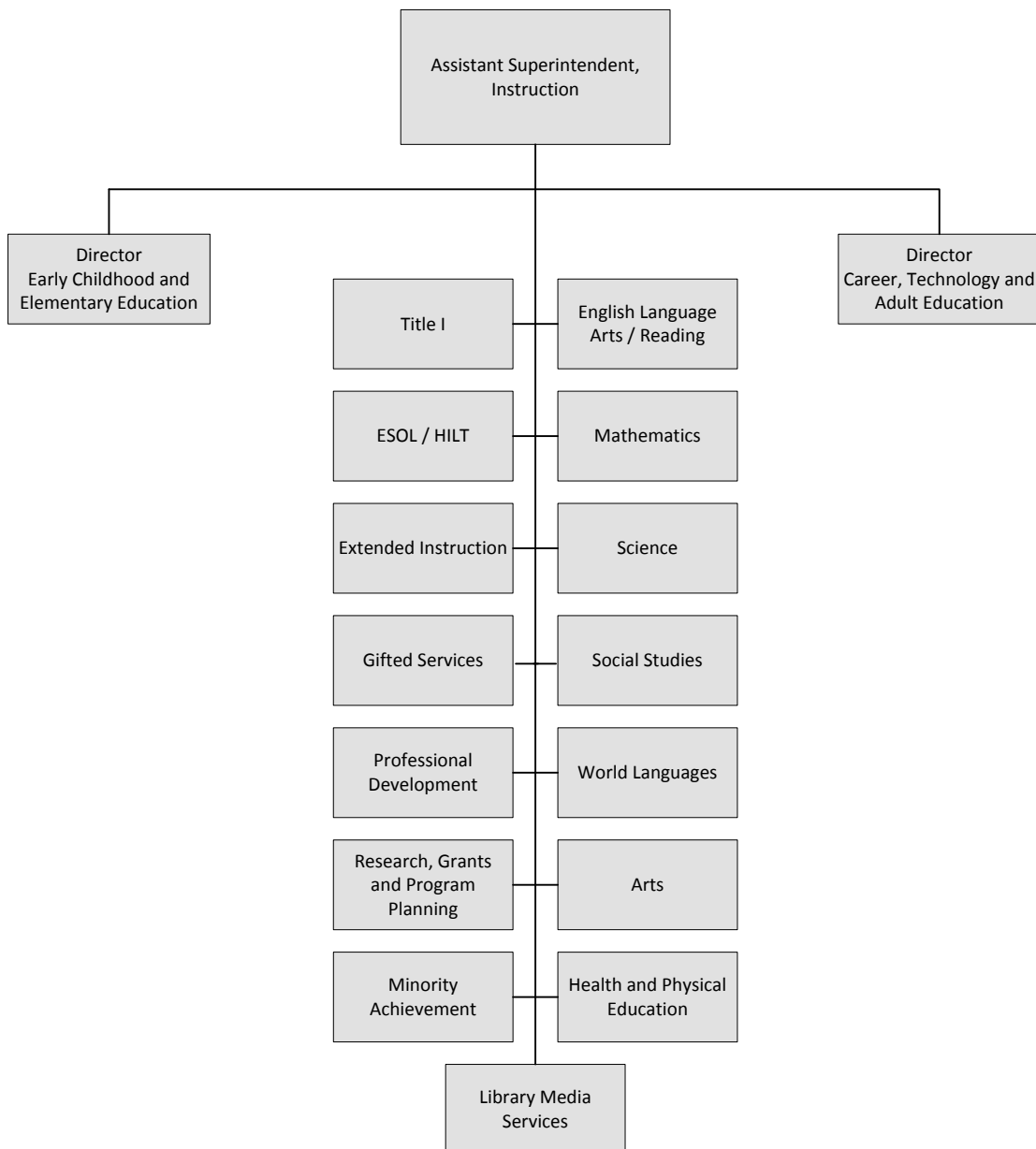
Source: Gibson Consulting Group, Inc. based on APS Fall 2011 organization chart, and clarifications from APS instructional leadership.

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The assistant superintendent for instruction has 17 positions under four broad categories reporting directly to it:

- Early childhood and elementary education (one director position)

- Instructional programs and support services (seven positions)

- Curriculum development (seven positions)

- Career technology and adult education (one director position)

- Professional development (one position)

There are two director positions overseeing the early childhood and elementary education and career technology and adult education functions. However, 15 other supervisory or coordinator functions report directly to the assistant superintendent. This represents an excessive span of control considering the size and complexity of several of the academic programs and the dissimilar nature of the curriculum development functions. This structure appears to be adversely affecting the coordination of services across the department of instruction, especially within the core curriculum areas, as well as programs such as English for speakers of other languages (ESOL) and Title I that are large in scope and have a high impact on the division's academic success.

The assistant superintendent is in need of a department leadership team to assist with the coordination and successful execution of the department's programs and services to the division. The following organizational changes are recommended:

1. Reclassify or upgrade the director of early childhood and elementary education to director of elementary and secondary education. This position will work closely with principals and other department directors to ensure a more cohesive division-wide instructional program, curriculum implementation and professional development. This position will also oversee professional development.

2. Create a director for instructional programs (e.g., student instruction and support) to provide oversight and supervision for ESOL/HILT, extended instruction, gifted services, library and media services, minority achievement, research, grants and program planning, and Title I.

3. Create a director for curriculum program offices to provide oversight and coordination of the division's curriculum development and management process to include arts, ELA and reading, health and physical education, mathematics, science, social studies, and world languages.

Figure 2.2 presents the proposed organization structure for instruction with new director positions over instructional programs and curriculum. This recommendation should support improved communication, coordination, and accountability for instructional programs and curriculum.

Figure 2.2. Proposed organization structure – instruction
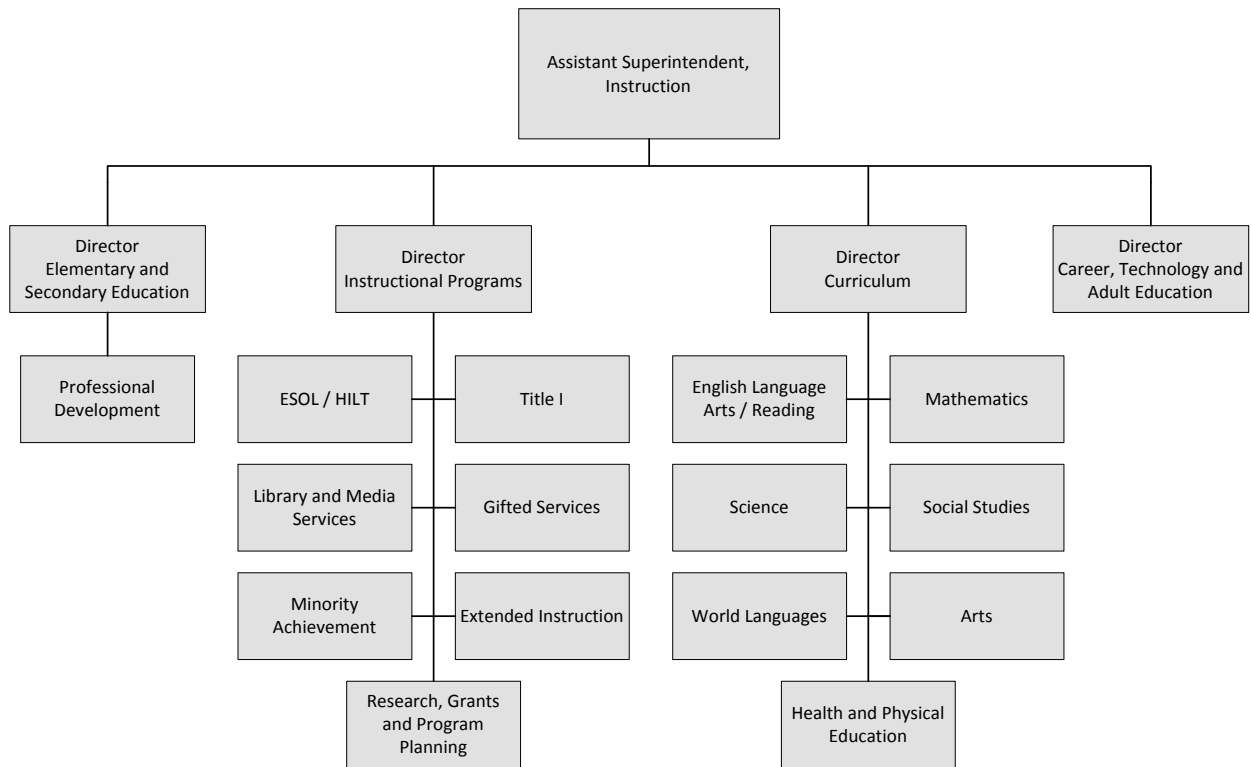
Source: Gibson Consulting Group, Inc., 2012

FISCAL IMPACT

The fiscal impact of this recommendation is not expected to exceed $350,000 per year, including benefits, based on the upgrade of one position and the creation of two ($120,000) director positions.

Recommendation 2-2	One-Time Costs/ Savings	2012-13	2013-14	2014-15	2015-16	2016-17
New director positions and position upgrade	$0	($350,000)	($350,000)	($350,000)	($350,000)	($350,000)

Note: Costs are negative. Savings are positive.

B. School Administration and Decision Making

Principals are responsible for student learning and performance, instructional leadership and supervision, and community and overall stakeholder involvement and support, among many other functions. The APS operates regular 31 schools, each under the leadership of a full-time school principal. The Virginia Standards of Quality (SOQ) provide minimum staffing requirements for school administrative and other school-based staff. The SOQs prescribe a minimum of one principal per school, except in the case where elementary enrollment is less than 300 students, in which case one half-time principal is suggested. The APS meets these requirements.

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The SOQs do not prescribe an assistant principal until a school reaches enrollment of 600 students, at which point a half-time assistant principal is suggested. However, the APS assigns one assistant principal to each elementary school regardless of size.

Two assistant principals are assigned to each middle school unless the enrollment exceeds 1,000 students, at which point a third assistant principal is assigned. Each high school has an assistant principal position for every 450 students, with an additional 0.5 full time equivalent (FTE) position when enrollment reaches 1,500 and 2,000 students. At 900 students, an elementary school is prescribed a minimum of one assistant principal.

Recommendation 2-3: Develop a site-based decision-making framework and job descriptions for instructional and school administrators.

The APS currently does not have a site-based decision-making framework or any document that defines decision-making authority between the central office and the schools. As a result, decision-making authority is not consistently applied. At the time of this review, job descriptions for principals and the assistant superintendents over instructional programs and schools were not available. The absence of these important documents is likely contributing to the lack of coordination described earlier in this chapter.

Some decisions should be made or guided centrally in order to provide consistent application and efficient operations at the schools and division administration levels. Other decisions, such as differentiation of instruction for individual students, can and should be made at the school level. Documentation of a single decision-making framework will help ensure that all principals and division administrators understand the ground rules for making certain decisions. Adopting a decision-making framework will ensure its consistent use by all positions involved in decision-making. At a minimum, decisions should be identified in the following four categories:

1. **Site-based decisions not requiring division administration approval**. These are decisions that can be made or approved independently by principals or their designees without intervention or approval by the division administration. These decisions might include teaching strategies used, certain disciplinary actions, and assignments of special projects to staff.

2. **Site-based selection from a list of division-provided options**. Examples of selection lists might include computer and instructional software available for purchase. Schools can be provided choices of computer brands and software as long as they meet minimum specifications established by the division administration technology function. Making purchases of items that are not on the approved list could result in the inability of the technology function to effectively support the hardware or software. Selecting from a list provides decision-making flexibility within a framework that helps ensure division-wide efficiency and effectiveness.

3. **Site-based decisions requiring division administration approval**. Certain decisions, such as hiring or terminating school staff, should require the approval of the division administration, as

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the human resources department should be involved in these decisions to ensure compliance with state and federal laws and division policy.

4. **Division administration decisions**. There are certain decisions that should be made by division administration and enforced at all schools. A single standardized curriculum and the school bell schedule are examples of decisions that should be established, or standardized, by division administration. In making these decisions, however, division administration should solicit input from schools to ensure that decisions make sense for the schools, as well as the division. Obtaining stakeholder input in the decision-making process is discussed later in this section.

In developing a site-based decision-making framework, the authority – using the four options above – should be defined for the types of decisions as shown in template provided in Table 2.6.

Table 2.6. Site-based decision-making framework – recommended template

Decision	(1) Principal Decision	(2) Principal Choice	(3) Division Approval	(4) Division Decision
Curriculum / curriculum guides				
Ability to re-allocate instructional and/or non-instructional staff to meet needs identified by school				
Benchmark testing				
Course offerings (secondary)				
Identification of professional development needs				
School calendar				
School bell schedule				
Class size				
Bus routes				
Cafeteria schedule				
Authority over custodians and how they spend their time				
Authority over food service workers and how they spend their time				
Work schedules for any categories of staff				
Number of work days per year for any categories of staff				
Block scheduling (secondary)				
Terminating school staff				
Establishing staffing needs				

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Decision	(1) Principal Decision	(2) Principal Choice	(3) Division Approval	(4) Division Decision
Establishing non-staff budget needs				
School facility renovations				
Student discipline – code of conduct				
Student activity funds – software / processes				
Class rank determination / computation				
Purchasing decisions as they relate to teachers' or principals' authority to select vendors, versus using the division administration purchasing department or only pre-approved vendors				
Computers / servers				
Instructional software purchases				
Hiring school staff				

Source: Gibson Consulting Group, Inc., 2012

In implementing this recommendation, division administration should first conduct a brief online staff survey to gauge perceptions of decision-making authority based on the list of decisions included in Table 2.6, and any additional decision areas desired by division management. A committee of eight principals (four elementary and four secondary) and instructional division directors should be convened to review the survey results and develop the decision-making framework.

Job descriptions for all instructional and school administrative positions should be developed in conjunction with the decision-making framework. The APS can use its existing templates for other job descriptions, and should also incorporate applicable elements of the decision-making framework.

FISCAL IMPACT

The division is expected to need outside assistance ($25,000 in consulting or contractor fees) in implementing this recommendation. In addition, approximately 16 school and division administrators will need to dedicate approximately 20 hours each to the development of the framework and job descriptions. The outside consultant/contractor will serve as an independent facilitator for the committee and be primarily responsible for developing the decision-making framework materials.

Recommendation 2-3	One-Time Costs/ Savings	2012-13	2013-14	2014-15	2015-16	2016-17
Develop site-based decision-making framework	($25,000)	$0	$0	$0	$0	$0

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C. Curriculum Policies and Management

The APS uses a curriculum that is driven by the Virginia SOL. The division's curriculum and instruction department is responsible for maintaining and updating the curriculum, monitoring classroom instruction, analyzing student achievement data, providing professional development and coaching to teachers, and delivering other direct services to schools.

Commendation: Curriculum area staff is actively supporting teacher recruitment and observation.

Hiring and supporting the best teachers is critical to the division's academic success. The office of curriculum's supervisors are actively involved in supporting the campus principals and the division's personnel services by screening teacher applications for content area knowledge and expertise (particularly at the secondary level) and by participating in the interview and vetting process of potential new hires. Additionally, content specialists observe all new hires in the classroom and participate in the evaluation process.

Recommendation 2-4: Standardize elements of the division's curriculum.

The APS maintains a documented curriculum but lacks a consistent presentation of the related materials for use by teachers. The APS is currently updating curriculum and enhancing the web pages for all content areas based on changes in the SOLs. Additionally, content supervisors annually engage in an SOL item analysis to determine parts of the curriculum that require curriculum enhancement, revision, or adaptation.

On its web site, the APS currently provides different elements of curriculum depending on the subject area. One subject area, social studies, has pacing guides, sample units of instruction, sample lessons, sample assessments, benchmark assessments, supplemental resource materials, and identified priority standards. Other subject areas, such as mathematics and science, have only a subset of these elements. Table 2.7 maps the curriculum elements against four subject areas.

Table 2.7. The APS curriculum elements by subject area

Content Area	Social Studies	Reading/ ELA	Mathematics	Science
Pacing guides (includes alignment to adopted materials)	X	Limited to adopted series	X	X
Sample units of instruction	X			
Sample lessons	X			
Sample assessments	X			

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Content Area	Social Studies	Reading/ ELA	Mathematics	Science
Benchmark assessments/ progress monitoring	Grades 6-12	PALS/ DRA elementary only	K-8 quarterly	
Supplemental resource materials	X	X	X	X
Priority/power standards identified	X			

Source: The APS curriculum documentation, fall 2011

Input from school principals during focus groups mirrored the availability of curriculum and assessment resources, as illustrated in Table 2.7:

The social studies department is the most organized I've ever worked with. The guidelines are clear and very organized. Curriculum is designed around understanding by design – helps you uncover the enduring understandings – which helps teachers be efficient. If other areas could adopt this approach it would be very beneficial.

Curriculum departments, particularly ELA, operate as silos. They specialize by the various programs, with the result that a reading teacher in the department may not know how to answer questions about the spelling program.

The division uses Blackboard to house their curriculum and curriculum-related documents. Teachers first access the system, and then they can access the individual content area sites. However, there is not a consistent design for each of the core content sites in terms of organization of materials and consistency of content. This is problematic for teachers, particularly for elementary teachers, who teach multiple content areas.

The division has purchased CORE K-12 as a division-wide benchmark system and is in the process of piloting a roll out to middle school reading/ELA and math teachers.

There is no master schedule for updating curriculum guides, and updates that have occurred are limited to those that are related to changes in the SOL's. Additionally, there was no evidence that student performance data is analyzed to evaluate the curriculum for weaknesses and strengths.

The APS' department of instruction should establish a consistent design across all of the content areas to create a more cohesive and efficient experience for the teachers and school administrators. The social studies department's approach should be set as the standard for all content areas. Combined with the organizational changes recommended earlier in this chapter, this will help provide a consistent, high-quality curriculum across the division.

FISCAL IMPACT

This recommendation can be accomplished through the additional staff resources provided under the organization recommendations made earlier in this chapter.

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D. Special Programs

Because the special education function at the APS is being reviewed through a separate comprehensive study, only gifted services and programs for limited English proficient (LEP) students were included as part of this review.

Despite the organizational challenges described earlier in this chapter, the English for speakers of other languages (ESOL) program has been effective in working with curriculum and special education staff through the following initiatives:

- Implementation of high intensity language training (HILT)

- Capacity development at the division office and campus level in sheltered instruction observation protocol (SIOP)

- Joint funding across multiple programs for coordinated SIOP training

- Development of professional development programs in the core content areas that includes collaboration with ESOL/HILT for modifications and adaptations

These initiatives should result in improved student outcomes over the next few years.

Commendation: The APS is implementing procedures to improve minority representation in the gifted services program.

The student composition of the APS' gifted services program differs from that of the overall student population in terms of ethnicity. Forty-four percent (44%) of all the APS' students are White, yet 62 percent of students in the gifted services program are White. Table 2.8 presents the ethnicity distribution of all students at the APS and gifted services students at the APS.

Table 2.8. APS ethnicity distribution, division-wide and gifted services program, 2010-11.

Ethnicity	All Students		Gifted Services Students	
	Number	Percent (of all students)	Number	Percent (of all GS)
White	9,535	44.4%	2,278	62.3%
Hispanic	6,353	29.6%	582	15.9%
Black or African American	2,462	11.5%	227	6.2%
Asian	2,076	9.7%	306	8.4%
Two or more races	997	4.6%	254	6.9%
American Indian/Alaska Native	45	0.2%	5	.1%
Native Hawaiian/Pacific Islander	17	0.1%	3	.1%
Total	**21,485**		**3,655**	

Source: APS worksheet: statistical_gifted_grade_level_countywide

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The APS has incorporated several strategies to address the under-representation of minority students in the gifted services program. The most significant activities referenced in the division's strategic plan and the superintendent's proposed FY 2012 budget are as follows:

- Development of a K-12 differentiated curriculum for the gifted online course in the division's Blackboard course management system.

- Development of a nine workshop series on gifted education to train the APS' teachers in gifted instructional strategies.

- Training for the APS' staff on culturally competent practices and how to recognize the various ways that students present themselves as gifted.

- Revising their current battery of assessments for gifted services identification process to include a reasoning/non-verbal assessment.

These initiatives represent best practices and should result in a program with an improved balance of ethnicity representation.

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Chapter 3 – Human Resources

Introduction

This chapter provides recommendations related to four aspects of human resources (HR):

A. Organization and Management
B. Policies and Procedures
C. Staff Development
D. Compensation and Classification Systems

Although recruitment, hiring and retention were examined as part of this study, no significant recommendations were identified.

HR management is an important area to examine in an organization review of this nature, as more than 75 percent of all financial resources in public education are devoted to labor expenses. As financial resources for school divisions become increasingly restricted, HR management is an area that is often looked to for change, primarily because the fiscal impact can be significant.

HR management involves recruitment, selection, hiring, development, compensation (salary and benefits), retention, evaluation, and promotion of personnel within the division, and compliance with equal employment opportunity statutes and other federal and state laws.

When it comes to cost per pupil, the APS' spending is consistently higher than the peer average – at 33.4, 35.2 and 40.6 percent in FY 2010, FY 2011 and FY 2012, respectively. In each year illustrated, the APS is the highest among the peer divisions, as is illustrated in Table 3.1.

Table 3.1. Cost per pupil

School Division	FY 2010 Approved	FY 2011 Approved	FY 2012 Approved
Alexandria	$18,003	$16,983	$17,618
Fairfax	$12,898	$12,597	$12,820
Falls Church	$18,116	$16,729	$16,309
Loudoun	$11,997	$10,833	$11,014
Manassas City	$12,192	$11,351	$11,478
Manassas Park City[1]	n/a	n/a	$9,888
Montgomery County, MD[2]	$15,490	n/a	$14,776
Prince George's County, MD	$12,267	$11,611	$11,753

School Division	FY 2010 Approved	FY 2011 Approved	FY 2012 Approved
Prince William	$10,383	$9,577	$9,852
Division Average	**$13,918**	**$12,812**	**$12,834**
Arlington	$18,569	$17,322	$18,047

Source: Washington Area Boards of Education Guide, FY 2012, pg. 34

[1] Manassas Park City Public Schools started participating in WABE Guide in FY 2012

[2] Montgomery County Public Schools (MD) did not participate in the WABE Guide in FY 2011

Overall, the APS maintains smaller class sizes than most of its peers (see Table 3.2), with the second highest number of authorized teachers per 1,000 students of its peers. In secondary/high grades, the APS has the lowest students per classroom teachers among all peers (19.9:1) and the third lowest for elementary (20.3:1) and middle/intermediate (20.6:1).

Table 3.2 Teacher staffing levels

School Division	FY 2012 Authorized Teachers per 1,000 Students[1]	FY 2012 Students per Classroom Teacher[2]		
		Elementary	Middle / Intermediate	Secondary / High
Alexandria	98.2	18.1	19.9	21.7
Fairfax	82.7	21.5	24.4	25.1
Falls Church	89.2	22.6	24.7	24.3
Loudoun	76.2	23.3	23.1	24.3
Manassas City	79.4	21.8	20.5	20.7
Manassas Park City	66.0	18.6	29.1	27.7
Montgomery County, MD	77.7	22.6	28.0	29.5
Prince George's County, MD	65.9	19.8	23.1	31.2
Prince William	68.6	22.5	28.3	28.8
Peer Division Average	**78.2**	**21.2**	**24.6**	**25.9**
Arlington	95.8	20.3	20.6	19.9

Source: Washington Area Boards of Education Guide, FY 2012, pgs. 29, 34, 35

Notes: Chart excludes teachers and students in pre-K, kindergarten, alternative schools, and self-contained special education

[1] Authorized teacher includes teacher-scale positions, which includes classroom teachers and other teachers such as ESOL/ESL, librarians, reading, coaches, mentors, music, art, physical education, etc.

[2] Classroom teachers are positions used to determine class size

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With the exception of school-based educational specialists, the APS has a higher number of school-based staff per 1,000 students than the peer average. Staffing levels for these positions are shown in Table 3.3.

Table 3.3. School-based staff per 1,000 students

School Division	School-based Administrators Per 1000 Students	Educational Specialists Per 1000 Students	Instructional Assistants Per 1000 Students	Non-Management/ All Others Per 1000 Students
Alexandria	3.8	13.4	14.9	14.4
Fairfax	3.6	2.8	16.2	15.3
Falls Church	4.6	5.8	27.4	25.1
Loudoun	4.2	1.6	17.7	15.2
Manassas City	3.5	2.8	15.7	16.8
Manassas Park City	3.0	2.7	8.7	11.7
Montgomery County, MD	3.3	1.9	15.9	12.9
Prince George's County, MD	4.9	1.4	9.7	13.0
Prince William	3.3	0.9	8.1	13.5
Peer Division Average	**3.8**	**3.7**	**14.9**	**15.3**
Arlington	4.7	1.5	23.9	19.3

Source: Washington Area Boards of Education Guide, FY 2012, pgs. 34, 35

Note: Entitlement grant positions are included here although these positions are not part of the school operating fund

Table 3.4 provides a summary of HR recommendations and resulting fiscal impacts over the next five years.

Table 3.4. Fiscal impacts of recommendations

Recommendation	Priority	One-Time Cost/ Savings	2012-13	2013-14	2014-15	2015-16	2016-17	Total Fiscal Impact
Organization and Management								
3-1. Reorganize HR and shift data entry	High	$0	$0	$0	$0	$0	$0	**$0**

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Recommendation	Priority	One-Time Cost/ Savings	2012-13	2013-14	2014-15	2015-16	2016-17	Total Fiscal Impact
3-2. Place more focus on communication	Medium	($2,400)	$0	$0	$0	$0	$0	**($2,400)**
Policies and Procedures								
3-3. Reduce duplicative data entry	High	$0	$0	$0	$0	$0	$0	**$0**
3-4. Monitor teacher attendance and sub reasons	Medium	$0	$0	$0	$0	$0	$0	**$0**
Staff Development								
3-5. Provide equitable staff development	Medium	$0	$0	$0	$0	$0	$0	**$0**
Compensation and Classification Systems								
3-6. Update job descriptions and compensation plans	High	(10,400)	$0	$0	$0	$0	$0	**$0**
Net Fiscal Impact		**($12,800)**	**$0**	**$0**	**$0**	**$0**	**$0**	**($12,800)**

Note: Costs are negative. Savings are positive.

A. Organization and Management

The HR organization at the APS – referred to as "personnel services" - includes the benefits and payroll functions, as well as traditional HR functions such as staffing, employee management, and employee relations. The division manages the employee assistance program (EAP) on behalf of the division and the county – with the county contributing to the cost of running the program.

Seven staff members report directly to the assistant superintendent for personnel services; an executive administrative assistant, a payroll supervisor (with five employees), director of employee relations (with four employees) and EAP (with four employees), the coordinator of recruitment (with no direct reports) who works less than full-time, the supervisor of employment services (with eight employees), and a project manager (with no direct reports) who works less than full-time. When the coordinator of recruitment was reduced to 0.6 full-time equivalents (FTEs), an additional temporary, full-time clerical specialist was hired as a receptionist in the Arlington Education Center with the resulting savings.

The benefits staff and the employment specialist who manages substitutes report to the director of employee relations and eight employees report to the supervisor of employment services.

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Figure 3.1. Current APS personnel services organization chart
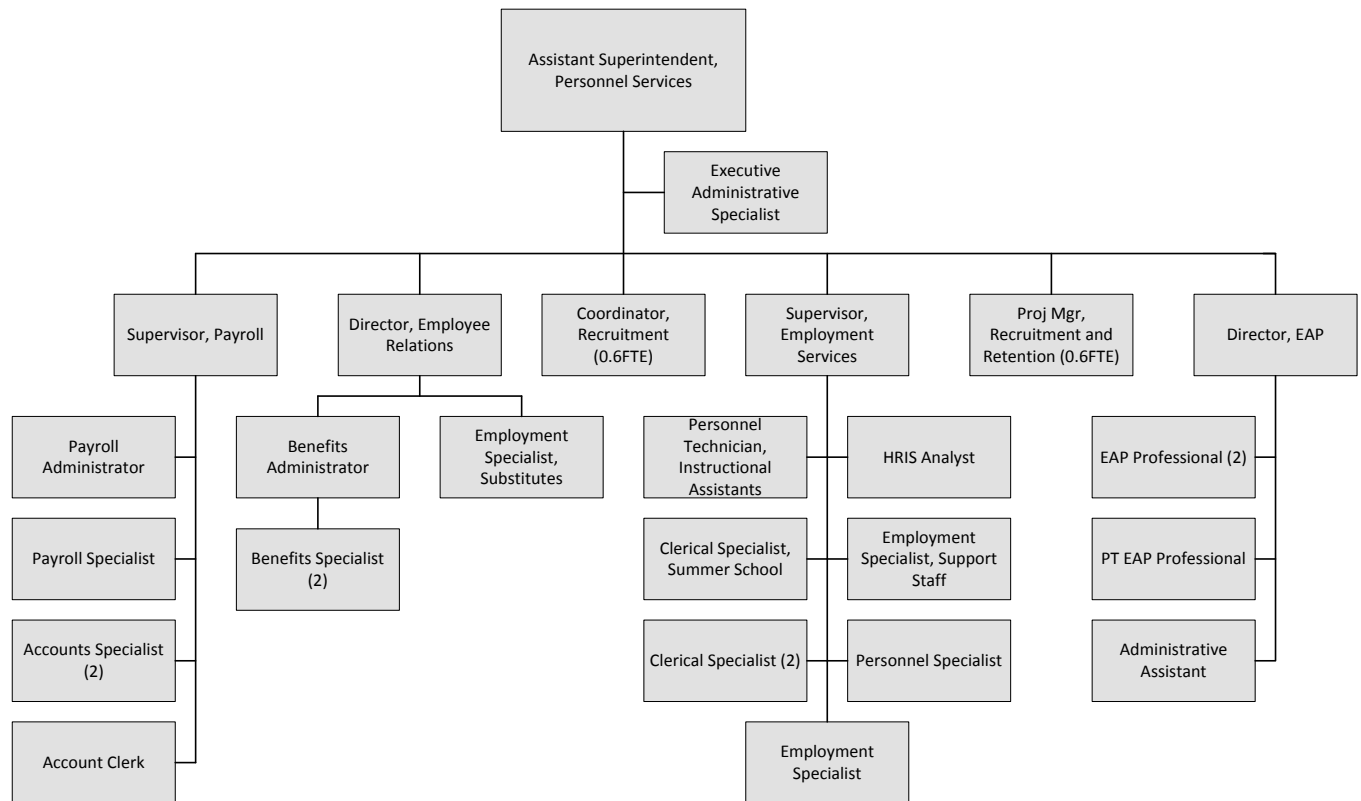
Source: The APS personnel services department and Gibson Consulting Group, Inc.

Recommendation 3-1: Reorganize the personnel services department and shift the data entry of demographic data to the respective employment specialists.

The current personnel services organization chart is not logically aligned. Employees performing the same type of work report to managers who have dissimilar responsibilities. For example, the employment specialist for substitutes as well as two benefits employees report to the director of employee relations, while all other employment specialists report to the supervisor of personnel services.

Job titles, in some cases, indicate overlapping duties. For example, there is a project manager for recruitment and retention, as well as a coordinator of recruitment. The project manager for recruitment and retention does not handle recruitment and retention, rather this position has the primary responsibility for teacher licensure and interfacing with the Virginia Department of Education, while the coordinator is responsible for recruitment. None of the employees interviewed indicated primary responsibility for retention.

Additionally, tasks which could be dispersed to several employees are concentrated on one position. One personnel services employee is responsible for entering all new employee demographics and pay (except for substitutes) into Oracle. This can be difficult during peak hiring times and delays the availability of employee information in Oracle for reporting.

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Following is the recommended organization chart for the personnel services department.

Figure 3.2. Recommended APS HR organization chart
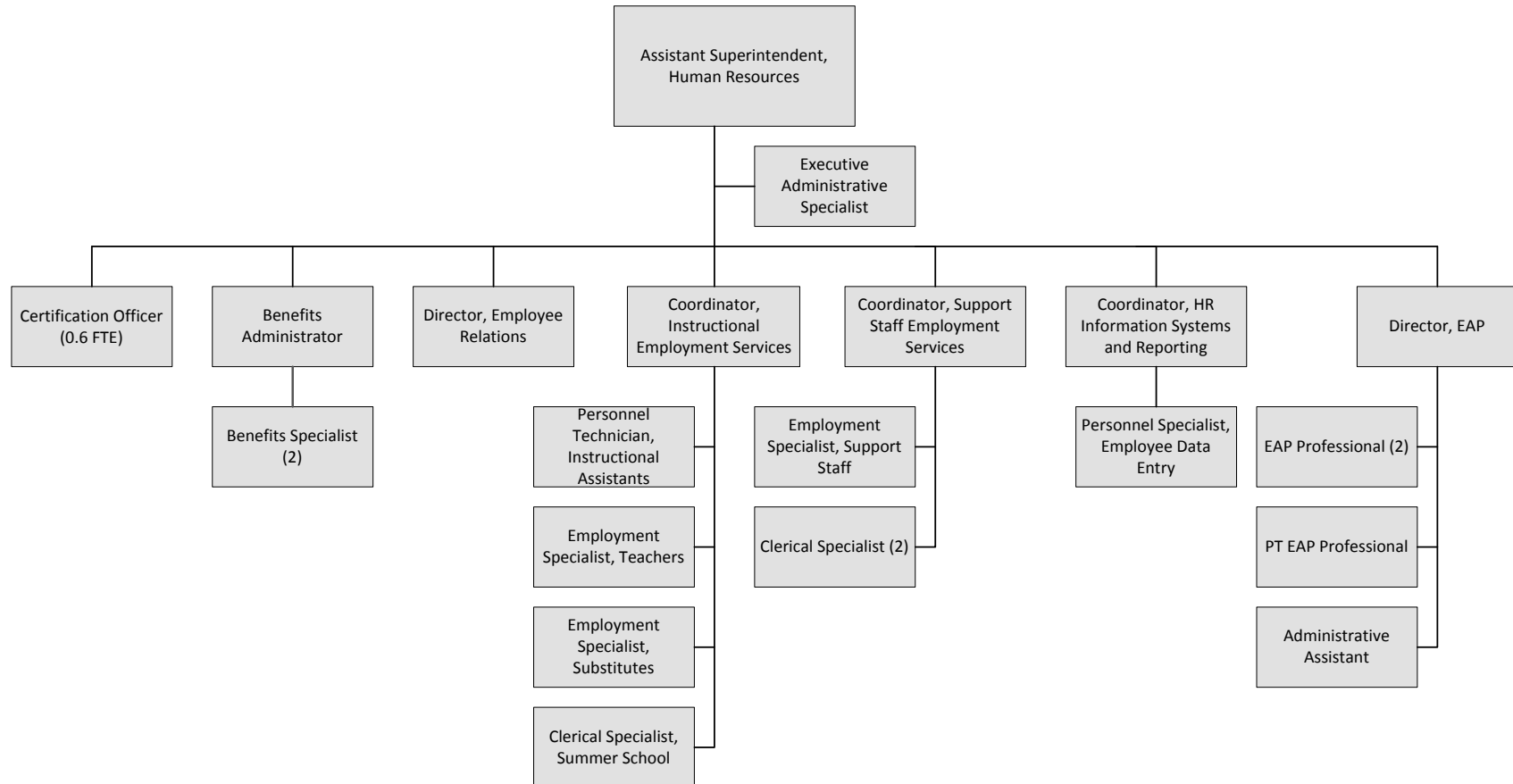
Source: Gibson Consulting Group, Inc., 2012

Contained in the financial management section of this report is a recommendation (5-2) to place the payroll group in the finance department. In addition to that organizational change, the review team recommends a slight reorganization of the department and some realignment of duties.

First, the division should consider changing the name of the department from "personnel services" to "human resources" to reflect the industry norm – an idea that the assistant superintendent of personnel services supports. Personnel management is typically thought to represent purely administrative and routine activities. The term "human resources management" emerged in the 1980s and reflected the shift from administrative management to a more strategic approach to supporting the organizations staffing and employment needs. In addition, in 1989, the premier global professional organization for personnel management, the American Society for Personnel Administration, changed its name to the Society for Human Resources Management (SHRM).

Next, titles of positions, as well as job descriptions (see recommendation 3-6), in HR should be adjusted to reflect actual duties and responsibilities. For example, the project manager of recruitment and retention is primarily responsible for certification and highly-qualified compliance and should be designated as such.

Department leadership has indicated that the newly hired benefits administrator will report directly to the assistant superintendent in order to free the director of employee relations to focus on employee relations responsibilities. Additionally, the director of employee relations should assume responsibility for reasonable accommodations related to employment from the current coordinator of recruitment. The coordinator of recruitment may continue to respond to requests for reasonable accommodation related to the application process.

In order to provide sufficient supervision in the personnel services department, as well as an equitable distribution of supervisory duties and support for applicants and employees, the recruitment and staffing duties for the APS should be split between two coordinator-level positions. Gibson recommends that the current coordinator of recruitment position be renamed as a coordinator for instructional employment services, and should supervise instructional recruitment, staffing and employment services, including all those related to teachers, substitutes, instructional assistants and summer school.

The current supervisor of employment services position should focus on support staff recruitment, staffing and employment services, as well as manage the clerical assistant(s).

The HR information systems (HRIS) analyst should report directly to the assistant superintendent in order to better manage the priorities and completion of incoming requests and special projects at a department level. In order to coordinate systems issues, solutions and resulting changes to complex data entry, this position should manage the personnel specialist responsible for entering complex pay data into the HR/payroll system.

As part of the reorganization, the data entry of demographic and basic employee information should be shifted to the employment specialists responsible for the application process for the types of employees they currently process. Although the data entry of the demographic and basic information would shift to the employment specialists, the personnel specialist would continue to enter new employees' pay information, as well as process transfers and terminations.

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FISCAL IMPACT

The implementation of this recommendation will not have a fiscal impact and can be accomplished with current staff.

Recommendation 3-2: Place more focus on internal communication within personnel services and to customers of personnel services in order to reduce the number of unnecessary calls and visits to the department.

Although metrics are not currently tracked regarding call and visitor volume in the department, personnel services employees report that a high percentage of their time is spent answering calls from employees, up to 30 percent of the time for some personnel services staff. Relative to the number of employees, this should not be the case.

High call and visitor volumes indicate that current communications may not be clear to all employees or they do not provide appropriate information in terms of content and/or volume. For example, some staff stated that the access website for the application tracking system (WinOcular) is not clearly worded and links do not always take the user to where he/she needs to be. Additionally, personnel services staff respond to frequent 'lost password' requests from applicants.

Additionally, within personnel services, the clerical specialists responsible for answering general calls and greeting employees who visit the department do not receive adequate information to reduce the calls that must be forwarded to personnel services staff.

Each personnel services staff member should document answers to commonly asked questions for his or her area and provide them to the clerical specialists. This document should be updated at least monthly or anytime staff anticipates that employees will call regarding a specific issue or process that is occurring. This will allow the front desk staff to answer basic questions without forwarding the calls or visitors to other personnel services staff.

Employees who perform front-desk duties should act as the first line of defense in terms of answering questions and keeping unauthorized staff out of areas like the benefits office, where sensitive data may be visible.

In addition to providing information to front desk staff when calls are anticipated, the same information should be made available to employees. For example, a frequently asked questions (FAQ) link could be placed on the applicant tracking software welcome screen; open enrollment FAQs could be emailed to all employees; and other targeted messages could be provided when personnel services staff detect an increase in calls for similar reasons or information.

Based on feedback from employment specialists, links and instructions within the WinOcular application website need correction and should be addressed with the vendor. In order to reduce administrative tasks related to resetting applicant passwords, the division should request that this common functionality be provided on the WinOcular sign-in page.

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Implementing these changes will allow personnel services staff to spend more time on strategic issues, rather than transactional processes and reactionary activities.

FISCAL IMPACT

Although a quote for the addition of the password reset functionality has not been requested from Combined Computer Resources, Inc. (the vendor of WinOcular), a rough estimate using 16 programming hours at a rate of $150 per hour – resulting in a cost of $2,400 - would be reasonable.

Other recommended items in this section can be accomplished with no fiscal impact, utilizing current staff.

Recommendation 3-2	One-Time Costs/ Savings	2012-13	2013-14	2014-15	2015-16	2016-17
Implement password reset capability in WinOcular	($2,400)	$0	$0	$0	$0	$0

Note: Costs are negative. Savings are positive.

B. Policies and Procedures

There are many manual, paper-based processes that are performed in personnel services. For example, online applications are printed from WinOcular and placed in a paper folder that is passed around to other personnel services, benefits and payroll staff in order to notify all parties involved in processing a newly hired employee. Other manual and paper-based processes are: performance evaluations; insurance check processing for retirees, employees on leave, and employees whose checks will not cover insurance deductions; leave-request processing; exit interviews; and family and medical leave processing.

There are some instances where paper is distributed, despite the availability of the data online (e.g., the practice of mailing 300 paper copies of the upcoming year's pay plan when the plan is available online).

Additionally, there is much duplicative data entry of data into Microsoft Excel spreadsheets and Access databases within the personnel services department. Some examples are shown in Table 3.5.

Table 3.5. External data used in personnel services

Contents	Format	Creator/Owner	User
Job vacancies	Excel	Personnel services	Personnel services
Licensure	Access	Personnel services	Personnel services
New hire teacher information	Access	Personnel services	Staff development
School staffing/conversions	Excel	Personnel services	Personnel services
Substitutes	Excel	Personnel services	Personnel services

Source: The APS personnel services interviews, fall 2011

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Some of these external data files are used to track information that is not currently housed in any information system, while others contain duplicative information that is already tracked in an information system. In some cases, the same data are hand-entered into multiple systems. For example, new teacher data are entered into Oracle, the substitute management system, and the Access database of teachers that is maintained by HR for the professional development office in the department of instruction.

Although personnel services staff enter newly hired teacher information into an Access database for the express purpose of informing the professional development office of these employees, staff development employees report that they do not receive the data necessary to best deliver services to new teachers who are hired by the APS.

Staff reported that they do not always know when newly hired employees come on board with the division, and within the Access database, it is sometimes difficult to tell if the teacher is a first-year teacher or if the teacher had prior experience as a teacher or assistant. Additionally, all notifications provided by professional development to new teachers (prior to orientation) are performed manually, using letters and "snail mail" because email addresses are not transferred from WinOcular to Oracle or Access during the hiring process.

Recommendation 3-3: Reduce duplicative data entry into spreadsheets and databases.

Paper-based processes should be reduced, where possible. Staff should continue to examine processes within the framework devised by the American Productivity and Quality Center (APQC)[1], with an emphasis on decreasing paper and manual processing, and accomplishing processes within the administrative system, rather than outside of it.

Duplicate entry of data in Excel and Access should be eliminated, where possible. First, personnel services department staff should perform a study to catalog and analyze each spreadsheet and database that is utilized, determine the purpose of the external data and why staff instituted the database or spreadsheet, and identify where the same information is duplicated.

Once this study is complete, the HRIS analyst and the Oracle support staff in the information services department (IS) should conduct an analysis on available systems to determine if some of this information can be converted and tracked within the available systems.

Additionally, security settings for Oracle should be examined to determine if professional development employees in need of newly hired teacher information can be provided security access to the specific employees and fields that are required to accomplish professional development objectives.

Data moving between systems, such as from WinOcular to Oracle or from Oracle to the substitute management system, should be examined to determine if IS staff can create automatic data transfers for some information in order to eliminate the need for duplicate data entry.

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[1] www.apqc.org

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Lastly, the professional development office should receive automated notification of newly hired teachers, similar to that which is provided to IS in order for that department to set up user accounts. This will provide more timely notification than the current process of weekly notifications.

FISCAL IMPACT

Although the implementation of this recommendation can be accomplished with current staff, it will likely have a positive fiscal impact over time – in terms of an increase in efficiency and time spent on tasks other than duplicative data entry.

Recommendation 3-4: Begin monitoring teacher attendance and tracking reasons that substitutes are placed in positions.

Substitute hours have increased by 20.2 percent over the last four years – from 162,036 hours in 2007-08 to 194,807 hours in 2010-11. Although the substitute system has the capability to track reasons for absences, the reasons that teachers request substitutes are not consistently tracked. Consequently, this increase in hours cannot be analyzed or addressed.

Additionally, there is no one APS employee who has been given the responsibility for monitoring or reporting on employee absences. The personnel services department typically receives information about absences in two situations: from principals regarding excessive absences, or from the EAP regarding employees needing time off.

According to a study performed by Mercer[2] during the summer of 2008, the direct and indirect costs of absences can be estimated at 36 percent of total payroll. Direct costs include the benefits paid to the employee during the absence, as well as any disability benefits provided by the employer or the insurance carrier. Indirect costs indicate the impact to the organization as a result of the absence. Examples are:

- The absent employee's work that is put off until he or she returns

- The employee's absence affects coworkers

- The absent employee's work is "covered" by coworkers, a substitute, or the employee's supervisor

Additionally, researchers at the Center for American Progress[3] have reported that teacher absences have a negative effect on student achievement, particularly in high-poverty schools where higher numbers of teacher absences are most likely to occur.

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[2] http://www.shrm.org/multimedia/webcasts/Documents/1008absenteeism.pdf

[3] http://www.americanprogress.org/issues/2008/10/pdf/teacher_absence.pdf

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Given the cost of absenteeism and the relationship between teacher absences and student achievement, the APS should explore ways to decrease teacher absences on instructional days, thus reducing the usage of substitutes.

The employment specialist for substitutes is currently working with the substitute management vendor, eSchool Solutions, in order to upgrade the system to the current version and to begin utilizing the hosted version of the software as a service (SaaS). Once this is done, the APS should begin monitoring, reporting and analyzing attendance, as well as tracking reasons for placing substitutes, in order to determine the reason that substitute hours are increasing.

FISCAL IMPACT

The implementation of this recommendation will not have a fiscal impact and can be accomplished with current staff.

C. Staff Development

Recommendation 3-5: Fully utilize the ERO system in order to provide staff development equitably to all employee groups and automate the tracking and reporting related to performance evaluation gaps and professional development.

Professional Development Tracking System

The APS uses online, vendor-hosted software – referred to as the Electronic Register Online (ERO) - to track professional development. However, this system is not utilized to the fullest extent possible. Currently, the staff development office compares some data for employees in the ERO system and the human resources (HR) system and makes manual corrections to the ERO. This is necessary because the data connection between the ERO and the HR system is currently not working correctly and is resulting in inaccurate data in the ERO system.

The ERO system allows employees to register for professional development and instructors to take attendance online. The system allows professional development taken both within and outside of the division to be entered and tracked in the system, but the APS currently enters only a limited subset of these training events into the ERO for tracking purposes.

Although the ERO system allows for online attendance tracking, all training attendance is presently taken using paper sign-in sheets, which are then hand-entered into the ERO by a member of the staff development office.

This system should be utilized fully, for all employees and training events, in order to provide more comprehensive information to supervisors and division leadership.

Professional Development by Employee Group

Training participation data from the ERO was provided by the APS. Based on the data provided, it appears that staff development participation for technical and administrative employees and clerical

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support staff lags behind the participation of other groups of employees (as shown in Table 3.6). However, it is unclear if this support staff participation is complete since the APS does not enter all training events into the ERO.

Table 3.6. External data used in personnel services

Scale	Total Employees	Total Hours Completed	Average Hours per Employee
P Scale – Principal and Administrative	120	2,151.5	17.9
A Scale – Instructional and Other Assistants	548	6,606.5	12.1
E Scale – Technical and Administrative	184	448.5	2.4
G Scale – Clerical Support Staff	277	29.0	0.1

Source: Data item 21_Prof Dev Registration Report from the APS, fall 2011

Interviews and focus groups with support staff indicated that although personnel services staff indicated that there are professional standards established for support staff (A, G and X scales) that provide stipends in exchange for completing coursework, not all support staff are aware of this.

Staff indicated that professional development is paid for by the division only if it is relevant to the employee's current position, and that the personnel services department does not provide career planning assistance to support staff. Further, staff interviewed suggested that support staff training at the APS is an afterthought, as their positions do not specifically require professional development. However, the APS does have a scholarship program designed to upgrade the skills of instructional assistants so that they can become licensed teachers; this program is part of the APS' succession planning initiative.

The division should place more focus on communication regarding professional standards, stipends, and staff development opportunities for support staff.

Professional Development and Performance Evaluations

Currently, improvement areas that are assigned to employees during their performance evaluations are not documented or linked to professional development that is offered by the division or any other entity. The main reason for this is the manual nature of the evaluation process. This deficiency makes it difficult to aggregate information to identify common gaps that can be used when developing future professional development.

Further research regarding the functionality of the ERO system indicates that it can be used to create performance plans at an individual, school and division level. Using this functionality, the division could begin tracking specific developmental training that is assigned as a result of the employees' performance evaluations. However, before this can be accomplished, all training event and employees should begin to be tracked within the ERO system.

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Additionally, HR leadership should explore ways to automate the performance review process and capture staff development recommendations from managers. Ultimately, the professional development offered should be closely tied to the needs of staff.

FISCAL IMPACT

The implementation of this recommendation will not have a fiscal impact and can be accomplished with current staff.

D. Compensation and Classification Systems

Job Descriptions

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

Job descriptions at the APS are not up-to-date. Eighty-eight job descriptions were provided to the review team, but not all appear to be active positions, nor were all active positions provided. None of the job descriptions indicated the Fair Labor Standards Act (FLSA) status of "exempt" or "non-exempt" from overtime, and 48 did not indicate the pay grade of the position. Additionally, some job descriptions had not been updated in as long as 14 years, with the average age of job descriptions provided of six and one-half years.

Salaries

Salaries for some employee groups at the APS are consistently higher than District of Columbia area salaries, as reported by the Bureau of Labor Statistics (BLS) within the United States Department of Labor in its April 2010 survey[4]. The following table illustrates the average hourly rates for the DC area according to the BLS survey, the average APS hourly rates, and the percent difference between the two.

Table 3.7. Bureau of Labor Statistics' hourly rates compared to the APS'

Title	BLS Hourly*	APS Hourly	% Difference
Principal/School Administrator	$56.45	$63.03	+11.7%
Executive Secretaries/Administrative Assistants	$23.47	$31.10	+32.5%

Source: Bureau of Labor Statistics, 2010; Arlington Public Schools, 2011

*Adjusted by a 3.5% cost of living increase since 2010[5].

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[4] http://www.bls.gov/ncs/ocs/sp/ncbl1604.pdf

[5] http://www.bls.gov/cpi/cpid1111.pdf

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Executive secretaries and administrative assistants at the APS earn approximately 32.5 percent more than their counterparts in the DC area, while principals earn 11.7 percent more than their counterparts.

To compare teacher salaries, the Washington Area Boards of Education Guide for fiscal year 2012 was used. The comparison is shown in table 3.8.

Table 3.8. Comparison of peer teacher pay

School Division	Scheduled Days	Hours per Day	Average Annual Salary	Average Hourly Salary
Alexandria	194	7.25	$71,239	$50.65
Fairfax	194	7.5	$63,980	$43.97
Falls Church	191	7.5	$65,835	$45.96
Loudoun	197	7.5	$61,304	$41.49
Manassas	195	7.5	$61,141	$41.81
Manassas Park	195	7.5	$55,851	$38.19
Montgomery County, MD	195	8.0	$74,694	$47.88
Prince George's County, MD	192	7.5	$63,884	$44.36
Prince William	195	7.0	$59,367	$43.49
Peer Division Average	**194**	**7.5**	**$64,144**	**$44.20**
Arlington	194	7.5	$72,635	$49.95

Source: Washington Area Boards of Education Guide, FY 2012, pg. 38

According to this data, the APS' teachers earn 13 percent more than the peer average of $44.20 per hour. The hourly rate for teachers at the APS is the second highest of all peers – surpassed only by Alexandria.

Classifications

Some positions at the APS with identical titles, or seemingly parallel levels of responsibility, are assigned to different salary scales and grades. For example, there are three employment specialists in the personnel services department; however, one position is assigned to the E scale on grade 5 (which starts at $51,537 annually) and the other two are assigned to the lower G scale on grade 12 (which starts at $43,638.40).

Other general examples of possible inconsistencies include assistant directors and supervisors, some of whom are assigned to the P scale while others are assigned to the E scale, and coordinators, some of whom are assigned to the P, E, and T scales.

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In addition, placement of employees on respective salary scales does not appear to correlate to years of experience, as was indicated during interviews with personnel services staff. For example, on the A-09 scale, an employee with 4.25 years of experience (calculated as the time from the last hire date to now) is paid the highest hourly rate possible, although some employees on the same pay scale have significantly more experience (15, 20, and 30 years).

Recommendation 3-6: Update job descriptions to ensure that the APS complies with applicable laws, and verify that employees are paid appropriately for their positions and experience.

Some jobs are dynamic – changing rapidly and extensively, due to technological or organizational considerations. The descriptions for these types of jobs should be reviewed at least annually. Other jobs change very little over long periods of time and their job descriptions need not be reviewed as often.

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

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

Once job descriptions have been updated, the personnel services department's leaders can verify that each job is placed on the appropriate salary scale and grade that relate to the essential duties performed, the level of responsibility, the number and type of employees supervised and the relative value of the job within the organization.

Personnel services staff should conduct a local salary survey, in which compensation data for area businesses and school divisions is collected and analyzed in order to adjust the APS' pay rates and bring them closer to area norms for each job type.

Salary equity among employees is an important consideration when setting salaries for new employees. Perceived inequality influences employee morale, and can cause charges of discrimination and grievances. When setting starting salaries, the skills and work experience of new employees should be compared to the skills and work experience of current employees performing similar work. The result of this comparison should be considered when making your salary decision.

Salary equity does not suggest that all employees within a scale and grade who have similar years of experience and education should be paid the same salary. It is assumed that recognition of varying levels of skills and performance may result in some differentiation in salary among employees.

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Procedures should be put in place to govern the placement of new employees on pay scales, grades and steps, so that the process and resulting salaries are perceived by employees as equitable and fair.

To keep job descriptions up-to-date in the future, each should be addressed each year as part of the performance appraisal process. At performance appraisal time, the personnel services department should provide a copy of each employee's current job description to the appropriate supervisors. Supervisors will then review each job description and provide notes to the supervisor of personnel services regarding any new job duties and/or duties that are no longer performed by the employee. The supervisor of personnel services will review all changes made by the employees' supervisors for appropriateness, make necessary changes to the job descriptions, and provide the updated job descriptions to each employee for review and signature.

FISCAL IMPACT

The initial update of the job descriptions, salaries and classifications may require some support by an external consultant. For the purposes of the fiscal impact below, 80 hours of support were estimated at $130 per hour.

Recommendation 3-6	One-Time Costs/ Savings	2012-13	2013-14	2014-15	2015-16	2016-17
Leverage external consultant for job description and classification updates	($10,400)	$0	$0	$0	$0	$0

Note: Costs are negative. Savings are positive.

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Chapter 4 – Facilities Use and Management

Introduction

School facilities should be designed and maintained to support the educational curriculum and to provide an effective learning environment that is educationally adequate to deliver the curriculum. Having suitable facilities requires good planning, which is made possible by accurate measurement of school capacities and enrollment projections.

Once facilities are built, preventive maintenance (i.e., an ongoing plan for addressing annual maintenance and operations) and a long-term capital improvement program are critical. One of the most important aspects of maintaining facilities in the long-term is preventive maintenance. Through preventive and ongoing maintenance, life cycle costs are reduced and the serviceable life of facilities is extended. Beyond operations and maintenance, an aggressive energy management program is critical to reducing operating expense and providing a sustainable building environment.

This chapter presents commendations and recommendations for facilities use and management for the Arlington Public Schools (the APS) and includes the following major sections:

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

The facilities of the APS include 22 elementary schools, five middle schools, four secondary and high schools, two special education facilities, three alternative campuses, and various administrative buildings. The total of school and office space currently in use throughout the APS (including portable buildings) is approximately 4.266 million square feet. School ages vary significantly across the division from those built in the 1920's (Arlington Traditional and Barcroft) to schools recently opened (Washington-Lee in 2009). The division also maintains over 350 acres on which its schools and facilities are located. The APS' schools have a cumulative, current capacity for 22,744 students and 2011 enrollment of 21,276 students resulting in an overall utilization of 93.5 percent.

The APS has experienced growth in its student enrollment over the past five years averaging 4.1 percent annually, and similar growth is expected to continue for the next five years (3.7% average per year).

In general, the APS facilities and operations department (facilities) has done an excellent job of planning, managing and operating its school buildings. Commendations noted in this report for best practices in exceeding industry practices include the following.

▪ Establishing an after-hours work team for preventative maintenance and emergency repairs

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- Proactive energy management department that works with school staff to save the APS resources

This chapter also offers recommendations that should be considered in order to enhance operations or reduce overall costs. These recommendations are summarized in Table 4.1, with more detailed findings and recommended actions following in each of the five sections.

Table 4.1. Fiscal impact of facilities and operations recommendations

Area/Recommendation	Priority	One-Time Costs/ Savings	2012-13	2013-14	2014-15	2015-16	2016-17	Total Fiscal Impact
Plans, Policies and Procedures								
4-1. Improve the usage of TmaTalk work order system	Medium	$0	$0	$0	$0	$0	$0	**$0**
4-2. Improve the process for ordering cleaning supplies	Low	$0	$0	$0	$0	$0	$0	**$0**
Custodial Operations								
4-3. Reduce custodial positions	Medium	$0	$207,240	$414,480	$580,272	$580,272	$580,272	**$2,362,536**
4-4. Change the reporting structure of custodial staff	High	$0	$0	$0	$0	$0	$0	**$0**
Net Fiscal Impact		**$0**	**$207,240**	**$414,480**	**$580,272**	**$580,272**	**$580,272**	**$2,362,536**

Note: Costs are negative. Savings are positive.

A. Organization and Management

The APS assistant superintendent for facilities and operations oversees a department of over 570 employees including bus drivers, custodians, architects, engineers, and lifeguards. The department is organized into the following groups:

- Maintenance
- Plant operations (custodial services)
- Design and construction
- Transportation
- Aquatics

This chapter focuses only on the first two groups and includes energy management, which is administratively part of the maintenance group. The organizational chart for areas reviewed in this chapter is shown in Figure 4.1.

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Figure 4.1. Facilities and operations organizational chart
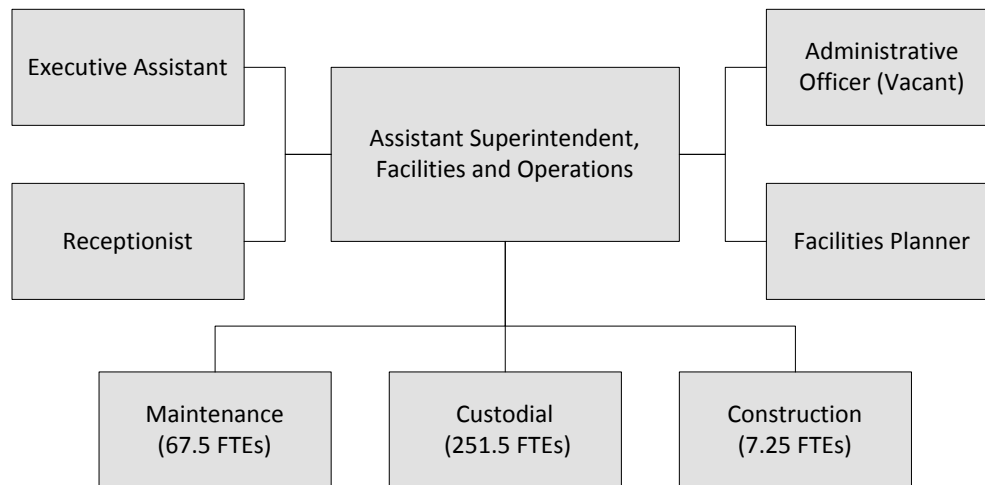
Source: Arlington Public Schools, facilities and operations department

The Virginia Department of Education publishes data on its website annually comparing staffing levels of all county and city school divisions. The most recent year for which data were available was the 2009-10 school year. A summary of the APS operations and maintenance staffing with that of other Virginia school divisions is shown in Table 4.2. For comparison purposes, county school divisions with enrollments comparable to the APS were included, as well as neighboring Alexandria City and the state-wide average.

Table 4.2. 2010 operations, maintenance and facilities staffing (in full-time equivalent positions)

Division	Enrollment At March 31, 2010	Operations and Maintenance (FTEs)	Facilities (FTEs)	Total Staff (FTEs)	FTEs per 1,000 Students 2010	FTEs per 1,000 Students 2009	FTEs per 1,000 Students 2008
Stafford	26,648	158.33	2.35	160.68	**6.03**	6.40	6.48
Spotsylvania	23,710	162.27	1.75	164.02	**6.92**	7.49	7.78
Hanover	18,433	159.50	2.00	161.50	**8.76**	8.64	8.24
Prince William	75,026	730.98	31.29	762.27	**10.16**	11.01	10.93
Chesterfield	58,665	684.00	--	684.00	**11.66**	12.86	13.58
Henrico	48,509	567.05	--	567.05	**11.69**	11.10	11.30
Alexandria (city of)	11,422	137.06	--	137.06	**12.00**	10.56	12.14
Fairfax	168,272	1,987.28	126.71	2,113.99	**12.56**	13.62	13.72
Loudoun	59,261	732.49	41.17	773.66	**13.06**	13.41	13.13
Roanoke	12,126	164.23	5.16	169.39	**13.97**	11.40	11.27
Arlington	19,267	352.15	7.30	359.45	**18.66**	16.70	17.74
State-wide	**1,204,422**	**14,784.84**	**261.34**	**15,046.18**	**12.49**	**12.93**	**12.96**

Source: Virginia Department of Education, Superintendent's Annual Report, 2009-10.

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Falls Church school division is considered an APS peer, but was not included in the above table because its small size (less than 2,000 students) would skew the results. The review team noted that the APS not only has significantly higher staff levels (relative to student enrollment) than all other comparable county school divisions, but also exceeds the state-wide average. Six out of nine county school divisions have reduced staff levels since 2008 while the APS staffing has increased from 316.15 FTEs in 2008 to 359.45 FTEs in 2010. The review team was unable to determine the source for the increased staff levels. Reported staffing levels for custodial and maintenance functions, which comprised the majority of staff in the facilities and operations department, have remained flat -or decreased slightly - over the period from 2008 to 2010.

The data submitted to the Virginia Department of Education does not take into consideration the extent to which individual divisions utilize external contractors to supplement or outsource their internal custodial and maintenance staff. The APS does not outsource or significantly supplement its custodial or maintenance functions.

Operations and maintenance (O&M) staffing levels for all city school divisions with enrollments ranging from 13,000 to 70,000 students were also analyzed. Out of nine city school divisions reviewed, only two – Richmond and Portsmouth – had higher per-student O&M staffing levels than the APS.

If the APS O&M function was staffed consistently with the Virginia state-wide average, the APS would have 273 FTEs in O&M areas (state-wide average x student enrollment ÷ 1,000, or 12.5 x 21,845 ÷ 1,000) compared to current staffing of approximately 370 FTEs.

In addition to data available through the Virginia Department of Education, the review team also examined staffing data compiled by the Washington Area Boards of Education (WABE). As shown in Table 4.3, the APS reported more school-based custodians per 1,000 students than all other school districts in the Washington D.C. area, except for Falls Church. Additionally, the APS reported more non-school based maintenance/custodial staff per 1,000 students than all other peer divisions in the Washington D.C. area.

Table 4.3. Custodial and maintenance staff

Division	FY 2012 Approved Enrollment	School-based Custodians		Non-School-based Maintenance/Custodial		Total Staff per 1,000 Students
		Staff FTEs	Per 1,000 Students	Staff FTEs	Per 1,000 Students	
Alexandria	12,381	62.5	5.0	24.7	2.0	7.0
Fairfax	177,629	1,308.0	7.4	464.0	2.6	10.0
Falls Church	2,177	22.5	10.3	2.0	0.9	11.3
Loudoun	66,266	494.0	7.5	202.5	3.1	10.5
Manassas	7,131	52.5	7.4	10.0	1.4	8.8
Manassas Park	2,998	20.0	6.7	5.0	1.7	8.3
Montgomery County, MD	146,709	1,263.2	8.6	454.5	3.1	11.7

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Division	FY 2012 Approved Enrollment	School-based Custodians		Non-School-based Maintenance/Custodial		Total Staff per 1,000 Students
		Staff FTEs	Per 1,000 Students	Staff FTEs	Per 1,000 Students	
Prince George's County, MD	125,168	1,064.6	8.5	427.0	3.4	11.9
Prince William	81,411	440.4	5.4	235.0	2.9	8.3
Peer Division Average	**69,097**	**525.3**	**7.4**	202.7	**2.3**	**9.8**
Arlington	22,245	194.5	8.7	84.5	3.8	12.5

Source: Washington Area Boards of Education Guide FY 2012, pgs. 34-37

The APS has several supervisory or administrative positions that supervise staff, schedule the work of other employees, and perform other administrative tasks, and spend significantly less time than non-supervisory staff completing work orders, cleaning buildings or performing other duties typically known as "wrench time." These managerial or supervisors are shown in Table 4.4 below.

Table 4.4. Facilities and operations department, management/supervisory positions

Position	Reports To	Area	FTEs
Facilities planner	Asst. superintendent	Design and Construction	1
Facilities manager	Principal	School operations	3
Facilities assistant manager	Facilities manager	School operations	1
Director	Asst. superintendent	Custodial	1
Assistant director	Director	Custodial	1
Quality control specialist	Director	Custodial	1
Director	Asst. superintendent	Maintenance	1
Assistant director	Director	Maintenance	1
Trade supervisor	Director/asst. director	Maintenance	8
Trade assistant supervisor	Trade supervisor	Maintenance	6
Program manager	Director	Maintenance	1
Project manager	Program manager	Maintenance	1
Total			**26**

Source: Arlington Public Schools, facilities and operations department, fall 2011

While effective department management and supervision are essential for a well-designed maintenance program, the number of supervisory staff at the APS seems disproportionate to the division's size and enrollment. Also, the duties of some of these staff, for example the school-based facilities managers, may overlap with duties of the custodial building supervisors or custodial group managers. The review team has conducted similar comprehensive reviews of the O&M functions in other school systems within the past 12 months. Two of these studies were of comparably-sized school systems in Virginia

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and Texas, and while these districts differ from the APS in certain ways, the number of supervisory positions at each presents a stark contrast with the number of supervisory FTEs at the APS.

Selected information regarding the supervisory function at each school system is shown in Table 4.5 below.

Table 4.5. Comparable school systems supervisory staff data

School System	Enrollment	Square Footage	Maintenance		Operations	
			Total Staff	Supervisory	Total Staff	Supervisory
Arlington	21,845	4.2 million FT^2	67.5	18	252	8
District A – Virginia	18,496	2.8 million FT^2	25	7	120	4
District B – Texas	22,657	2.9 million FT^2	50	4	111	3

Source: Arlington Public Schools, facilities and operation, fall 2011; Gibson Consulting Group, Inc., 2012

Note: Similar to the APS, a significant portion of the grounds keeping function at district A is performed by the county government unit

As noted in the table above, the APS O&M staff maintains almost 50 percent more building space than its peers – even though their enrollments are similar.

The APS has supervisors and assistant supervisors in each technical trade (except locks) in addition to departmental managerial staff. Our understanding from interviews with department staff is that the APS trade supervisors oversee the work of technical staff in their area, and perform hands-on repair and maintenance task (i.e., completing work orders). Most trade supervisors spend more than 50 percent of their time performing direct maintenance tasks. All six trade assistant supervisors spend more than 90 percent of their time performing direct maintenance tasks.

At peer district A, team leads oversee staff in all the trade areas, in addition to actively completing work orders in their trade. At peer district B, supervisory staff consists of a coordinator for all maintenance activities, one supervisor for all maintenance trade staff, one supervisor for grounds crews, and one coordinator for minor construction and major maintenance projects. District B's maintenance function includes 15 staff who maintain over 800 acres of grounds.

Both maintenance and custodial operations will be analyzed in greater depth in subsequent sections of this chapter.

B. Plans, Policies and Procedures

The department defines maintenance projects either as routine work orders or as minor construction/major maintenance ("MC/MM"). For routine work orders, the maintenance group utilizes a software system called TmaTalk, an online work order management tool which allows school and department staff to request maintenance on school buildings.

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Work orders or other significant maintenance projects that will require significant time, funding or other resources to complete are defined as MC/MM projects. The department uses a spreadsheet to manage these projects. A committee comprised of department leaders, the central APS finance management, and school-based staff review MC/MM requests and prioritizes projects at the outset of each year. For recent years, the amount budgeted for MC/MM work has been as follows:

- Fiscal Year 2011 -- $4,437,267

- Fiscal Year 2012 -- $4,687,917

- Fiscal Year 2013 (proposed) -- $5,577,025

Each project is assigned to one of five broad categories based on the impact of the project to the functioning of the school division: accessibility, preventative maintenance, capacity, health and safety, and operations. Proposed projects for 2013 are categorized as shown in Table 4.6. Certain budgeted amounts (consulting fees) associated with MC/MM projects relate to all categories. Amounts are also budgeted for contingencies in completing all projects.

Table 4.6. MC/MM projects by category

Category	Amount Budgeted FY 2013
Health and safety	$2,636,925
Preventative maintenance	$1,133,650
Capacity	$312,625
Accessibility	$127,500
Operations	$20,500
Contingencies (including consulting fees)	$553,500
Other salaries and administrative costs	$792,325
Total	**$5,577,025**

Source: Arlington Public Schools, facilities and operations department, fall 2011

For MC/MM and minor maintenance requests, the department is working to educate the APS community regarding the appropriate methods for capturing and tracking projects and individual requests. As noted, smaller projects are tracked in the work order system – TmaTalk – while minor construction projects are tracked by spreadsheet. Not all projects are entered into TmaTalk to record outstanding requests and to capture the time and materials incurred by maintenance staff in addressing these issues. Also, it is understood that the full range of routine preventative maintenance activities, such as filter replacement, has not been entered into TmaTalk.

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Recommendation 4-1: Improve the usage of the TmaTalk work order system.

The review team recommends that the maintenance group management continue to refine the process for tracking projects. Specifically, all activities of maintenance staff - including preventative maintenance, time spent on MC/MM projects, and regular work orders - should be recorded in TmaTalk. The system should be used to record time spent by all maintenance group staff except the director, assistant director and administrative and energy management staff. Efforts should also be made to capture time spent by staff in the following activities: completing work orders (on site); driving between the central facilities buildings, schools, supply stores and other locations; performing administrative tasks or other non-productive time at the central department building. Appropriate codes should be established in TmaTalk to capture and categorize all time spent by staff.

The maintenance group should continue to refine the process for managing MC/MM projects, including instructions to school principals and building managers for submitting requests and methods for tracking and reporting the progress of individual projects.

FISCAL IMPACT

This recommendation will not have any net impact on future expenditures or a net current investment.

Recommendation 4-2: Improve the process for ordering cleaning supplies.

During the review team's site visit, storerooms for custodial supplies appeared to be stocked with cleaning supplies that could be expected to last for several weeks, if not months, of normal use. These supplies are purchased directly by the schools, without any review or approval of central custodial department managers.

The review team did not conduct an exhaustive study of quantities used or current inventories of supplies on hand across the division. However, the stocking of excess quantities of cleaning supplies can lead to loss, theft, and the overuse of cleaning materials by custodial staff, resulting in additional cost to the division. Under current procedures and in light of the current organizational structure (with custodial staff under the direct supervision of school-based staff rather than custodial department managers), there is no effective method in place for tracking custodial supplies usage or inventory levels.

The custodial office could derive benefits from implementing procedures similar to those in place for ordering and stocking of food and materials by the APS food services office. In this manner, all purchases of custodial supplies at each school would require the review and approval of custodial supervisors or managers before orders are placed. This would allow custodial management to effectively track the usage at each school and to dissuade overstocking or overuse of supplies.

FISCAL IMPACT

This recommendation will not have any net impact on future expenditures or a net current investment.

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C. Maintenance Operations

The maintenance group is organized by technical or trade area. The director and assistant director oversee teams of technicians in various trades, as well as the division's energy management function and minor construction/major maintenance (MC/MM) program team. Table 4.7 shows the current composition of the maintenance staff.

Table 4.7. Maintenance group staffing composition

Area or Function	FTEs	Comments
Director	1	Oversees general maintenance and MC/MM
Assistant Director	1	Trade supervision
Administrative	2	Work orders, payroll, budget and finance
Energy Management	1.5	Energy manager and assistant
MC/MM	3	Program manager, project manager and assistant
HVAC	18	Day and night shift supervisors; assistant supervisor
Electrical	11	Supervisor and assistant supervisor
Plumbing	5	Supervisor and assistant supervisor
Grounds	8	Supervisor and assistant supervisor
Carpentry	9	Supervisor and assistant supervisor
Roofing	5	Supervisor and assistant supervisor
Locks	3	Supervisor
Total Maintenance Group	**67.5**	

Source: Arlington Public Schools, facilities and operations department, fall 2011

Based on the APS enrollment, the department overall has significantly more employees in operations, maintenance and facilities positions than other Virginia school systems. The APS was also analyzed in light of national trends for other school systems' maintenance function. The sources for comparable information included:

- Managing for Results in America's Great City Schools (CGCS) – This study is a publication of the Council of Great City Schools and was last updated in October 2011.

- The 38th Annual Maintenance and Operations Costs conducted by the American School and University (AS&U). This survey-based study was conducted for the 2008-09 school year; therefore, the dollar amounts (expressed in per-square-foot or per-student measures) may be subject to inflationary pressures of the last two years. However, the expected coverage by each maintenance worker is as applicable today as it was in the 2009 school year.

The Council of Great City Schools includes many of the larger school districts in the country; therefore, most of these systems are larger than the APS. On the other hand, the schools surveyed by American School and University tend to be smaller than the APS. Despite these differences, the comparison of the APS' maintenance function to these sources of information is useful.

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Table 4.8 presents the comparison of the APS maintenance function to measures of maintenance activities surveyed by the Council of Great City Schools. Individual measures and the method used to calculate the APS results are as follows:

- Maintenance Costs per Square Foot – The Department maintains approximately 4,266,000 square feet of space including portable buildings. Maintenance expenditures for FY 2011 were approximately $7.2 million (cost centers 108000, 108300 and 109200).

- Total Maintenance and Operations (M&O) as a Percentage of Total General Fund Expenditures – Total M&O expenditures for FY 2011

Table 4.8. The APS maintenance performance compared to Council of Great City Schools (CGCS)

Measure	Source	Benchmark	APS
Maintenance costs per square foot	CGCS	$1.89	$1.80
Maintenance costs per student	AS&U	$337.47	$351.68
Maintenance and operations as a % of total general fund expenditures	CGCS	5.54%	7.86%
Maintenance workers per 100,000 square feet of space maintained	CGCS	1.17 FTE/FT^2	1.20 FTE/FT^2
Square feet maintained per FTE worker	CGCS	92,074 FT^2	83,647 FT^2
Percentage of space provided by portables	CGCS	1.3%	1.9%

Source: Managing for Results in America's Great City Schools, Council of Great City Schools (2011); 38th Annual Maintenance and Operations survey (2009).

As noted above, the maintenance area has 14 supervisors and assistant supervisors. Assistant supervisors spend the majority of their time (over 95 percent) completing work orders and a small percentage of time in supervisory roles (ordering parts and supplies, administrative duties, and in support of construction-related improvements). The department has eight trade supervisors who spend between 10 and 80 percent of their time actually completing work orders; the remainder of time is spent in various supervisory and support functions.

The manner in which the work order system is currently utilized does not provide an accurate source of data that can be used to track the time spent by supervisors completing work orders and performing other supervisory duties. Department management provided the review team with estimates to indicate that all but two supervisors spend at least 65 percent of their time in direct, hands-on repair and work order completion. Significant bond work related to HVAC and roofing replacement requires that supervisors in these two areas spend more of their time in non-work order activities.

Commendation: The division utilizes an evening maintenance shift to reduce school-day interruptions.

A team of technicians in the maintenance group – four HVAC specialists and one HVAC supervisor – work an evening shift, which begins at 2:30pm. The division also has one "night rover" - an electrician

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who works the third shift (10 P.M. to 6 A.M.). The division should be commended for developing this evening shift, as it allows significant preventative maintenance to be scheduled when school is out resulting in fewer interruptions of work or disruption of school activities.

D. Custodial Operations

The operations (or custodial) group director and assistant director oversee the work of 38 custodial building supervisors, 200 site-based custodians, and 10 division-wide or relief custodians. This group also includes a secretary and a quality control specialist.

The division shares three of its facilities – Jefferson, Gunston and Kenmore middle schools – with Arlington County, which conducts community activities at these schools after school hours and on weekends. Each school, in addition to the custodial supervisor and staff, has a site-based facilities manager who coordinates the use of the school's buildings and resources with community groups. Jefferson Middle School also has an assistant facilities manager. Facilities building managers report directly to the respective school principal.

The building supervisor position is budgeted at the school level and supervisors report directly to the principal or center director, but also receive direction from the custodial group managers. At those schools that share facilities with the county, supervisors receive direction from the facility manager. Supervisors generally work from 6:00 AM to 2:30 PM daily and perform a variety of duties, in addition to cleaning. They also clean cafeterias where breakfasts are served. Building supervisors are included in staffing formulas.

The custodial group also has nine relief custodians who report to the assistant director and are used to fill vacancies when absences arise among school-based staff.

The custodial group is responsible for cleaning approximately 4,266,000 square feet of space, including portable buildings at each school. The department uses a standard of 20,000 square feet per custodian to assign staff to each school. To calculate the total space to be cleaned at each school, the department adds a predetermined number of square feet to the actual square footage (which includes portable space) to adjust for the additional workload related to the community's' use of each school or facility. In general, 8,400 square feet are added to each elementary school, 17,000 to each middle school and 34,000 to each high school. The total added for community use for the 2010-11 budget year was 477,000 square feet. Applying this formula results in 237 custodians as shown in Table 4.9.

Table 4.9. Application of staffing formula

Item	Square Footage
Actual square footage	4,266,000
Community use	477,000
Total	**4,743,000**
Required Custodians per formula (1 custodian/20,000 FT^2)	237 FTEs

Source: Arlington Public Schools, facilities and operations department, fall 2011

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The budgeted staffing levels for fiscal year 2011-12 were adjusted by one custodian, resulting in current staffing of 238 custodians.

The APS makes adjustments in the square footage amounts used in its staffing formulas because schools are used for purposes other than typical school use. Such adjustments are rarely made, because public schools are routinely used for a variety of community purposes – after-school day care, youth athletics, adult education, and even for-profit purposes. These uses for schools must be planned for carefully, but it should not be necessary to simply add staff to handle extra-curricular activities. More often, custodial departments schedule staff hours to best cover the use of the school for typical classes and after-school activities, and to perform any additional or duplicate cleaning on an overtime basis, which can be recovered by charging fees for use.

A variety of guidelines exists for the custodial function in public schools and includes the following:

- Planning Guide for Maintaining School Facilities – This publication was issued by the School Facilities Maintenance Task Force sponsored by the Association of School Business Officials (ASBO).

- Council of Great City Schools (see discussion above in Section C. Maintenance Operations) – This group of large American school systems publishes the results of surveys of its members in a variety of operational areas, including custodial services. The most recent survey results were issued in October 2011.

- The 38th Annual Maintenance and Operations Costs conducted by the American School and University also discussed in Section C. above

The ASBO study identified five cleanliness levels that can be applied to any facility ranging from level 1 of "spotless" to level 5 of "unhealthy." The ASBO study indicates that level 3 is the "norm for most school cleaning" and is "acceptable to most stakeholders and does not pose any health issues." Level 2 cleaning, the "uppermost" for most school facilities, is generally reserved for restrooms, special education areas, kindergarten classrooms, and kitchens. Level 1 is appropriate for hospitals or corporate suites.

The ASBO study suggests that a typical custodian can clean 28,000 to 31,000 square feet during an eight-hour shift to achieve the level 3 standard of cleanliness. Level 2 cleaning standards suggest that 18,000 to 20,000 can be cleaned over the same eight-hour shift.

The most recent Council of Great City Schools survey indicates that the custodial workload for its members indicated that a median of school systems nationally achieve an efficiency level of 27,408 square feet per custodian, and approximately 40 percent of school systems surveyed achieve at or above 30,000 square feet per custodian.

In its most recent published study, the American School and University survey indicated that school systems averaged 32,100 square feet per custodian.

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Finally, the review team's experience during the past 12 months conducting similar comprehensive reviews of the facilities and maintenance operations of school systems in Virginia, Texas and Nevada indicates that school systems are proactively examining their custodial services function to find ways to improve efficiency while maintaining acceptable service levels. Table 4.10 illustrates the custodial performance results of three school systems – including two districts of approximately the same enrollment as APS and one system significantly larger (>300,000 students).

Table 4.10. Summary of custodial coverage

School System	State	Square Feet	All Custodial Positions	Total Coverage	Evening Shift	Evening Shift Coverage
Arlington Public Schools	VA	4,266,000	248*	17,202	159.5	26,746
District 1	VA	2,756,000	116	22,759	88	31,318
District 2	Texas	2,936,000	134	21,910	101	29,069
District 3	Nevada	34,737,000	1,479	23,487	1,111	31,266

Source: Arlington Public Schools, facilities and operations department, fall 2011; Gibson Consulting Group, Inc., 2012

*Note: Excludes 10 relief custodians

The column above labeled "All Custodial Positions" includes staff on the day and evening shifts, as well as any employees with responsibilities similar to the custodial supervisors at APS. At district 2, subsequent to our review, reductions in service levels were implemented and 26 custodial positions were eliminated. The department added a coordinator position to assist custodial staff in implementing the service level changes.

The APS provides approximately 79 custodians during the day shift. The day shift includes 39 custodial building supervisors at each school or non-school facility, plus additional staff for handling routine cleaning of restrooms, hallways and light grounds keeping duties. These custodians also monitor the cafeterias during lunchtime and clean-up afterward. The APS generally staffs one day shift custodian, the building supervisor, for each elementary school and non-school facility; three custodians at each middle school (in addition to the custodial building supervisor); and five custodians at each high school. Based on the review team's experience with similar school systems, this day-time staffing is appropriate.

Recommendation 4-3: Reduce the number of custodial positions.

Table 4.11 presents the projected staffing levels required to meet the low range of the national productivity standard of 28,000 square feet per custodian. Staffing formulas have been applied to determine the appropriate number of custodians needed for APS schools and other facilities. In determining the total number of custodians of 248, the following was assumed:

▪ The evening shift calculated allocation is the total building square footage divided by 28,000 (the lower ASBO level 2 standard). Actual staffing is determined by rounding up to the nearest one-half FTE.

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- Where less than one FTE is calculated based on the square footage of the school, APS should either convert existing employees to one-half FTE, or convert positions to one-half FTE as attrition occurs.

- Elementary school day shift includes the current custodial building supervisor who provides a variety of services, including cafeteria clean-up.

- Middle school day shift includes the current custodial building supervisor and three additional FTEs - primarily for hallways, restrooms, emergency spills, and cafeteria duties.

- High school day shift includes the current custodial supervisor and five additional FTEs - primarily for hallways, restrooms, emergency spills and cafeteria duties.

- Facilities smaller than 30,000 square feet do not have a separate day and night shift.

- The ten relief custodians currently on staff are retained.

Table 4.11.Projected APS custodial staffing based on national standards

School/Facility	Square Footage	Evening Shift Calculated Allocation	Evening Staffing	Day Shift	Total
Elementary Schools					
Abingdon	88,413	3.16	3.5	1.0	4.5
Arlington Science Focus	68,991	2.46	2.5	1.0	3.5
Arlington Traditional	78,125	2.79	3.0	1.0	4.0
Ashlawn	73,195	2.61	3.0	1.0	4.0
Barcroft	77,940	2.78	3.0	1.0	4.0
Barrett	79,872	2.85	3.0	1.0	4.0
Campbell	73,647	2.63	3.0	1.0	4.0
Carlin Springs	90,945	3.25	3.5	1.0	4.5
Claremont	80,238	2.87	3.0	1.0	4.0
Drew	100,815	3.60	4.0	1.0	5.0
Glebe	87,089	3.11	3.5	1.0	4.5
Henry	61,488	2.20	2.5	1.0	3.5
Hoffman-Boston	108,135	3.86	4.0	1.0	5.0
Jamestown	75,899	2.71	3.0	1.0	4.0
Key	88,637	3.17	3.5	1.0	4.5
Long Branch	70,754	2.53	3.0	1.0	4.0
McKinley	64,152	2.29	2.5	1.0	3.5
Nottingham	78,600	2.81	3.0	1.0	4.0
Oakridge	79,305	2.83	3.0	1.0	4.0
Randolph	70,880	2.53	3.0	1.0	4.0
Taylor	80,428	2.87	3.0	1.0	4.0

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School/Facility	Square Footage	Evening Shift Calculated Allocation	Evening Staffing	Day Shift	Total
Tuckahoe	74,869	2.67	3.0	1.0	4.0
Elementary Totals	**1,752,417**		**68.5**	**22.0**	**90.5**
Middle Schools					
Gunston	209,212	7.47	7.5	4.0	11.5
Jefferson	219,934	7.85	8.0	4.0	12.0
Kenmore	206,188	7.36	7.5	4.0	11.5
Swanson	132,158	4.72	5.0	4.0	9.0
Williamsburg	178,857	6.39	6.5	4.0	10.5
Middle School Totals	**946,349**		**34.5**	**20.0**	**54.5**
High Schools					
H-B Woodlawn	142,331	5.08	5.5	6.0	11.5
Wakefield	325,000	11.61	12.0	6.0	18.0
Washington-Lee	366,873	13.10	13.5	6.0	19.5
Yorktown	307,484	10.98	11.0	6.0	17.0
Career Center	165,000	5.89	6.0	6.0	12.0
High School Totals	**1,306,688**		**48.0**	**30.0**	**78.0**
Non-School Facilities					
Clarendon Education Center	56,931	2.03	2.5	1.0	3.5
Education Center	55,130	1.97	2.0	1.0	3.0
Langston	46,786	1.67	2.0	1.0	3.0
Marshall Center	11,217	0.40	0.0	0.5	0.5
Reed /Syphax	45,101	1.61	2.0	1.0	3.0
Stratford	18,504	0.66	0.0	1.0	1.0
Quincy Street	26,900	0.96	0.0	1.0	1.0
Non-School Totals	**260,569**		**8.5**	**6.5**	**15.0**
School-based Totals	**4,005,454**		**151.0**	**72.0**	**223.0**
				Relief custodians	**10.0**
				Grand Total	**248.0**

Source: Arlington Public Schools, facilities and operations department, fall 2011; Gibson Consulting Group, Inc., 2012

As noted in Table 4.11, the current APS staffing of 247.5 custodians meets the minimum level of productivity for the night shift. The difference between the standard of 28,000 square feet per custodian and the actual coverage at APS schools is because staff work increments of one-half day, and hiring staff to work less than one-half day is difficult.

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As indicated in Table 4.10, many school systems have achieved even higher levels of productivity and the review team recommends that APS continue to review the staffing of each school and the procedures in place for the evening shifts to find ways to increase efficiency. As noted in the next sub-section, changes that allow direct supervision of custodial staff by department managers may offer opportunities to streamline procedures to achieve higher levels of efficiency.

The review team recommends that the department look for additional ways to boost custodial staff productivity to achieve the higher standards suggested in the ASBO study (31,000 square feet per custodian). This analysis should still give thought to those areas identified in the ASBO study that require a higher level of cleaning.

FISCAL IMPACT

The analysis indicates that if all APS schools were able to achieve an evening shift productivity level of 31,000 square feet (up from the current level of 28,000 square feet), the division could eliminate 14 custodial positions. Based on current salary levels for custodial staff, estimated savings from the implementation of the full reduction of 14 positions would yield total annual general fund savings of $580,272 (average salary per custodian $30,000 x 38.16% benefits x 14 positions). However, implementation of this recommendation would likely be phased in over three fiscal years with staff reductions of five positions each year over the three-year period of 2013-2015. General Fund budget savings for these years would be $207,240 $414,480, and $600,996 over this period.

Recommendation 4-3	One-Time Costs/ Savings	2012-13	2013-14	2014-15	2015-16	2016-17
Reduce custodial positions	$0	$207,240	$414,480	$580,272	$580,272	$580,272

Recommendation 4-4: Change the reporting structure for custodial staff so they report to central custodial group management staff.

Typically, those individuals at each school who function similarly to the APS custodial building supervisors (by opening the buildings each morning, checking on heating and cooling equipment, and performing other routine, non-cleaning activities) will have an informal, "dotted line" reporting relationship to the principal. These supervisors are commonly the only staff capable of performing duties such as setting up cafeterias for assemblies, moving large equipment from room to room, directing traffic when inclement weather occurs, and other similar functions. For this reason, this custodial staff member is not expected to handle a large share of the cleaning duties. Usually, he or she will police restroom areas, clean up cafeterias after breakfast, and handle emergency spills.

The performance of these school-specific duties, however, does not diminish the importance of receiving their primary guidance from the custodial group managers. Annual performance evaluations of these staff members should include input of the principals, but their overall performance should be evaluated by the director and assistant director of custodial operations.

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As noted above, custodians report directly to school-based staff. This reporting structure emphasizes the custodians' responsiveness to the principal and his/her staff, but may not be the most effective model. The director and assistant director for custodial services are the experts regarding the day-to-day cleaning and maintenance of school buildings. They have experience and expertise in custodial procedures, equipment, supplies, and training; principals do not. The custodial services leaders are also charged by the APS board with implementing a program to keep the buildings as clean as possible to foster an effective environment for learning. Another benefit of changing the reporting structure is that changes in cleaning procedures and reductions in staff can be more effectively implemented if all custodians report directly to custodial group managers.

The APS' custodial management has indicated that this change in reporting structure would require additional supervisory staff to implement; however, the department already has three senior-level managers who provide oversight to the custodial function. The department has 38 custodial supervisors who should oversee the staff of their respective schools and assist central office management with developing work schedules, reviewing and approving supplies requisitions and other personnel-related duties (time sheet approvals, evaluations, etc.).

Additional supervision of building operation can be carried out by realigning the positions of the current facilities managers and assistant managers to report directly to the custodial director and assistant director. These four supervisors could be re-trained to provide the supervision, quality control and training needs of the custodial group. If the individuals currently in these positions cannot be re-trained, then these positions would be eliminated and new staff recruited for custodial supervisory positions. Re-tasked operations supervisors would be able to oversee the work of current building supervisors, perform periodic evaluations, assist in inventory control, implement quality control measures, and provide training for custodial staff.

The principals or center directors should be considered customers of the custodial department, and should provide significant input as to the quality of the service that is provided, the responsiveness of individual custodians to their needs, and overall reliability of the service. However, each custodial building supervisor and custodian should directly report to the custodial group managers.

FISCAL IMPACT

There would be no net financial impact of changing the reporting structure of custodians. All responsibilities for building management would rest with the facilities and operation department, and facilities scheduling and building management currently handled for the three schools that share space with Arlington County would be folded into the custodial group's portfolio.

E. Energy Management

Commendation: The energy and utility usage at the APS is well-managed.

The department has one full-time energy manager who is very knowledgeable and pro-active. The energy manager supervises one part-time position that provides clerical and analytical support. The

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department tracks all utility expenses and usage, monitors the status of energy conservation projects and advise school staff regarding conservation measures.

As shown in Table 4.12, electricity usage (in kilowatt hours) has increased by 5.3 percent since 2008, but overall electricity cost has increased by only 3.3 percent. Cost per student and per square foot of space have both declined during this four year period.

Table 4.12. Electricity usage and cost, 2008-2011

Year	Electricity Cost	Electricity Usage (in kWh)	Cost per Student	Cost per Square Foot
2011	$4,337,992	55,900,441	$205.98	$0.99
2010	$3,684,071	50,704,710	$183.84	$0.84
2009	$4,602,032	49,209,177	$237.81	$1.09
2008	$4,198,830	53,103,908	$227.03	$1.00

Source: Arlington Public Schools, facilities and operations department, fall 2011

The trend for natural gas has been similar over the same period – usage of natural gas (in Therms) has increased by 6.3 percent (from 1.18 million Therms in 2008 to 1.25 Therms in 2011) while overall expenditures for natural gas have decreased by 8.8 percent, or approximately $139,000. Overall water usage since 2008 has remained steady and has declined slightly when measured on a per-student basis

According to the APS energy manager, teachers are permitted to maintain personal appliances such as heaters, refrigerators, coffee pots and other devices that, when aggregated, use significant amounts of electricity. The department is currently conducting energy audits of five schools to determine the extent of the use of personal appliances.

Although the use of personal appliances can be a sensitive issue, these devices result in significant additional energy costs. Elimination or reduction in the number of such devices requires the education of school staff and commitment to providing alternatives such as refrigerators and coffee pots in all teachers' lounges.

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Chapter 5 – Financial Management

Introduction

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.

The division's fiscal year (FY) 2012 budget is $475.1 million, an increase of $33 million, or 7.5 percent, from FY 2011. Over 81 percent of the division's revenue comes from the county, with the remaining revenue coming from state and federal sources. In addition, $10 million in funding is a carryover from FY 2011 due to lower than expected expenditures and higher than planned revenues. The carryover resulted from a Virginia Retirement System (VRS) reserve that wasn't needed and higher than anticipated revenues from enrollment increases and increased state sales tax revenue.

Table 5.1 provides a comparative of revenues by funding source for the APS and other school divisions located in the Washington area. The APS received the lowest percent of revenues from state sources and the highest percent of revenues from local sources of all the Washington area school divisions.

Table 5.1. Sources of revenue – school operating fund

School Division	Federal Funds	State Funds	Local Funds	Beginning Balance	Other
Alexandria	6.7%	12.8%	75.1%	3.6%	1.9%
Fairfax	4.1%	21.0%	70.0%	2.5%	2.5%
Falls Church	3.0%	14.2%	76.8%	3.9%	2.2%
Loudoun	1.8%	29.8%	66.2%	1.3%	0.9%
Manassas City	6.0%	43.3%	49.8%	0.3%	0.6%
Manassas Park City	6.6%	54.4%	35.4%	0.0%	3.6%
Montgomery County, MD	3.5%	27.6%	67.5%	0.8%	0.6%
Prince George's County, MD	6.9%	54.2%	38.3%	0.0%	0.7%
Prince William	4.1%	47.8%	44.3%	3.4%	0.4%
Peer Division Average	**4.5%**	**34.4%**	**58.1%**	**1.6%**	**1.3%**
Arlington	2.4%	12.6%	81.8%	2.5%	1.0%

Source: Washington Area Boards of Education Guide FY 2012, pg. 25

Note: Funds for entitlement grants are included here under the School Operating Fund for consistency with other districts, although some districts may not consider these funds as part of their operating funds.

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This chapter provides commendations and recommendations related to five aspects of financial management of Arlington Public Schools (the APS):

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

Two significant commendations are made in this chapter:

1. The APS requires mandatory direct deposit of payroll checks for all employees, which aids the payroll department in achieving efficiencies.

2. The APS obtains a wide diversity of input during its budgeting process.

Table 5.2 provides a summary of financial management recommendations and resulting fiscal impacts over the next five years.

Table 5.2. Fiscal impacts of all financial recommendations

Recommendation	Priority	One-Time Cost/ Savings	2012-13	2013-14	2014-15	2015-16	2016-17	Total Fiscal Impact
Organization and Management								
5-1. Implement a training and transition plan	Medium	($3,000)	$96,515	$96,515	$96,515	$96,515	$96,515	**$479,575**
5-2. Move the division's payroll function to the finance and management service department.	High	$0	$0	$0	$0	$0	$0	**$0**
5-3. Re-organize responsibilities and cross-train employees	Medium	$0	$0	$0	$0	$0	$0	**$0**

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Recommendation	Priority	One-Time Cost/ Savings	2012-13	2013-14	2014-15	2015-16	2016-17	Total Fiscal Impact
Planning and Budgeting								
5-4 Provide budget workshops to all APS' staff responsible for monitoring a budget.	Medium	$0	$0	$0	$0	$0	$0	**$0**
Administrative Technology								
5-5 Explore the options of implementing a new financial system for the division.	High	($3,500,000)	$500,000	$500,000	$500,000	$500,000	$500,000	**($1,000,000)**
Contracting Process								
5-6 Explore options for making print shop operations cost neutral.	Low	Un-determined	Un-determined	Un-determined	Un-determined	Un-determined	Un-determined	Un-determined
Net Fiscal Impact		**($3,503,000)**	**$596,515**	**$596,515**	**$596,515**	**$596,515**	**$596,515**	**($520,425)**

Note: Costs are negative. Savings are positive.

A. Organization, Management, and Staffing

The APS' financial management functions fall primarily to the supervision of the assistant superintendent for finance and management services. A director of finance, a budget director, and a director of purchasing report to the assistant superintendent, as shown in Figure 5.1. The assistant superintendent is also responsible for the oversight of the division's extended day program and the food and nutrition services program.

The finance director supervises three financial analysts who are responsible for general ledger accounting, grants accounting, stimulus funds tracking, school treasurer oversight, audits, and procurement card accounting. The finance director is also responsible for overseeing three accounts payable clerks and an accounting clerk.

The division's budget director supervises two financial analysts who are responsible for preparing and overseeing the budget, including both operational and capital budgets for the division.

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A director of purchasing supervises an assistant director, two buyers, and a purchasing clerk. The division's procurement operations are guided by the APS' purchasing resolution which states, in part:

The Arlington County School Board wants to buy goods and services of high quality at reasonable cost and also make sure that all purchasing actions are fair and impartial with no impropriety nor appearance of impropriety, that all qualified buyers and sellers have access to School Board business and that no offeror is arbitrarily or capriciously excluded, and that there is the maximum feasible amount of competition; therefore the School Board

RESOLVES that…policies for the conduct of purchasing by the Arlington County School Board shall take effect immediately.

At the time of this review in November 2011, the division's financial functions had turnover in some key positions: the assistant superintendent for financial and management services and the director of purchasing had been their positions for less than one month, and the assistant director of purchasing position was vacant. The director of purchasing, though appointed to the director position in October 2011, had been an employee of the purchasing department since 2008.

Figure 5.1. Current APS financial management organization chart
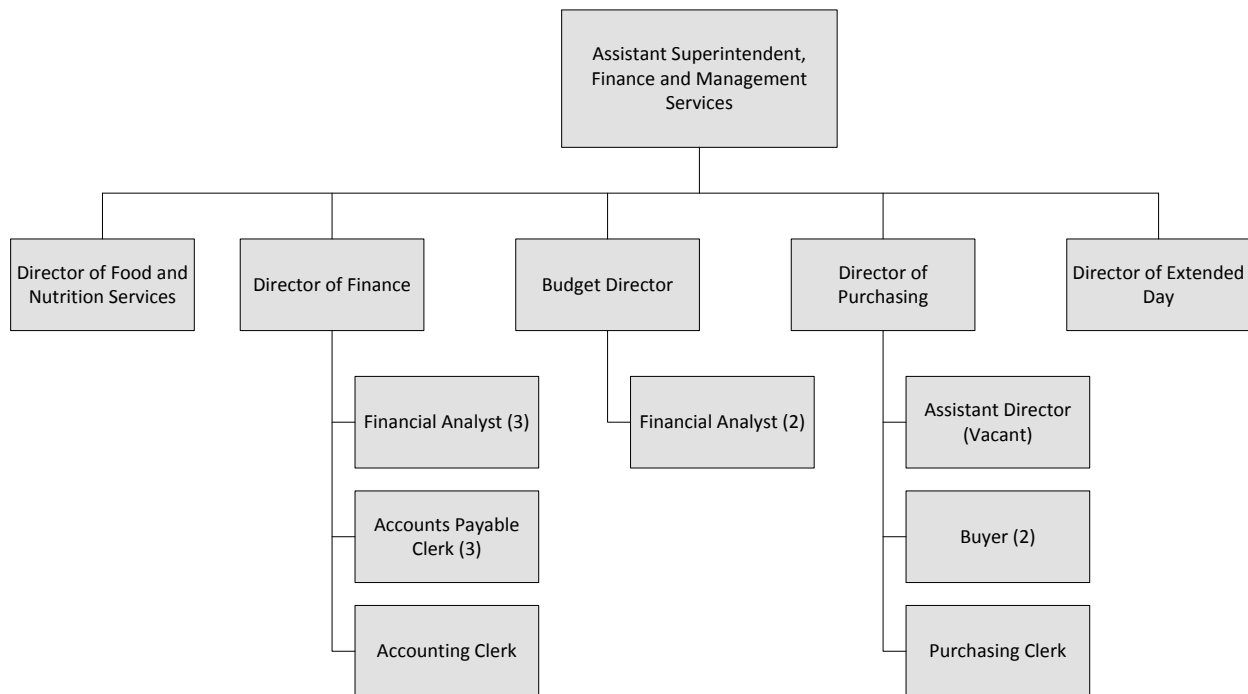
Source: The APS' organization charts from FY 2012 budget document and staff interviews

The division's payroll function does not report to the assistant superintendent; instead it falls under the supervision of the assistant superintendent for personnel services.

Recommendation 5-1: Implement a training and transition plan to ensure purchasing staff obtains the skills necessary to operate a quality procurement program and to ensure efficient and effective staffing of the purchasing function.

The APS' current purchasing organization was put into place in 2007 after the division closed its warehouse operation. The APS' management, at the time of the warehouse closing, committed to retain and/or reassign the warehouse employees to the purchasing function.

In 2007, the purchasing organization consisted of a director, an assistant director, a senior buyer, two buyers, and two clerical support staff members. Since 2007, the senior buyer and a clerical support staff member were eliminated due to budget cuts. Additionally, the assistant director position is currently vacant.

With only three staff employees in the unit, it is not feasible to have both a director and an assistant director. However, the APS' management has stated that the assistant director position is needed because of the lack of experience and background of current departmental staff to support major purchasing activities, particularly for facilities and construction requirements.

The APS' management further stated that because of the demands of the purchasing office and extended vacancies in both the director and assistant director position over the past 18 months, the office has been unable to make changes, streamline operations, or complete basic processes such as implementing the APS' purchasing resolution.

The review team researched other Virginia school divisions similar in size to the APS and found that none had an assistant director position in their purchasing operations. The divisions researched included:

- Richmond Pubic Schools (enrollment of 23,336) has a purchasing director and three staff.

- Hampton City Schools (enrollment of 21,588) does not have a purchasing function. Instead, the division partners with the City of Hampton for procurement services.

- Spotsylvania County Schools (enrollment of 23,817) has a purchasing director and two staff.

- Newport News Public Schools (enrollment of 29,948) has a purchasing director overseeing a staff of six.

- Norfolk Public Schools (enrollment of 22,461) has a purchasing director overseeing a staff of five.

In order to operate an effective and efficient procurement program, the assistant superintendent for finance and management services and the purchasing director should implement a transition program allowing current employees the opportunity to obtain the skills and education necessary to perform the functions required of the purchasing office, or provide them the opportunity to transfer to a different position within the division.

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The transition plan should include an analysis of current staff skills compared to desired skills, as well as revision of job descriptions for each purchasing position. The plan should also allow a reasonable amount of time for staff to obtain training or find a different position (e.g., a maximum of 12 to 18 months).

In addition, the division should address budgetary needs of employees obtaining training. The transition plan could allow for reimbursing purchasing office employees for classes if completed successfully, or if a purchasing certification is obtained.

The affected employees should be offered opportunities to obtain training in procurement, such as that offered by the American Purchasing Society, the Virginia Association of School Business Officials (VASBO), or the Virginia Association of Government Purchasing (VAGP). In addition, many community colleges offer classes and certification programs.

The American Purchasing Society offers online courses and webinars that range in cost from $100 to $200, and include introductory classes as well as classes on contracts and cost /price analyses. VAGP offers training in introductory procurement practices, contract management, procurement law, leadership and management, risk management, and issuing requests for proposals. VAGP training offerings are not available online, but are offered in person in various Virginia cities.

With a fully trained staff, the division should be able to operate effectively with a director, two buyers, and clerical support.

FISCAL IMPACT

The cost of providing additional training to current purchasing staff will cost the division between $1,600 and $3,000 for training for the two current buyers. The variation in this cost estimate is dependent upon whether online or local training can be obtained or whether travel expenses will be incurred.

Once the purchasing department employees have obtained the necessary skills, the division can eliminate the assistant director of purchasing position, which will result in a total savings of $96,515 annually.

Recommendation 5-1	One-Time Costs/ Savings	2012-13	2013-14	2014-15	2015-16	2016-17
Train the purchasing department buyers	($3,000)	$0	$0	$0	$0	$0
Eliminate the assistant director of purchasing position	$0	$96,515	$96,515	$96,515	$96,515	$96,515
Total	**($3,000)**	**$96,515**	**$96,515**	**$96,515**	**$96,515**	**$96,515**

Note: Costs are negative. Savings are positive.

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Recommendation 5-2: Move the division's payroll function, which currently reports to the assistant superintendent for personnel services, to the finance and management service department.

Payroll expenditures are usually the largest expenditures made by school divisions; as a result, accurate and detailed payroll accounting is particularly important. In addition to ensuring that employees are paid timely and accurately for their services, payroll accounting is necessary to fulfill legal requirements under federal and state laws with respect to withholding taxes, unemployment, and retirement.

Payroll, by definition, is an accounting function and not a human resources function. A human resources function is responsible for collecting new employee information, such as IRS forms, certification verifications, fingerprinting and background checks, as well as establishing new employees in the payroll system – including their rates of pay. Human resources is also responsible for any making changes to employee records, including changes in benefits, pay, position title, or any other employee information. Payroll, on the other hand, involves the disbursement of funds to employees. All disbursements should be managed through an organization's financial function. Payroll staff should not have access to make changes to employee information and should only be responsible for verifying the information necessary to pay employees accurately.

Typically payroll functions are supervised by the financial controller (in the case of the APS, the assistant superintendent for finance and management services) to support effective internal control, reliable financial reporting, effective and efficient operations, and compliance with applicable laws and regulations. Adequate separation of duties, an internal control concept, requires that the payroll function be separate from the human resources function. This separation provides checks and balances between the establishment of employee records and the responsibilities of paying employees. Currently, the APS payroll function reports to personnel services, limiting the ability to achieve adequate internal control over the payroll function.

Best practices research indicates that when adequate separation of duties between the payroll and human resources function is not maintained, an organization places itself at risk. In a best practice example from the University of California San Diego, for instance, the university cautions that a lack of separation of duties creates the potential consequences of:

- Unauthorized payment made to non-existent employees
- Unauthorized payroll transactions processed
- Improper changes made to payroll files and/or personnel documents
- Misappropriation of funds
- Overpayments resulting in loss of funding to terminated employees

The APS payroll supervisor, along with supporting staff that includes a payroll administrator, payroll specialist, two account specialists, and an account clerk, should report to the finance department under the director of finance. The payroll function should continue to work in tandem with the division's employee benefits function, which should remain under the personnel services department. In order to

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ensure a smooth transition and a continued coordination, the payroll supervisor and the employee benefits administrator should develop a communication plan that will help facilitate implementation of this recommendation.

Figure 5.2 shows the recommended financial management organization chart, with the transferred payroll positions' boxes outlined in bold.

Figure 5.2. Recommended APS financial management organization chart
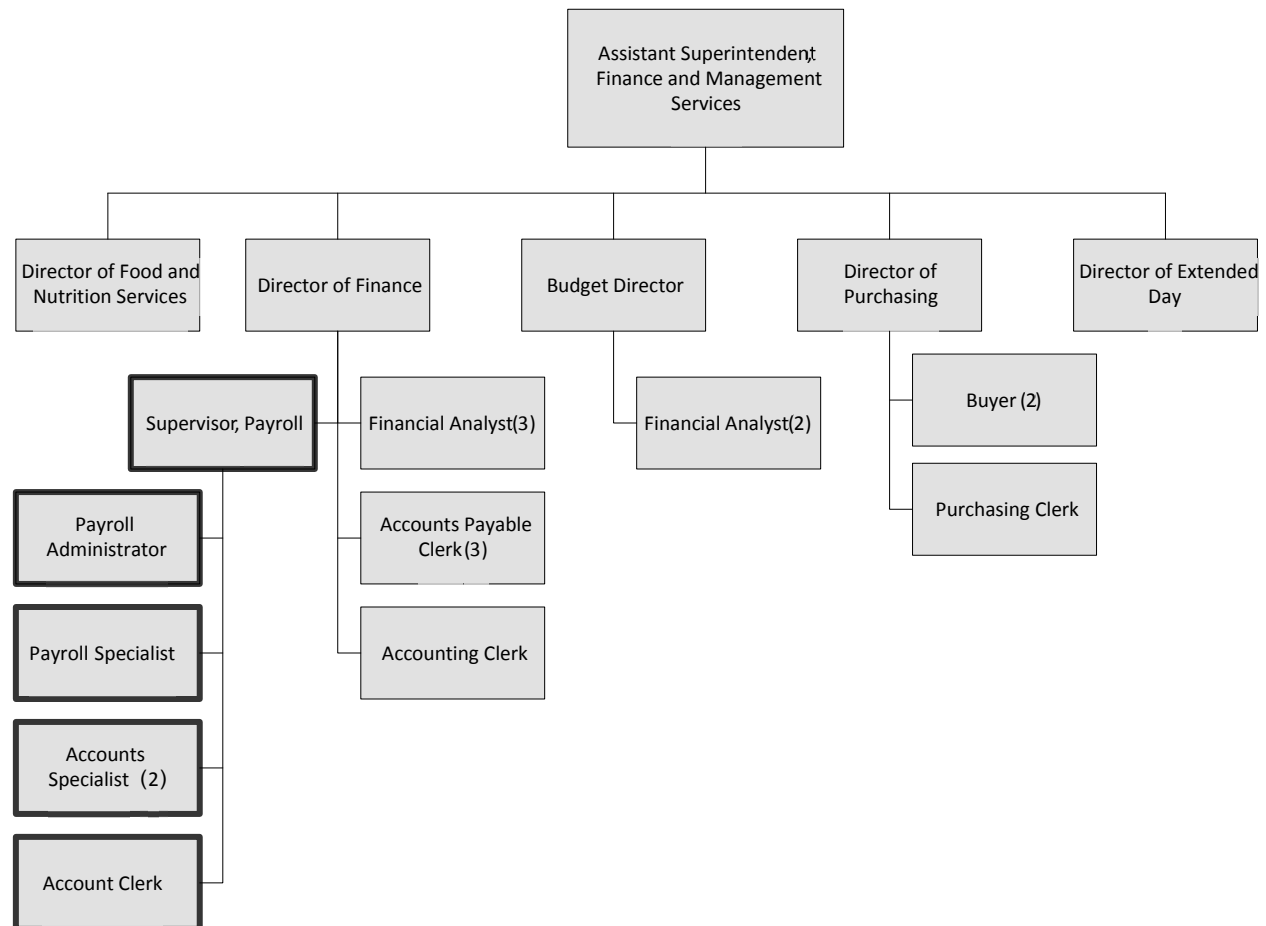
Source: Gibson Consulting Group, Inc., 2012.

FISCAL IMPACT

The implementation of this recommendation will not have a fiscal impact and can be accomplished with current staff.

Recommendation 5-3: Re-organize responsibilities and cross-train employees to obtain efficiencies in the APS' finance and budget functions.

A comparison of the APS' budget and finance staff to other Virginia divisions of similar size shows that overall staffing in the APS is in line with its peers. However, the way that responsibilities are organized leave the division's budget office short staffed.

Current budget staff consists of a director and two analysts. One of the two analysts is assigned to monitoring the financial operations of facilities and constructions, leaving the director and one analyst to conduct all other budgeting responsibilities.

Streamlining finance operations such as expanding the use of procurement cards, using sampling techniques for reviewing transactions, and streamlining payroll processes could free up finance staff that could be cross-trained on budget office responsibilities.

The assistant superintendent for finance and management services, along with the director of finance and the budget director should implement processing efficiencies and conduct cross training for finance and budget staff to improve operating efficiencies in the department.

FISCAL IMPACT

The implementation of this recommendation will not have a fiscal impact and can be accomplished with current staff.

B. Financial Performance

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

The APS monitors its financial performance in a decentralized fashion. That is, department heads and principals are responsible for monitoring their expenditures and ensuring that they conform to approved budgets. Although budget and finance staff in the finance and management services department performs reviews of division financial performance at a summary level, the primary responsibility falls to each budget manager.

Budget managers are also responsible for determining when budget transfers or amendments are needed, and coordinating with the director of budget to process transfers and get approval on amendments.

To monitor expenditures, all budget managers are provided monthly electronic reports. In addition, budget managers have the capability to view their account activity online through the division's financial management software.

Commendation: The APS requires mandatory direct deposit of payroll checks for all employees, which aids the payroll department in achieving efficiencies

In 2007, the division implemented a direct deposit policy which requires that all employees receive their net pay through an automated electronic transfer directly into their bank accounts. For those employees

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who do not have bank accounts, the division put in place an agreement with a local credit union that allows employees to use debit-like cards to access to pay.

This policy saves the division processing time and cuts down on the time required to handle lost paychecks. It also allows employees to have quicker and more convenient access to their funds. Prior to the implementation of the policy, many employees received their paychecks through the mail, so its implementation has also saved the division in postage costs.

Additionally, the division no longer is responsible to the state for reporting abandoned property for paychecks that are never cashed. Instead, this responsibility now lies with the division's banking institution.

C. Planning and Budgeting

Budget preparation and administration are important aspects of overall division operations. Providing adequate resources for programs within the restraints of available funding sources presents administrators with a significant challenge. State law mandates that the superintendent prepare the budget. Thus the superintendent is responsible for preparing and presenting the preliminary budget to the board. The board's role in approving the budget is critical, however, because it is through the budgets that the priorities of the board are funded. Planning and budgeting must be closely linked if plans are to be implemented and the goals of the division are to be accomplished.

The APS has adopted a set of budget standards and guiding principles for use in its budget preparation process. The division's FY 2012 budget standards and guiding principles are presented in Table 5.3.

Table 5.3. The APS' FY 2012 budget standards and guiding principles[1]

The Arlington Public Schools FY 2012 budget will respond to strategic plan goals and ensure that a) fiscal, human, and physical resources are used effectively, efficiently, and responsibly; b) the APS acts in an environmentally-responsible manner; and c) the APS complies with all federal and state laws. Funds proposed for expenditure in the superintendent's Proposed Budget will focus on meeting the following six standards, using the principles listed as factors in determining the funding levels to support programs and activities. The development of the budget will:

- Base short- and long-term decisions on updated three-year forecasts of revenues and expenditures;
- Undertake a systematic review of ongoing and proposed expenditures;
- Identify efficiencies and streamline operations, and
- Consider recommendation from 2009-10 citizen advisory council reports.

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[1] APS School Board agenda documents, September 9, 2010.

Standard #1: Achievement Gap, Cultural Competence, and Rising Achievement for All

Guiding Principles

All APS students shall experience success

The APS focuses instruction by identifying and monitoring student progress

Teachers are empowered and supported to enhance student learning

Staff members have high expectations and take responsibility to student achievement

Staff is culturally competent

All parents are viewed as partners in the education of their children

Student learning is aligned with curriculum, instruction, and assessment

Standard #2: Effective Communications

Guiding Principles

Decision-making is enhanced by dialogue with the entire community

An informed and engaged community supports APS and actively supports APS students

Effective communication increases parental involvement and improves student achievement

Efforts focus on communities that are currently underrepresented in APS dialogues

Standard #3: High Quality and Diverse Staff

Guiding Principles

All students are taught by teachers certified in the field they are assigned to teach

Teachers and staff demographics reflect the diversity of the overall student population

Professional development opportunities are provided to all instructional and support staff members

APS provides a competitive advantage to attract and retain a high-quality staff

All APS staff members are evaluated to ensure effectiveness and accountability to school division philosophy and goals

Standard #4: Learning and Working Environments

Guiding Principles

APS maximized the efficient use of all facilities and operations/services

Learning and work are enhanced through well-maintained, safe, and full-functional facilities

APS facilities promote an appreciation for and attention to the environment

APS facilities are designed and built to standards that provide equitable opportunities for students and staff members

Standard #5: Responsive Education and Healthy Learning Environment

Guiding Principles

Instruction is differentiated to maximize student learning

Students are prepared to work in a global society

Access to student achievement data assists student monitoring and drives instructional decision-making

Students are supported in making informed decisions about their short- and long-term plans

Students develop the skills and relationships necessary to lead healthy and productive lives

Students learn 21st century skills such as collaboration, problem-solving, and working in a virtual environment

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Standard #6: Technical Infrastructure and Information Systems
Guiding Principles
Productivity and learning are enhanced through the use of 21st century tools
Enterprise systems promote effective and efficient use of resources across the division
Data are accurate, reliable, and secure
Information systems are scalable, replicable, and redundant

Source: The APS' School Board meeting minutes, September 2010

The budget process for the division spans 13 months from process review and policy guidance through distribution of the adopted budget documents. The diagram in Figure 5.3 depicts the process, which begins in June with a debriefing of the most recently completed budget process and ends in June of the following year with the distribution of the final adopted budget.

Figure 5.3. The APS budget development process

Source: The APS' School Board's adopted budget FY 2012

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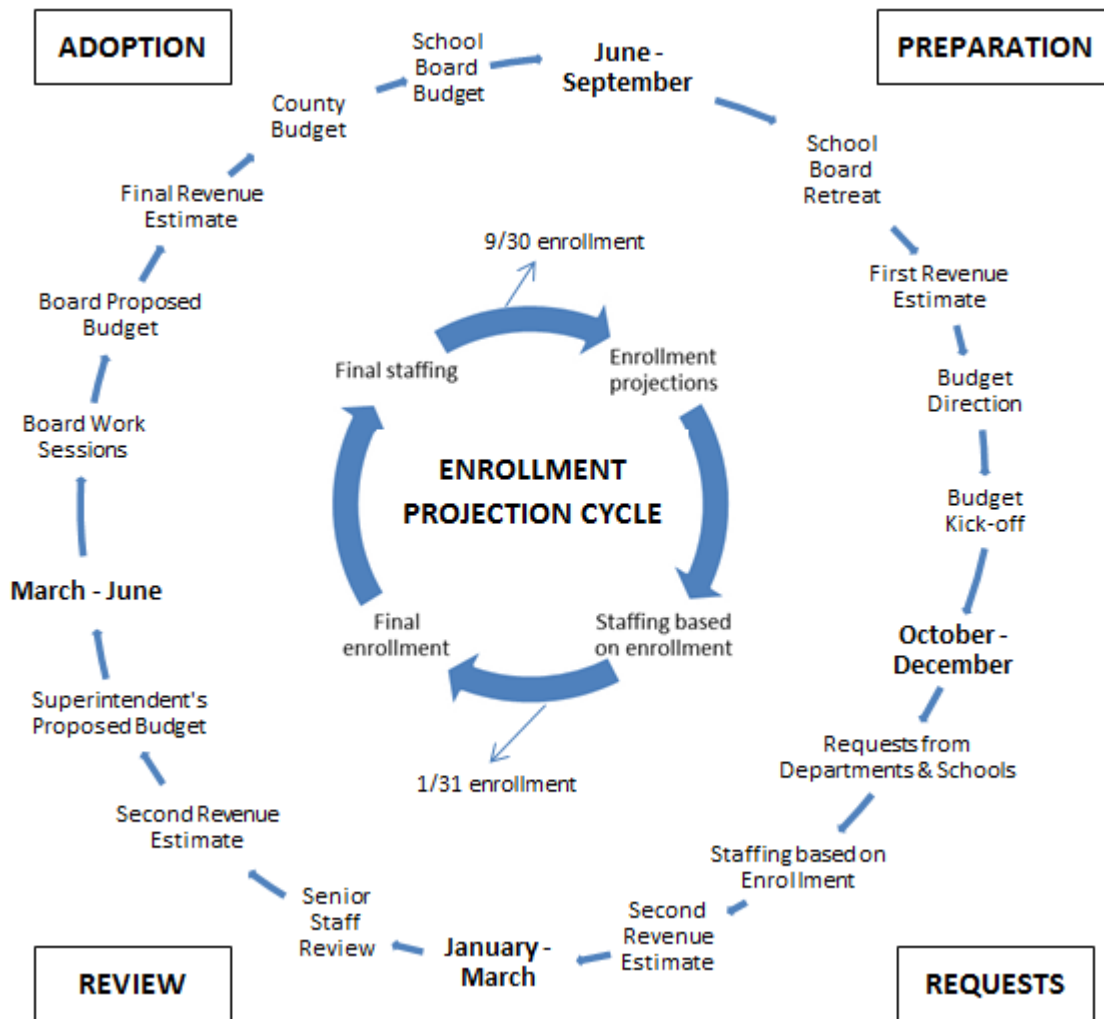
Commendation: The APS obtains a wide diversity of input during its budgeting process.

During the budget preparation process, the superintendent and staff engage the community in the development of its budget. This process was initiated because of the many economic challenges facing the division. The division holds a number of budget forums, meetings with division constituencies, and public hearings. It also conducts surveys of community members and staff.

In 2010-11, over 300 people attended the budget forums and board meetings where the budget was discussed. The division received 727 survey responses from community members and 1,302 responses from staff members through an online survey. The survey, which was conducted in both English and Spanish and included both open- and closed-ended questions, solicited feedback on what respondents saw as the division's greatest challenges and issues.

From this input, staff developed an additional survey asking respondents to weigh-in on which priorities should be considered the most important for the division. The APS' staff then compiled the responses to inform its FY 2012 budget development process.

Allowing a broad base of input into the budget process provides an opportunity for the community to feel engaged in the operations of the division, and the APS' budget can be prepared to better meet the needs of its stakeholders.

Recommendation 5-4: Provide budget workshops to all the APS' staff responsible for monitoring budgets.

Although the APS uses a commendable process in the preparation of its annual budget, the division does not provide its managers and department heads – those employees who are responsible for budget management functions – with adequate tools for preparing and monitoring their budgets.

Interviews with division staff members responsible for overseeing a budget revealed a large degree of dissatisfaction with the expenditure reports provided to them for monitoring budgets. Budget managers are provided monthly reports for their departments showing comparative expenditures to budget data. In addition, managers have access to online budget reports for their departments. Many managers told the review team that the monthly reports provided to them are so difficult to understand that they keep their own "off-line" budget reports to help them track activity. Part of the issue is that once a manager submits a budget, line-items within the budget may be re-organized by budget staff to better fit the division's reporting module. However, the re-organization of expenditures creates confusion for budget managers.

A second issue that makes the budget monitoring process difficult is the deficiencies in the division's financial system. These issues will be discussed in more detail later in this chapter. In addition to having difficulty in monitoring current budgets, managers report that it is also difficult to prepare future budgets due to a lack of understand of the past year's budget. The review team held focus groups with school principals where similar frustrations were expressed.

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The primary issue with monitoring budgets is the cumbersome reports produced by the division's accounting system. Administrative technology is discussed later in this chapter, but the division should put in place additional resources to help budget managers prepare and monitor their budgets.

At the beginning of each budget cycle, the APS' budget director provides a detailed budget development packet to all budget managers. The packet contains important information such as budget calendars and due dates, budget standards and guiding principles, board priorities, and budget request forms and instructions. However, most principals whom the review team met with, as well as many administrative budget managers, stated that the budget development package was not sufficient to explain how to prepare and monitor a budget, particularly for new staff having never been through the process previously.

Many school systems hold budget kick-off meetings as well as follow-up meetings to help staff understand the budgeting and budget monitoring processes. Very typically these meetings are held by group type; that is, one meeting might be exclusively for principals while another meeting might be exclusively for operational managers so that issue common to each group can be highlighted.

The APS' director of budget, along with the assistant superintendent for finance and management services, should develop a budget workshop presentation and agenda to help budget managers prepare and monitor their budgets. There could be different types of workshops: one for principals, one for operational personnel, and one for administrative personnel. In addition, if needed, there could be a workshop focused on budget managers who are new to the budget development and monitoring process.

The workshops should be held to coordinate with the kick-off of the division's budget cycle, with follow-up workshops held at key intervals during the process. A final workshop should be held at the time that the budget is finalized to focus on ways of interpreting budget report formats so that managers can more accurately understand and oversee their budgets for the upcoming year.

FISCAL IMPACT

The implementation of this recommendation will not have a fiscal impact and can be accomplished with current staff – once processes are streamlined and finance and budget staff is cross-trained (recommendation 5-3).

D. Administrative Technology

School division technology is very often focused primarily on instructional technology, leaving many divisions with substandard 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 divisions to eliminate some of the manual aspects of processes requiring labor hours and improve the accuracy of the data gathered and reported.

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The division's current financial operating system was implemented in April 2007. It has been described by division staff as a robust operating system and one that is often used by large corporations. The county upgraded to this system one year prior to the school division, which was a large part of the division's decision to implement the same system.

Recommendation 5-5: Explore the options related to implementing a new financial system for the division.

Almost all division employees that the review team interviewed expressed a level of dissatisfaction with the current financial management system. Complaints primarily focused on the difficulty in getting information out of the system. Most of the reports that the system produces must be programmed by information services (IS) staff, which can be costly in terms of labor resources, in addition to taking a long time for users to receive their requested information.

In addition, the division implemented this system only when faced with the potential of its old mainframe system being shut down. A rushed implementation schedule did not allow the division an adequate opportunity to evaluate its business practices at the time and to make any necessary changes. As a result, some outdated and ineffective business processes were included in the system implementation.

Because the system is not specifically designed for use in a school setting, IS has been required to perform a large amount of programming and customization of the system. In addition, the user department staff has had to modify business practices to conform to the automated system, which is not always the most efficient way of conducting business.

Other issues related to the system include a lack of integration between sub-systems such as payroll and the division's substitute teacher system, and the software vendor is no longer supporting the system.

The assistant superintendent for IS told the review team that the current system is expensive, costing the division an estimated $650,000 annually in licensing and support agreements. In addition, he estimates that approximately five IS staff members are needed to keep the system operational for a total cost of staff and fees of approximately $1.3 to $1.4 million.

The division should explore the option of implementing a new system that is more cost effective and more suited to its needs. Due to the high level of dissatisfaction with the current system, the division needs to ensure that a thorough needs assessment is conducted prior to exploring the available system options. In addition, the division needs to carefully examine its current business practices to provide further efficiencies.

FISCAL IMPACT

Although the division will not be able to determine the cost of implementing a new system until it solicits vendor bids, the APS estimates approximately $3.5 million would be needed for the procurement and implementation of a new system.

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In implementing a new system, the costs of maintaining the division's current system will be reduced. It is estimated that the division could reduce these maintenance fees by $500,000 annually.

Recommendation 5-5	One-Time Costs/ Savings	2012-13	2013-14	2014-15	2015-16	2016-17
Procure and implement a new financial management system	($3,500,000)	$500,000	$500,000	$500,000	$500,000	$500,000

Note: Costs are negative. Savings are positive.

E. Review and Evaluation of Contracting Process

Division management functions 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 or through shared service arrangements that can be procured at a lower cost, higher quality, or both.

The APS has a shared service agreement with Arlington County for vehicle purchases and vehicle maintenance, and soon will use the county's carpentry services as well. In addition to shared services with the county, the school division participates in several cooperative agreements and "piggybacking" off other local and state government contracts.

The division maintains a print shop operation that falls under the direction of the assistant superintendent for school and community relations. The print shop operation has two employees: a supervisor and an assistant. The operation currently has three digital copiers that are used in providing printing services to the APS' departments and schools.

Recommendation 5-6: Explore options for making print shop operations cost-neutral.

Departments and schools using the APS' print shop are charged for their print jobs. However, they are not charged the full cost of printing, which results in the print operation subsidizing the services they provide to schools and departments.

Table 5.4 shows the charge-backs and expenditures for print shop operations for FY 2009, 2010, and 2011. The amount of expenditures not captured through school and department charge-backs was $236,000 for FY 2009, $247,000 in FY 2010, and $137,000 for FY 2011.

In addition, to continue the print shop operations, the supervisor indicated that some equipment needs replacing at a cost of approximately $106,000.

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Table 5.4. Print shop operations charge-backs and expenditures

Description	FY 2009	FY 2010	FY 2011
Charge-backs to schools and departments	**$69,540**	**$41,913**	**$195,404**
Salaries and benefits	$167,736	$164,349	$163,686
Equipment costs and repairs	$68,759	$67,205	$111,955
Supplies	$69,291	$57,754	$56,938
Total expenditures	**$305,786**	**$289,308**	**$332,579**
Excess expenditures over charge-backs	**$236,246**	**$247,395**	**$137,175**

Source: The APS' finance department reports for the years presented

The assistant superintendent for school and community relations, who oversees the print shop operations, told the review team that this subsidization is intentional to help schools and departments meet their budgets. However, because the division does not compare print shop operations to the cost of using outside providers, it is difficult to determine whether there is a more cost effective solution.

The APS should explore options for making the its print shop operations more cost-neutral, including establishing the operation as an internal service fund and/or partnering with the county, which already maintains a print shop that is operated through an internal service fund.

The purpose of an internal service fund is to fully allocate costs of operations to user departments. If the internal service fund is unable fully allocate costs, including equipment investments and print shop salaries, while operating at break-even, closing down printing operations and seeking an outside provider of printing services should be pursued.

FISCAL IMPACT

The implementation of this recommendation cannot be determined at this time. Charging schools and departments more realistic prices for printing services will help to cover the deficit in the print shop operations, but there will be additional costs reflected at the school and department levels.

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Chapter 6 – Technology Management

Introduction

This chapter provides updated information regarding the implementation statuses of the recommendations from the recent comprehensive technology review conducted by Berry, Dunn, McNeil & Parker (BDMP) at the APS from November 2010 to April 2011. The major areas that are covered by this review are:

- Assessment of the technology infrastructure and its processes

- Review of the tools, equipment and materials used by the department

- Review of the current student and financial information systems

- Review of the department's organizational structure

The external review resulted in 49 findings or issues. BDMP made 15 major recommendations (labeled A through O) to address these 49 findings and established estimated time and effort to implement the recommendations. The recommendations were grouped into three main areas: information services, applications, and technology.

The information services (IS) department prioritized the recommendations with a three- to five-year timeline for completion. As a result of this prioritization, the division grouped each recommendation into three areas: technical infrastructure, data systems, and departmental procedures. Table 6.1 is a summary of each recommendation and the extent to which it has been implemented.

Table 6.1. Summary of BDMP recommendations and implementation status, grouped by priority.

Recommendation	Implementation Status
Priority 1 – Technical Infrastructure	
Redesign the IS organization's structure and update job descriptions (C)	Partially complete
Conduct a network analysis (M)	Substantially complete
Analyze and consider implementing VoIP technology (N)	Substantially complete
Complete the platform infrastructure replacement project (O)	Substantially complete
Priority 2 – Data Systems	
Conduct an ERP business process and needs assessment analysis (I)	Partially complete
Develop policies and procedures to improve data quality in applications (J)	Partially complete

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Recommendation	Implementation Status
Conduct and SIS business process and needs assessment analysis (K)	Substantially complete
Conduct a needs assessment for a document management system (L)	Planned
Priority 3 – Departmental Procedures	
Develop written policies and procedures related to remote access (A)	Planned
Develop enterprise-wide change management policies and procedures (B)	Planned
Update existing and develop new service level agreements (SLA) (D)	Not initiated
Centralize and standardize project management methodologies and tools (E)	Partially complete
Develop policies and procedures for managing enterprise-wide support (F)	Partially complete
Develop policies and procedures for professional development and training (G)	Partially complete
Develop disaster recovery and business continuity plans (H)	Planned

Source: IS Review – Recommendations Report (BDMP), April 2011; Gibson Consulting Group, Inc., 2011-12

This chapter provides each recommendation from section four ("Recommendations") of BDMP's original report and an implementation status update for each recommendation organized by APS' prioritized areas. Each recommendation is numbered as it was in the original report. Additionally, the page number from the original report in which the recommendation appeared is listed after the recommendation, in parenthesis. The findings and BDMP's suggested action items to implement the recommendations are provided in Appendix C.

It is worth noting that this chapter will not reiterate the strengths documented by BDMP, as the purpose of this chapter is to provide implementation status updates for the BDMP recommendations.

Commendation: The information services department is commended for hiring a technology consulting firm to conduct a detailed and comprehensive department review.

The IS department engaged an outside consultant – BDMP – to perform a detailed and comprehensive review of the department. The goal of the review was to assess the technology infrastructure, including the mission critical applications such as the student information and finance systems and main processes, and look at industry best practices and other successful technology organizations to develop recommendations to help the department continue to serve its users and meet or exceed expectations with respect to technology. This review resulted in 15 major recommendations. As indicated in the remainder of this chapter, the department has implemented or is in the process of implementing all but three of the recommendations.

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A. Technical Infrastructure – Priority 1

BDMP Recommendation C: Redesign IS organization structure and update job descriptions (p47)

Status Update of Recommendation: Partially Complete

The IS department has submitted an updated organizational chart to personnel services. At the time of the review, the department was waiting for approval of the proposed changes. The IS department has also made changes to the majority of the job descriptions and is working on the remaining ones. Additionally, the IS department leadership indicated that they are working with personnel services to make sure that the IS staff pay scales are in line with their positions.

As part of the ongoing platform project, the IS department has created user accounts in the new active directory infrastructure and has configured them with correct permissions. These actions should address the issues regarding BDMP's finding T4.

BDMP Recommendation M: Conduct a network analysis (p71)

Status Update of Recommendation: Substantially Complete

Two findings related to this recommendation (T6, T7) have been addressed with the platform project, and one finding (T15) has been substantially addressed. In addition, IS department leadership indicated that a third-party consulting company has conducted a network analysis study, although the review team has not received a copy of the report. It is anticipated that two additional findings (T2, T12) will be addressed as a result of that study.

BDMP Recommendation N: Analyze and consider implementing voice over IP (VoIP) technology (p73)

Status Update of Recommendation: Substantially Complete

The division has the appropriate network infrastructure in place to allow the implementation of VoIP. However, the implementation would require a significant investment in initial hardware and the department is currently in the process of analyzing the cost and benefits of VoIP. In addition, the department is piloting other technologies, such as software-based VoIP which does not require the high initial costs of the traditional VoIP solution.

Recommendation O: Complete the platform infrastructure replacement project (p74)

Status Update of Recommendation: Substantially Complete

The department has completed most of the critical sub-projects that are part of the platform infrastructure replacement project. Table 6.2 shows the progress on each sub-project.

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Table 6.2. Platform infrastructure replacement sub-projects and statuses

Title	Scheduled Start	Design	Acquisition	Build	Test	Deploy
Email archiving	August 2010	Complete	Complete	Complete	Complete	Active
Critical infrastructure upgrade	December 2010	Complete	Complete	Complete	Complete	Active
Workstation deployment and management	December 2010	Complete	Complete	Complete	Complete	Complete
Unique identity system	January 2011	Complete	Complete	Complete	Complete	Complete
Email platform change	February 2011	Complete	Complete	Complete	Complete	Active
Wireless capacity and technology expansion	February 2011	Complete	Complete	Complete	Complete	Complete
Active directory	February 2011	Complete	Complete	Complete	Complete	Complete
Automated account provisioning	February 2011	Complete	Complete	Complete	Complete	Complete
Legacy and exceptional applications	March 2011	Complete	Complete	Active		
Local storage	March 2011	Complete	Complete	Complete	Complete	Complete
Backup	March 2011	Complete	Active			
Windows 7 – Admin	April 2011	Complete	Complete	Complete	Complete	Active
Windows 7 – Instruction	April 2011	Complete	Complete	Complete	Complete	Complete
Cloud storage	April 2011	Active				
Office 2010 – Admin	April 2011	Complete	Complete	Complete	Complete	Complete
Unified network services gateway	September 2011	Complete	Complete	Active		
OSX support	September 2011	Complete	Complete	Complete	Complete	Complete
Google apps for education	October 2011	Complete	Complete	Complete	Complete	Active
Novell infrastructure retirement	July 2012					
Microsoft 365 for education	Under Consideration					
Network intrusion detection	Under Consideration					

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Title	Scheduled Start	Design	Acquisition	Build	Test	Deploy
iOS support	Under Consideration					

Source: The APS website (http://www.apsva.us/site/Default.aspx?PageID=2474); The APS staff

Currently, the department is in the discovery, pilot, or research phase of the following sub-projects, which are part of the larger platform infrastructure replacement project:

- Network intrusion detection deployment

- Mobile operating system (iOS) Support

- Microsoft Office 365 for education

B. Data Systems – Priority 2

BDMP Recommendation I: Conduct an enterprise resource planning (ERP) business process and needs assessment analysis (p61)

Status Update of Recommendation: Partially Complete

The division is looking for ways to improve processes using existing systems and has completed some business process mapping related to timecard entry approval, family and medical leave, and leave reporting processes. However, major processes have not been examined (e.g., payroll, purchasing, budgeting).

IS department staff indicated that there are issues with the existing ERP system, Strategic Transformation of Administrative Resource Systems (STARS) – the name used among staff for the Oracle system, and that the shortcomings of the system may be the result of a poor system implementation. The IS department leadership does not believe that business process mapping alone can fix all of the issues identified in the review.

The APS has engaged a consultant to issue a request for information for alternate ERP systems.

Recommendation J: Develop policies and procedures to improve data quality in applications (p64)

Status Update of Recommendation: Partially Complete

The department has not created complete policies and procedures to improve data quality in the enterprise applications. However, some important steps have been taken in terms of creating the organizational structure and the application environment that will support data quality in these applications. The department has created a full-time data architect role, whose primary responsibility will be to manage data quality and related data issues. This position will report directly to the assistant

superintendent for information services. According to IS leadership, at the time of the review team's site visit, the organizational changes had not been approved by the personnel services department.

The department is currently executing a project to replace the fragmented student information system environment, which currently consists of eSchoolPLUS and APSnet.

Additionally, the division is evaluating potential division-level data warehouse solutions in order to provide transparent and accurate data to division users.

BDMP Recommendation K: Conduct a student information system (SIS) business process and needs assessment analysis (p66)

Status Update of Recommendation: Substantially Complete

IS department leadership indicated that a needs assessment and process analysis for the SIS has been conducted. Based on this analysis, as well as the requirements gathered from the key users and stakeholders, the division is in the process of the final selection of a new SIS. According to department leadership, the project for replacing eSchoolPlus and APSnet began in January of 2012, with an expected completion date in August of 2013.

BDMP Recommendation L: Conduct a needs assessment for a document management system (p69)

Status Update of Recommendation: Planned

A needs assessment for a document management system has not been done. However, department leadership indicated this task will be part of the third phase of the platform/infrastructure replacement project. The decision to complete this task during a later phase of the platform project was made because of potential imminent changes to the division critical systems, such as the SIS.

C. Departmental Procedures – Priority 3

BDMP Recommendation A: Develop written policies and procedures related to remote access (p42)

Status Update of Recommendation: Planned

No written policies and procedures have been developed related to remote access. IS department leadership has indicated that one component of phase two of the comprehensive platform project is an improved remote access solution which will address many of the technical infrastructure issues experienced in the division. The department is planning to create written policies and procedures related to remote access once the new remote access solution is implemented.

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BDMP Recommendation B: Develop enterprise-wide change management policies and procedures (p44)

Status Update of Recommendation: Planned

The division is planning to establish change management policies and procedures as part of the deployment of the new Information Technology Service Management (ITSM) help desk system.

The terms "change management" and "communication" are often used interchangeably. Although change management includes a large communication component, it is a much larger discipline that is the subject of much research. In the simplest terms, change management is a set of processes, tools and techniques that can be used to manage employees' resistance to change when implementing process, technology, or organizational changes. For example, John Kotter, a well-known change expert, sets forth an eight step change process[1] which advises strong leadership, constant communication, and employee involvement, among other things.

In terms of communication, the IS department has initiated a plan to inform IS staff – including the Instructional Technology Coordinators – of major changes (e.g., updates regarding the platform project, which is a major infrastructure project being implemented APS-wide, using Google Sites). Additionally, IS regularly posts a newsletter on the APS web site to inform division staff about current and future changes related to the platform project. All groups within the IS department hold regular staff meetings in which they discuss the platform changes.

Largely due to the compressed timeframe of the early phases of the platform project, changes were not communicated to the division users in a timely manner. As the division moves into the latter phases of the platform project, the IS department has indicated that the changes will be better communicated to the APS staff.

BDMP Recommendation D: Update existing and develop new service level agreements (SLA) (p49)

Status Update of Recommendation: Not Initiated

Although the IS department does not currently have SLAs that cover all of its services, the review team received and reviewed one SLA for the Service Support Center that was last updated in January of 2009. Establishment of SLAs is dependent on the technical changes being made in response to the Priority 1 and Priority 2 recommendations. The department plans to update the SLAs when the technical changes are complete.

Service levels in SLAs are closely related to the organization's staffing levels and workloads. Although there are commonly accepted service levels for certain services (e.g., priority one service requests are responded to within one hour), these response times can be adjusted based on a department's staffing levels. Once the SLAs are written and published, division leadership can determine whether the service levels that can be provided with current staff levels are acceptable.

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[1] http://www.kotterinternational.com/kotterprinciples/changesteps

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The IS department operates on a schedule which provides support from 7:00 AM to 7:00 PM. Although there are no written SLAs to this effect, IS staff and user interviews indicated that the staff who support critical systems are available during regular hours and beyond, and that they respond to requests for assistance during the evenings and on weekends.

The department has plans to provide training and resources to its support staff regarding the support of Macintosh computers and other devices.

BDMP Recommendation E: Centralize and standardize project management methodologies and tools (p51)

Status Update of Recommendation: Partially Complete

During the review team's site visit, there was evidence that the department utilizes standard project management methodologies and tools and that the department has qualified staff to perform project management functions. The department has one full-time project manager. According to IS leadership, an accelerated methodology was utilized on the platform project, due to the urgency of the project. Although this accelerated methodology helped to keep the project on time, it caused issues with division users because of the lack of communication.

Although a formal process for identifying, selecting, prioritizing, and managing new technology projects has not been documented, the department appears to be doing its due diligence for technology projects currently underway.

Recommendation F: Develop policies and procedures for managing enterprise-wide support (p54)

Status Update of Recommendation: Partially Complete

The policies and procedures for managing enterprise-wide support at the APS have not been developed. However, the department has recently acquired a new work-order ticketing system which includes user self-service functionality, allowing users to enter their own help tickets. All areas of the IS department will use the same system to capture user requests and provide information on the status of requests.

The service support center within the IS department currently tracks and reports on metrics related to work orders on a monthly basis. However, there was no evidence that other support groups within IS do the same.

The school and community relations department, rather than the IS department, manages the division's website. As such, responsibility for this finding is not under the IS department.

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Recommendation G: Develop policies and procedures for professional development and training (p57)

Status Update of Recommendation: Partially Complete

IS department leadership has indicated that a professional development plan is being developed for IS staff members, although it was not available for examination during the review team's site visit. Additionally, there was no evidence that the department has established minimum training levels for each individual job description or developed individual development programs to align professional development with the individual's particular job description.

Interviews with various IS staff members indicated that additional monies have been allocated in the budget for professional development. As a result, more professional development requests were approved for IS staff.

Recommendation H: Develop disaster recovery and business continuity plan (p59)

Status Update of Recommendation: Planned

Currently, there is no written disaster recovery plan. However, IS department leadership has acknowledged the need for a disaster recovery plan and has therefore included the development of a comprehensive plan as part of phase three of the platform project. The department is currently documenting its network infrastructure in preparation for disaster recovery planning activities. The department plans to engage with a consulting firm in order to receive assistance with the disaster recovery planning process. A network assessment, a prerequisite for creating the disaster recovery plan, has recently been completed. APS anticipates having the funding needed to execute the planning process by May 2012.

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Chapter 7 – Food Services

Introduction

This chapter provides commendations and recommendations regarding the Arlington Public Schools (APS) food services program. The primary mission of a school division's food service program is to provide an appealing and nutritionally-sound breakfast and lunch to students while operating on a cost-recovery basis. In addition, these meals should be provided to the students in a safe, clean and accessible environment. Several success factors can be used to measure the efficiency and evaluate the effectiveness of a school division's food service operation. These factors include a high ratio of meals per labor hour (MPLH), minimizing food costs and waste, maximizing student participation in breakfast and lunch programs, providing a variety of meal choices that meet or exceed nutritional standards, reducing the length of time students must wait in line for service, and operating a financially self-sufficient program.

Efficient food service program management and cost controls can allow a division to operate its food services program on a break-even basis, thereby preventing the need to drain dollars away from classroom instruction. Successfully managed school food service programs provide customer satisfaction and contain costs while complying with applicable federal, state and local board regulations and policies.

The APS' food services program operates 23 full-service cafeterias and eight non-cooking elementary cafeterias. The food services program serves over 2,000 breakfasts and 9,000 lunches daily. The five staff in the central office oversees 127 staff at 22 elementary, five middle, and four secondary and high schools. All services must comply with national meal standards set forth by the United States Department of Agriculture (USDA), as well as policies and procedures established locally at the APS.

The food services program derives its revenues from reimbursements (on a per-meal basis) from the federal government, for meals provided to students who qualify for economic assistance, and cash sales from all other students. For the most recent fiscal year, food services earned $6.9 million in total revenues and incurred $6.7 million in expenditures for a net surplus of approximately $181,000.

This chapter presents commendations and recommendations for the food services program of the APS and includes the following major sections:

      A. Organization and Staffing

      B. Planning and Budgeting

      C. Management and Facility Operations

      D. Student Participation

While this review included the following areas, no significant commendations or recommendations were identified as a result of this work.

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- Policies, Procedures and Compliance

- Qualifying Students for Free and Reduced-Price Meals

- Nutrition and Nutrition Education Programs

- Purchasing, Warehousing and Contracting

Two significant commendations are made in this chapter:

- The APS cafeteria workers are well-trained.

- The current food services director has significantly improved the financial condition of the food service fund during her tenure.

Table 7.1 provides a summary of food services recommendations and resulting fiscal impacts over the next five years.

Table 7.1.Fiscal impacts of recommendations

Recommendation	Priority	One-Time Cost/ Savings	2012-13	2013-14	2014-15	2015-16	2016-17	Total Fiscal Impact
Organization and Management								
7-1. Adjust workload for secondary schools	Medium	$0	$0	$0	$0	$0	$0	**$0**
Planning and Budgeting								
7-2. Allocate direct costs to food services	High	$0	$145,860	$296,140	$442,000	$442,000	$442,000	**$1,768,000**
Management and Facility Operations								
7-3. Review school lunch scheduling	Low	$0	$0	$0	$0	$0	$0	**$0**
Student Participation								
7-4. Review projections for conversion of remaining 8 kitchens	Medium	$0	$0	$0	$0	$0	$0	**$0**
7-5. Focus efforts on improving student meal participation	High	$0	$275,600	$275,600	$275,600	$275,600	$275,600	**$1,378,000**

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Recommendation	Priority	One-Time Cost/ Savings	2012-13	2013-14	2014-15	2015-16	2016-17	Total Fiscal Impact
Net Fiscal Impact		$0	$421,460	$571,740	$717,600	$717,600	$717,600	$3,146,000

Note: Costs are negative. Savings are positive.

Savings shown in this table are to the general fund.

A. Organization and Staffing

The APS central food services program is led by a director who manages three supervisors (one of whom is a registered dietician), one clerical assistant, and one driver. One of the supervisors assists the director in the financial management of the program and the other supervisor focuses on operations.

The APS has been transitioning from a central kitchen/satellite operation to a model where each school is self-supporting with a full kitchen. One of the middle schools, in addition to its own kitchen, has additional facilities in its basement where meals are prepared, packaged, and delivered to eight non-cooking elementary schools. This model will be phased out in the next two years.

Each school location employs a food services manager who is responsible for requisitioning and taking delivery of food items, scheduling staff, and managing the operations of the cafeterias. The food service staff is responsible for preparing the food, working the food lines, and kitchen clean-up following the meal periods. The school custodial staff cleans the cafeteria seating areas only.

Each of the full-service kitchens orders and stocks its own food and non-food supplies on site. Weekly orders are placed with the central office for dry goods and paper supplies. The division utilizes vendors selected through a competitive process to provide most food and non-food items. The APS also participates in the Shenandoah food-buying cooperative which helps to reduce costs for schools in the northern Virginia area.

Commendation: The APS food service workers are well-trained.

The APS cafeteria managers receive certification in food service management skills. All school leads are licensed food service managers through an Arlington County program and take tests to be recertified every three years. Approximately 40 percent of food service staff is also licensed as food service workers.

Food services program workers are assigned schedules that provide the flexibility to meet daily workloads for meal planning, preparation, serving, and clean-up. The staff in each kitchen cleans the kitchen preparation, storage, and serving areas daily. Staffing at each of the schools is shown in Table 7.2.

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Table 7.2. Food services staffing

School Name	Manager	Staff	Total
Elementary Schools			
Abingdon	1	3	4
Arlington Tradition	1	1	2
Ashlawn	1	1	2
Barcroft	1	2	3
Barrett	1	2	3
Campbell	1	1	2
Carlin Springs	1	4	5
Claremont	1	1	2
Drew	1	1	2
Glebe	1	2	3
Henry	1	1	2
Hoffman Boston	1	2	3
Jamestown	1	1	2
Key	1	2	3
Long Branch	1	1	2
McKinley	1	1	2
Nottingham	1	1	2
Oakridge	1	1	2
Randolph	1	2	3
Science Focus	1	2	3
Taylor	1	3	4
Tuckahoe	1	1	2
Secondary Schools			
Jefferson [1]	1	8	9
Gunston	1	6	7
Kenmore	1	7	8
Swanson	1	5	6
Williamsburg	1	3	4
HB Woodlawn	1	4	5
Wakefield	1	9	10
Washington-Lee	1	10	11
Yorktown	1	8	9
Total Staff	**31**	**96**	**127**

Source: Arlington Public Schools, food services program

[1] Staffing includes Jefferson central kitchen that supplies non-cooking elementary schools.

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It is important to note that the staff count listed for each school is a headcount and does not represent full-time equivalent (FTE) positions, since staff work a variety of schedules ranging from two hours to eight hours each school day.

A common measure of the productivity and efficiency of school cafeteria operations is meals per labor hour (MPLH). This measure is an average of the number of meal equivalents served by the cafeteria over a given period of time, typically one month, divided by the total number of hours worked by cafeteria staff. The fewer the hours required to prepare and serve a given number of meals, the more efficient the cafeteria. Industry standards usually assume that more hours are required to prepare a meal in a full, convention kitchen – where meals are prepared from scratch – than in a satellite, convenience kitchen, such as those non-cooking elementary schools – where meals are prepared and packaged off-site and reheated and served at the school's cafeteria.

Additionally, as the number of meal equivalents served increases, the standard MPLH increases as larger cafeterias are expected to benefit from economies of scale. Table 7.3 shows the industry standard recommended MPLH for each range of meal equivalents served for both conventional and convenience systems.

Table 7.3. Industry standard recommended meals per labor hour

| Number of Meal Equivalents | Meals Per Labor Hour (MPLH) | | | |
| | Conventional System | | Convenience System | |
	Low Productivity	High Productivity	Low Productivity	High Productivity
Up to 100	8	10	10	12
101 – 150	9	11	11	13
151 – 200	10-11	12	12	14
202 – 250	12	14	14	15
251 – 300	13	15	15	16
301 – 400	14	16	16	18
401 – 500	14	17	18	19
501 – 600	15	17	18	19
601 – 700	16	18	19	20
701 – 800	17	19	20	22
801 – 900	18	20	21	23
901 up	19	21	22	23

Source: School Foodservice Management for the 21st Century, 5th edition

The APS analyzes MPLH at least once each semester to ensure that the food services program continues to operate as efficiently as possible. MPLH for a given kitchen will vary somewhat by month, depending on student attendance and the number of meals served each month. For the most recent month available during our review, the MPLH for each cafeteria type is shown in Table 7.4.

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Table 7.4. Meals per labor hour by school-level and kitchen type, September 2011.

Cafeteria Type	Range		Average Meal Equivalents	Average MPLH
	Low MPLH	High MPLH		
Elementary (convenience)	17	37	201-250	26
Elementary (conventional)	14	25	251-300	20
Secondary (conventional)	10	23	301-400	15

Source: Arlington Public Schools, food services program

The APS elementary schools generally have very high productivity rates. Analysis in September 2011 shows that all APS elementary schools except for one (Taylor) exceed the high School Foodservice Management (SFM) productivity standard based on the number of meals served daily. Most exceed the standard by a significant margin (114% to 205% of the high standard).

On average, secondary schools serve slightly fewer than 400 meals daily; therefore, the average MPLH of 15 falls within the range of SFM recommended productivity. However, the review team noted that the MPLH for three schools, Swanson Middle School (10.4), Wakefield High School (13.1), and Yorktown High School (10.5), fell below the recommended SFM standard of 12, 14 and 14 MPLH, respectively, based on average daily meals served at each school.

The disparity in productivity levels at elementary versus secondary schools means that the workload for elementary schools is disproportionately higher than that of the secondary schools.

Recommendation 7-1: Adjust the workload for the secondary schools.

The workload for the secondary schools should be adjusted so that the staff at those schools is meeting the same standards as those staff in the elementary schools. This recommendation may result in a reduction of overall staff; however, it may be preferable that the staffing is shifted from secondary schools to elementary cafeterias to balance the workload.

FISCAL IMPACT

This shifting of staff would not have a net impact on expenditures of the food services fund.

B.   Planning and Budgeting

The financial management of food service operations has become a major emphasis of school systems nationwide. Food service operations are expected to function like a business and be self-supporting. To successfully manage a financially stable school food service operation requires the knowledge of the financial goals and objectives of the school board, sound planning and budgeting development to meet the board's goals and objectives, and a financial accounting system that provides accurate and timely financial information to managing revenues and expenditures.

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Commendation: The current food services director has significantly improved the financial condition of the food service fund during her tenure.

The food services director took over management of the food services operations five years ago. In 2008, the fund was experiencing significant operating deficits in excess of $1 million. Since then, the operations have been streamlined and operating deficits have been eliminated. In the last fiscal year, food services reported a surplus of approximately $181,000 on revenues of $6.9 million.

Table 7.5 shows the financial performance of the food services program over the past five years.

Table 7.5. Food services program financial performance, fiscal years 2007-2010

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Revenues					
Food sales	$2,465,053	$2,429,284	$2,736,092	$2,884,384	$3,076,818
Federal/state reimbursements	$2,763,800	$2,833,971	$3,071,269	$3,444,324	$3,748,428
Other revenues	$248,267	$269,019	$75,903	$41,392	$35,316
Total Revenues	**$5,477,120**	**$5,532,274**	**$5,883,264**	**$6,370,100**	**$6,860,562**
Expenditures					
Personnel expenditures	$3,091,547	$3,190,287	$2,911,237	$3,097,898	$3,238,444
Food costs	$2,372,322	$3,287,402	$2,780,143	$2,841,984	$3,244,923
Materials and supplies	$441,535	$32,054	$25,356	$20,189	$50,974
Capital outlays	$39,108	$66,138	$204,026	$132,084	$112,107
Other expenditures	$50,261	$23,018	$9,236	$23,378	$33,334
Total expenditures	**$5,994,773**	**$6,598,899**	**$5,929,998**	**$6,115,533**	**$6,679,782**
Net surplus or (deficit)	**($517,653)**	**($1,066,625)**	**($46,734)**	**$254,567**	**$180,780**

Source: Arlington Public Schools, food services program

The APS' food services program incurred deficits in fiscal years 2007, 2008 and 2009 that were covered through subsidies from the general fund of $354,832, $1,529,963 and $460,029, respectively. No subsidies were needed in 2010 or 2011.

The food services program management has been proactive in adjusting meal prices to reflect economic conditions and prices at other regional school systems. As noted in the previous section, management calculates MPLH at least once each semester to ensure that there are no significant changes in meals served which would require staffing adjustments. Periodic analysis of MPLH also enables management to compare of the productivity levels among individual schools between school levels (high, middle and elementary) to ensure that the workloads and expectations of staff across the division are consistent.

Food costs as a percentage of revenues have remained under 50 percent, employee benefits have remained stable and participation rates have improved significantly under the current director.

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Federal guidelines permit the allocation of certain costs to the child nutrition fund (i.e., those expenditures that are necessary and reasonable for proper and efficient administration of the food program – including utilities, trash removal, and janitorial services). Currently, the APS does not allocate any direct costs associated with the food service operation. The food service fund reported excess revenues over expenditures in FY 2011 of approximately $181,000.

The review team estimates that approximately $442,000 of general fund expenditures relate to the operation of kitchens and cafeterias at all APS schools. Additional analysis is necessary to determine the amount of actual expenditures in the current fiscal year that can be allocated to food services for janitorial/custodial services, waste disposal, and utilities. Following is a discussion of each category of expenditures that should be considered for allocation.

- **Janitorial/custodial services** – The time spent by custodians policing the cafeteria area during breakfast and lunch period and the time spent cleaning up the cafeterias after lunch can be charged from the general fund to the child nutrition fund. In a typical school system, at least one to two hours each day for one custodian is spent at each elementary school and one to three hours for two custodians is spent at each secondary school. For the APS, a conservative estimate of the custodial hours spent cleaning the cafeterias would be 40 hours each day, or $137,000 annually (based on average hourly pay rate of $18.75 for 183 school days).

- **Waste Disposal** – Based on the estimates of custodians employed at the schools visited, approximately one-half of the trash collected daily relates to the kitchen and cafeteria operations. Additional analysis is necessary to confirm the actual proportion of trash collected by the APS food services and the annual fees for trash removal. Actual expenditures for refuse services have varied significantly over the past three years; however, based on expenditures for 2011 ($266,000), food services incurs approximately $130,000 for trash removal annually.

- **Utilities** – Utility costs for heating/cooling and lighting the cafeteria can be estimated based on the cafeteria's proportionate share of the overall square footage of each school, and the mix of uses for the cafeteria facility for food services or other functions during the school year. In detailed studies of other school systems, the review team has found that cafeteria/kitchen space typically accounts for five percent of the floor space of secondary schools and five to seven percent for elementary schools. Use of the cafeteria for breakfast and lunch, including preparation, serving, and clean-up time generally accounts for 50 percent of the total use of the cafeteria. Total utilities costs for 2011 (including electricity, heating fuel, and water) were approximately $7 million, resulting in annual allocation to food services of approximately $175,000 (one-half of 5% of total expenditures).

Recommendation 7-2: Allocate direct costs of the food services operations to the food services fund.

As noted above, the food services program has achieved a surplus in its operations in only the last two years. To achieve these surpluses, the program has had to defer certain expenses related to equipment

replacement, staff uniforms, training, staffing and information systems upgrades. The review team estimates that approximately $150,000 of additional annual expenses could be incurred in future years related to these deferred expenses.

For this reason, the food services program may not achieve sufficient operating surpluses to absorb all allocated direct costs in fiscal years 2012 and 2013. The APS should calculate the full costs allocable to the food services program; however, only the amount of allocable costs that can be absorbed by the program without incurring a deficit should be charged to the food service fund account.

FISCAL IMPACT

Allocation of direct costs would yield general fund savings of approximately $442,000 annually (beginning in 2014-15). The fiscal impact shown below represents savings to the general fund and costs to the child nutrition fund. Based on the net surpluses generated in the past two years, food services cannot fully absorb these direct costs without improving financial performance. The final section of this report (Student Participation) suggests methods for boosting surpluses by increasing student meal participation.

Full absorption of all direct costs will likely require a phase-in period as net surplus of the child nutrition fund grows with higher student participation. The table below assumes that the full benefit will be derived by fiscal year 2014-15.

Recommendation 7-2	One-Time Costs/Savings	2012-13	2013-14	2014-15	2015-16	2016-17
Allocate costs for custodians assigned to cafeteria clean-up	$0	$137,000	$137,000	$137,000	$137,000	$137,000
Allocate costs for waste disposal	$0	$130,000	$130,000	$130,000	$130,000	$130,000
Allocate costs for utilities	$0	$175,000	$175,000	$175,000	$175,000	$175,000
Phase-in of savings benefit	$0	($296,140)	($145,860)	($0)	($0)	($0)
Net Savings	**$0**	**$145,860**	**$296,140**	**$442,000**	**$442,000**	**$442,000**

*Table indicates savings to the general fund.

Note: Costs are negative. Savings are positive.

C.   Management and Facilities Operations

Lunch periods are not efficiently scheduled at all schools. Elementary schools bring students in by grade, giving each group a certain amount of time to eat. Middle schools operate three lunch periods and high schools operate either two or three periods. Based on observations during visits to three schools, each period is longer than necessary for students to eat. It was observed that each group remained in the cafeteria at least 10 to 15 minutes after all students had finished eating. There was also down time for the cafeteria staff before the next group began its lunch period – after students were dismissed and the cafeteria was prepared for the next group.

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The review team understands that some lunch period time is given for students to spend outdoors and the weather during our visits was inclement. However, this practice results in total lunch periods lasting longer than necessary and staff time not being utilized efficiently.

Recommendation 7-3: Review school lunch scheduling.

The APS should review the time necessary to bring students to the lunch room, serve them lunch, eat and prepare for the next lunch shift.

Food services leadership indicated that there is a requirement to provide a full 30-minute, duty-free lunch period to teachers, which influences their lunch period scheduling; however, based on research conducted by the review team, this does not appear to be a federal, state or local requirement. Although there was a duty-free lunch incentive fund, set up by the state legislature (Code of Virginia §22.1-291), which appropriated funding for the provision of duty-free lunch periods to teachers, this duty-free lunch period was not required to be provided and the code was repealed in the 2011 session by HB1885, Chapter 216, when the program was unfunded[1].

Additionally, there are no agreements with the teacher organizations to provide this duty-free lunch period. Therefore, it may be possible to shorten the overall time for all lunch periods, and food service workers' shifts could be better utilized to prepare for the next day.

FISCAL IMPACT

Because food service workers are scheduled and paid on 30 minute increments, there may be no opportunity for budget savings. However, if there is time that can be eliminated from the lunch period, resources can be better utilized and student school day can be allocated for more productive learning activities.

D.   Student Participation

Student meal participation rates have increased in recent years as food service program revenues have grown at a faster rate than APS enrollment. For the most recent two years, however, participation rates have remained steady, as shown in Table 7.6.

Table 7.6. Student Meal Participation Rates, September 2010 and September 2011

School Type	September, 2010		May, 2011		September, 2011	
	Breakfast	Lunch	Breakfast	Lunch	Breakfast	Lunch
Elementary	12.1%	47.9%	13.1%	52.6%	11.9%	47.0%
Middle	7.7%	45.9%	10.3%	44.3%	8.2%	47.0%
High	5.1%	28.7%	7.3%	26.2%	5.2%	28.9%

Source: Arlington Public Schools, food services program

As noted earlier in this chapter, APS operates some non-cooking elementary cafeterias where meals are prepared and packaged at Jefferson Middle School's kitchen and reheated and served on various sites.

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[1] http://lis.virginia.gov/111/idx/noframes/help/0022.html#44709345

At September 2010, 14 schools had non-cooking cafeterias; during the school year, five of these were converted to full-kitchens. At the start of this school year, Carlin Springs Elementary School's cafeteria was converted, such that now there are only eight remaining non-cooking cafeterias.

Although significant differences were noted in the lunch participation rates for cooking versus non-cooking kitchens (schools with full kitchens had as much as 10 percent higher lunch participation rates overall), the impact in terms of participation for the cafeterias that were converted since September 2010 has not been significant. Table 7.7 shows the rates of participation for breakfast and lunch at the five schools converted since September 2010.

Table 7.7. Comparison of participation for school cafeterias converted to full kitchens

School	September 2010		September 2011	
	Breakfast	Lunch	Breakfast	Lunch
Carlin Springs	52%	83%	44%	82%
Claremont	9%	51%	11%	51%
Long Branch	15%	50%	15%	53%
McKinley	--	27%	2%	30%
Nottingham	--	25%	2%	25%
Arlington Science Focus	7%	37%	7%	37%

Source: Arlington Public Schools, food services program

Conventional cafeterias are generally more expensive to operate, since a complete staff complement is required to prepare meals from scratch and each kitchen must be fully equipped to store materials and cook meals (e.g., ovens, freezers). The additional cost is considered justified when the quality of meals served can be improved and more students can be enticed to purchase their meals.

Recommendation 7-4: Review projections for meal participation and operating costs for conversion of remaining eight non-cooking kitchens.

This analysis is based on only one month of operation (September 2011) as a full, conventional kitchen. However, food services leadership should review the projections of meal participation and operating costs that underpinned the decision to convert these cafeterias before proceeding with the conversion of the remaining cafeterias eight non-cooking kitchens.

FISCAL IMPACT

There is no immediate fiscal impact of implementing this recommendation; however, APS may save future costs that would be incurred to convert the remaining non-cooking kitchens to conventional operation. These future expenditures would include the personnel expenses (additional hours for food preparation) and the costs of ovens or other kitchen equipment necessary for conventional operation. These future costs would be offset by the reduction of hours of staff at the Jefferson Middle School central kitchen which would be closed.

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There is wide disparity in the lunch participation rates for middle and elementary schools. Six schools were noted with less than 30 percent participation (four elementary and two middle schools), and six schools were noted with greater than 60 percent participation (four elementary and two middle schools). For each of these schools, student lunch participation rates appeared to vary depending on the percentage of students at each school receiving lunch at free or reduced prices. Schools with the lowest percentage of students eligible for free and reduced meals (within each school level) had the lowest level of participation. Conversely, schools with the highest percentage of students receiving subsidized meals had much higher participation rates.

Table 7.8 shows participation rates and percentage of students receiving free and reduced lunches.

Table 7.8. Lunch participation and free and reduced status

School	Percentage Lunch Participation	Percentage Free and Reduced
Elementary Schools		
Tuckahoe	24%	3%
Nottingham	25%	1%
McKinley	27%	7%
Jamestown	25%	2%
Carlin Springs	83%	83%
Barcroft	82%	66%
Hoffman-Boston	69%	69%
Randolph	78%	74%
Average All Elementary Schools	**48%**	**33%**
Middle Schools		
Swanson	29%	15%
Williamsburg	28%	13%
Jefferson	71%	66%
Kenmore	62%	55%
Average All Middle Schools	**46%**	**35%**

Sources: Arlington Public Schools, food services program and Virginia Department of Education website: (http://www.doe.virginia.gov/support/nutrition/statistics/index.shtml)

Recommendation 7-5: Focus efforts on improving student meal participation.

Efforts to improve student meal participation should continue. These efforts should focus on reasons why students who are not eligible for free and reduced meals elect to skip breakfast and lunch – or bring their lunches – rather than purchase meals in the cafeteria. It is recommended that APS conduct surveys of students and/or parents to determine the reasons for bringing lunches to school, or otherwise opting out of the school lunch program. Other strategies suggested by a neighboring state for boosting participation include "asking students' opinions, monitoring food quality, redesigning menus, increasing

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staff morale, providing a pleasant cafeteria atmosphere and sponsoring nutrition programs" (Maryland State Department of Education, www.marylandpublicschools.org).

The APS should meet with food service managers at each school, as well as other school or parent leaders, to discuss current participation levels and methods for engaging parents, students, and school leaders. Goals should be set overall at elementary, middle, and high school levels – and at each school – for ways to boost daily meals served. The results of the strategy should be assessed at the end of each fall and spring semester in order to fine-tune the plan going forward.

The review team did observe some trends regarding competition that the secondary school cafeterias face from external vendors; however, these food sources do not appear to account for the reason why 53 percent of students in middle schools and 72 percent of students in high schools are not eating in the cafeteria. Secondary school cafeterias face competition from commercial food providers, including restaurants which deliver directly to students at the schools and food trucks near (and on) campus property. During site visits one food truck, which is permitted to park in a high school's parking lot due to the absence of available parking adjacent to the school and concerns about students crossing roads to reach the truck, was observed. The degree to which these commercial sources comply with food safety regulations has not been determined by the school. This places the students, as well as APS, at risk should one or more students become sick due to food borne pathogens.

The access of students at high schools (and possibly middle schools) to competing lunch sources, such as food delivery to campuses and food trucks, should be evaluated to ensure that students are not placed at risk from unregulated food sources. As noted above, it is not clear that the competition is significantly impacting cafeteria participation rates; therefore, any fiscal impact from this recommendation has not been estimated.

FISCAL IMPACT

Increasing student participation will enable the food services program to generate sufficient net surplus from operations to fully absorb all direct costs related to custodial services, trash disposal, and utilities discussed in Section B. Planning and Budget. Table 7.9 shows that increasing participation by 10 percent would result in an increase to net surplus of $275,600, annually. Assumptions include the following:

- Receipts or disbursements for miscellaneous revenues, capital outlays, and miscellaneous expenditures in future years will be consistent with FY 2011 levels.

- Increasing participation by 10 percent can be accomplished without increasing staffing levels.

- Gross profit margins (i.e., revenues less food costs, materials, and supplies) will remain approximately 58 percent, comparable with FY 2011 and 2010 levels.

- Additional meals will be served to students not eligible for free or reduced meal subsidies, as participation by those students currently eligible under National School Lunch Program (NSLP) guidelines is at a maximum level.

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Table 7.9. Net impact of increasing student meal participation

School Level	Daily Lunches	Additional Daily Lunches +10%	School Days per Year	Additional Lunches Served Annually	Revenues per Meal *	Additional Gross Revenues	Net Increase in Surplus**
Elementary	5,619	562	183	102,828	$2.81	$288,946	$167,589
Middle	1,846	185	183	33,782	$2.91	$98,305	$57,017
High	1,651	165	183	30,213	$2.91	$87,921	$50,994
Totals	**9,116**	**912**		**166,823**		**$475,172**	**$275,600**

*Includes $0.26 per meal federal NSLP reimbursement

** Assuming a gross profit margin of 58 percent

Source: Gibson Consulting Group, Inc., 2012

Recommendation 7-5	One-Time Costs/Savings	2012-13	2013-14	2014-15	2015-16	2016-17
Focus efforts on improving student meal participation	$0	$275,600	$275,600	$275,600	$275,600	$275,600

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Appendix A – Fiscal Impact Summary

Table A.1 lists all recommendations made as a result of the review, by operational area, priority level for implementing each recommendation, as well as estimated savings, investments, and net fiscal impacts.

Table A.1. Summary of fiscal impacts (five-year)

Recommendation	Priority	One-Time Costs/ Savings	2012-13	2013-14	2014-15	2015-16	2016-17	Total Fiscal Impact
Chapter 1 – Divisional Administration								
1-1. Consider downgrading two to three assistant superintendent positions over the next three years to more closely align position titles with responsibilities.	Medium	$0	$0	$0	$0	$0	$0	**$0**
1-2. Improve the division's ability to match resources to needs by incorporating a performance-based budgeting system.	High	$0	$0	$0	$0	$0	$0	**$0**
Net Fiscal Impact – Chapter 1		**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Chapter 2 – Education Service Delivery								
2-1. Evaluate effectiveness of APS' low pupil-teacher ratio	High	$0	$0	$0	$0	$0	$0	**$0**
2-2. Reduce span of control for instructional leadership	High	$0	($350,000)	($350,000)	($350,000)	($350,000)	($350,000)	**($1,750,000)**
2-3. Develop site-based decision-making framework	High	($25,000)	$0	$0	$0	$0	$0	**($25,000)**
2-4. Standardize elements of division curriculum	High	($25,000)	$0	$0	$0	$0	$0	**($25,000)**
Net Fiscal Impact – Chapter 2		**($50,000)**	**($350,000)**	**($350,000)**	**($350,000)**	**($350,000)**	**($350,000)**	**($1,800,000)**

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Recommendation	Priority	One-Time Costs/ Savings	2012-13	2013-14	2014-15	2015-16	2016-17	Total Fiscal Impact
Chapter 3 – Human Resources								
3-1. Reorganize HR and shift data entry	High	$0	$0	$0	$0	$0	$0	**$0**
3-2. Place more focus on communication	Medium	($2,400)	$0	$0	$0	$0	$0	**($2,400)**
3-3. Reduce duplicative data entry	High	$0	$0	$0	$0	$0	$0	**$0**
3-4. Monitor teacher attendance and sub reasons	Medium	$0	$0	$0	$0	$0	$0	**$0**
3-5. Fully utilize the ERO system	Medium	$0	$0	$0	$0	$0	$0	**$0**
3-6. Update job descriptions and compensation plans	High	($10,400)	$0	$0	$0	$0	$0	**($10,400)**
Net Fiscal Impact – Chapter 3		**($12,800)**	**$0**	**$0**	**$0**	**$0**	**$0**	**($12,800)**
Chapter 4 – Facilities								
4-1. Improve the usage of TmaTalk work order system	Medium	$0	$0	$0	$0	$0	$0	**$0**
4-2. Improve the process for ordering cleaning supplies	Low	$0	$0	$0	$0	$0	$0	**$0**
4-3. Reduce custodial positions	Medium	$0	$207,240	$414,480	$580,272	$580,272	$580,272	**$2,362,536**
4-4. Change the reporting structure of custodial staff	High	$0	$0	$0	$0	$0	$0	**$0**
Net Fiscal Impact – Chapter 4		**$0**	**$207,240**	**$414,480**	**$580,272**	**$580,272**	**$580,272**	**$2,362,536**
Chapter 5 – Financial Management								
5-1. Implement a training and transition plan for purchasing staff	Medium	($3,000)	$96,515	$96,515	$96,515	$96,515	$96,515	**$479,575**
5-2. Move the division's payroll function to the finance and management service department.	High	$0	$0	$0	$0	$0	$0	**$0**

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Recommendation	Priority	One-Time Costs/ Savings	2012-13	2013-14	2014-15	2015-16	2016-17	Total Fiscal Impact
5-3. Reorganize responsibilities and cross-train employees	Medium	$0	$0	$0	$0	$0	$0	**$0**
5-4. Provide budget workshops to all APS staff responsible for monitoring a budget.	Medium	$0	$0	$0	$0	$0	$0	**$0**
5-5. Explore the options of implementing a new financial system for the division.	High	($3,500,000)	$500,000	$500,000	$500,000	$500,000	$500,000	**($1,000,000)**
5-6. Explore options for making print shop operations cost-neutral.	Low	Un-determined	Un-determined	Un-determined	Un-determined	Un-determined	Un-determined	Un-determined
Net Fiscal Impact – Chapter 5		**($3,503,000)**	**$596,515**	**$596,515**	**$596,515**	**$596,515**	**$596,515**	**($520,425)**
Chapter 6 – Technology Management								
N/A	--	--	--	--	--	--	--	**--**
Chapter 7 – Food Services								
7-1. Adjust workload for secondary schools	Medium	$0	$0	$0	$0	$0	$0	**$0**
7-2. Allocate direct costs to food services	High	$0	$145,860	$296,140	$442,000	$442,000	$442,000	**$1,768,000**
7-3. Review school lunch scheduling	Low	$0	$0	$0	$0	$0	$0	**$0**
7-4. Review projections for conversion of remaining 8 kitchens	Medium	$0	$0	$0	$0	$0	$0	**$0**
7-5. Focus efforts on improving student meal participation	High	$0	$275,600	$275,600	$275,600	$275,600	$275,600	**$1,378,000**
Net Fiscal Impact – Chapter 7		**$0**	**$421,460**	**$571,740**	**$717,600**	**$717,600**	**$717,600**	**$3,146,000**
TOTAL Net Fiscal Impact		**($3,565,800)**	**$875,215**	**$1,232,735**	**$1,544,387**	**$1,544,387**	**$1,544,387**	**$3,175,311**

Note: Costs are negative. Savings are positive.

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Appendix B – Peer Comparisons

Table B.1 Overview

School Division	FY 2011 Actual Membership	Percentage ESOL Membership	Percentage Free/Reduced Price Meal Eligible	Percentage Special Education Membership	Total Number of Schools
Alexandria	11,999	22.3%	52.8%	13.6%	20
Fairfax	174,933	12.9%	24.5%	14.0%	194
Falls Church	2,096	9.0%	7.8%	11.7%	4
Loudoun	63,220	7.8%	14.4%	11.7%	80
Manassas City	6,979	34.7%	49.2%	13.8%	9
Manassas Park City	2,998	26.2%	52.8%	11.9%	4
Montgomery County, MD	144,064	13.0%	30.7%	12.0%	200
Prince George's County, MD	128,172	11.8%	54.4%	12.2%	196
Prince William	79,399	16.8%	33.5%	12.5%	90
Peer Division Average	**68,207**	**17.2%**	**35.6%**	**12.6%**	**88.6**
Arlington	21,276	17.6%	31.2%	14.4%	36

Source: Washington Area Boards of Education Guide FY 2012, pgs. 5-15

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Table B.2 Teacher staffing levels

School Division	FY 2012 Total Authorized Teachers	FY 2012 Students per Classroom Teacher[1]		
		Elementary	Middle/Intermediate	Secondary/High
Alexandria	1,215.8	18.1	19.9	21.7
Fairfax	14,689.2	21.5	24.4	25.1
Falls Church	194.2	22.6	24.7	24.3
Loudoun	5,048.2	23.3	23.1	24.3
Manassas City	565.9	21.8	20.5	20.7
Manassas Park City	198.0	18.6	29.1	27.7
Montgomery County, MD	11,404.3	22.6	28.0	29.5
Prince George's County, MD	8,248.1	19.8	23.1	31.2
Prince William	5,584.4	22.5	28.3	28.8
Peer Division Average	**5,238.7**	**21.2**	**24.6**	**25.9**
Arlington	2,130.9	20.3	20.6	19.9

Source: Washington Area Boards of Education Guide FY 2012, pgs. 29, 34

Notes: Chart excludes teachers and students in pre-K, kindergarten, alternative schools, and self-contained special education

[1] Classroom teachers are positions used to determine class size

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Table B.3 Sources of revenue – school operating fund

School Division	Federal Funds	State Funds	Local Funds	Beginning Balance	Other
Alexandria	6.7%	12.8%	75.1%	3.6%	1.9%
Fairfax	4.1%	21.0%	70.0%	2.5%	2.5%
Falls Church	3.0%	14.2%	76.8%	3.9%	2.2%
Loudoun	1.8%	29.8%	66.2%	1.3%	0.9%
Manassas City	6.0%	43.3%	49.8%	0.3%	0.6%
Manassas Park City	6.6%	54.4%	35.4%	0.0%	3.6%
Montgomery County, MD	3.5%	27.6%	67.5%	0.8%	0.6%
Prince George's County, MD	6.9%	54.2%	38.3%	0.0%	0.7%
Prince William	4.1%	47.8%	44.3%	3.4%	0.4%
Peer Division Average	**4.5%**	**34.4%**	**58.1%**	**1.6%**	**1.3%**
Arlington	2.4%	12.6%	81.8%	2.5%	1.0%

Source: Washington Area Boards of Education Guide FY 2012, pg. 25

Note: Funds for entitlement grants are included here under the School Operating Fund for consistency with other districts, although some districts may not consider these funds as part of their operating funds.

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Table B.4 Cost per pupil

School Division	FY 2010 Approved	FY 2011 Approved	FY 2012 Approved
Alexandria	$ 18,003	$ 16,983	$ 17,618
Fairfax	$ 12,898	$ 12,597	$ 12,820
Falls Church	$ 18,116	$ 16,729	$ 16,309
Loudoun	$ 11,997	$ 10,833	$ 11,014
Manassas City	$ 12,192	$ 11,351	$ 11,478
Manassas Park City[1]	n/a	n/a	$ 9,888
Montgomery County, MD[2]	$ 15,490	n/a	$ 14,776
Prince George's County, MD	$ 12,267	$ 11,611	$ 11,753
Prince William	$ 10,383	$ 9,577	$ 9,852
Peer Division Average	**$ 13,918**	**$ 12,812**	**$ 12,834**
Arlington	$ 18,569	$ 17,322	$ 18,047

Source: Washington Area Boards of Education Guide FY 2012, pg. 31

[1] Mansassas Park City Public Schools started participating in WABE guide in FY 2012

[2] Montgomery County Public Schools did not participate in WABE guide in FY 2011

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Table B.5 School-based staff per 1,000 students

School Division	FY 2012 Approved Membership	Staff per 1,000 Students			
		Administrators	Educational Specialists	Instructional Assistants	Non-Management/All Others
Alexandria	12,381	3.8	13.4	14.9	14.4
Fairfax	177,629	3.6	2.8	16.2	15.3
Falls Church	2,177	4.6	5.8	27.4	25.1
Loudoun	66,266	4.2	1.6	17.7	15.2
Manassas City	7,131	3.5	2.8	15.7	16.8
Manassas Park City	2,998	3.0	2.7	8.7	11.7
Montgomery County, MD	146,709	3.3	1.9	15.9	12.9
Prince George's County, MD	125,168	4.9	1.4	9.7	13.0
Prince William	81,411	3.3	0.9	8.1	13.5
Peer Division Average	**69,097**	**3.8**	**3.7**	**14.9**	**15.3**
Arlington	22,245	4.7	1.5	23.9	19.3

Source: Washington Area Boards of Education Guide FY 2012, pgs. 34, 35

Note: Entitlement grant positions are included here although these positions are not part of the school operating fund

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Table B.6 Nonschool-based educational specialists per 1,000 students

School Division	FY 2012 Approved Membership	Non-school Educational Specialists Per 1000 Students
Alexandria	12,381	1.8
Fairfax	177,629	0.7
Falls Church	2,177	0.7
Loudoun	66,266	0.6
Manassas City	7,131	0.0
Manassas Park City	2,998	0.0
Montgomery County, MD	146,709	1.3
Prince George's County, MD	125,168	4.8
Prince William	81,411	2.7
Peer Division Average	**69,097**	**1.4**
Arlington	22,245	2.0

Source: Washington Area Boards of Education Guide FY 2012, pgs. 34, 35

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Table B.7 Nonschool-based, leadership staff per 1,000 students

School Division	FY 2012 Approved Membership	Leadership Team Per 1000 Students	Management Per 1000 Students
Alexandria	12,381	0.3	2.2
Fairfax	177,629	0.1	0.9
Falls Church	2,177	1.4	3.0
Loudoun	66,266	0.1	1.5
Manassas City	7,131	0.3	1.4
Manassas Park City	2,998	0.7	2.3
Montgomery County, MD	146,709	0.1	1.9
Prince George's County, MD	125,168	0.2	0.9
Prince William	81,411	0.1	1.4
Peer Division Average	**69,097**	**0.4**	**1.7**
Arlington	22,245	0.4	2.5

Source: Washington Area Boards of Education Guide FY 2012, pgs. 34, 35

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Table B.8 Nonschool-based, technical/support and office support staff per 1,000 students

School Division	FY 2012 Approved Membership	Technical/Support Per 1000 Students	Office Support Staff Per 1000 Students
Alexandria	12,381	5.1	2.0
Fairfax	177,629	3.4	1.3
Falls Church	2,177	4.1	1.6
Loudoun	66,266	1.7	2.2
Manassas City	7,131	3.3	1.4
Manassas Park City	2,998	1.7	3.0
Montgomery County, MD	146,709	0.8	2.1
Prince George's County, MD	125,168	1.8	2.6
Prince William	81,411	2.0	1.8
Peer Division Average	**69,097**	**2.7**	**2.0**
Arlington	22,245	4.1	2.7

Source: Washington Area Boards of Education Guide FY 2012, pgs. 34, 35

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Table B.9 Custodial and maintenance staff, FY2012

District	FY 2012 Approved Membership	School-based Custodians		Non-School-based Maintenance/Custodial		Total Staff per 1,000 Students
		Staff FTEs	Per 1,000 Students	Staff FTEs	Per 1,000 Students	
Alexandria	12,381	62.5	5.0	24.7	2.0	7.0
Fairfax	177,629	1,308.0	7.4	464.0	2.6	10.0
Falls Church	2,177	22.5	10.3	2.0	0.9	11.3
Loudoun	66,266	494.0	7.5	202.5	3.1	10.5
Manassas	7,131	52.5	7.4	10.0	1.4	8.8
Manassas Park	2,998	20.0	6.7	5.0	1.7	8.3
Montgomery County, MD	146,709	1,263.2	8.6	454.5	3.1	11.7
Prince George's County, MD	125,168	1,064.6	8.5	427.0	3.4	11.9
Prince William	81,411	440.4	5.4	235.0	2.9	8.3
Peer Division Average	**69,097**	**525.3**	**7.4**	**202.7**	**2.3**	**9.8**
Arlington	22,245	194.5	8.7	84.5	3.8	12.5

Source: Washington Area Boards of Education Guide FY 2012, pgs. 34-37

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Table B.10 Other operating fund positions[1] per 1,000 students

School Division	FY 2012 Approved Membership	Other Operating Fund Positions Per 1000 Students
Alexandria	12,381	9.9
Fairfax	177,629	0.2
Falls Church	2,177	5.4
Loudoun	66,266	13.6
Manassas City	7,131	14.2
Manassas Park City	2,998	13.3
Montgomery County, MD	146,709	15.3
Prince George's County, MD	125,168	15.1
Prince William	81,411	11.0
Peer Division Average	**69,097**	**10.9**
Arlington	22,245	7.5

Source: Washington Area Boards of Education Guide FY 2012, pgs. 34, 35

[1] Includes bus drivers, bus drivers' aides and cafeteria staff (Fairfax contracts for bus drivers and bus driver aides)

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Table B.11 FY 2011 actual free and reduced lunch eligibility

School Division	Students Eligible	Percent of District Enrollment
Alexandria	6,451	52.8%
Fairfax	42,204	24.5%
Falls Church	161	7.8%
Loudoun	9,277	14.4%
Manassas City	3,410	49.2%
Manassas Park City	1,571	52.8%
Montgomery County, MD	44,231	30.7%
Prince George's County, MD	68,970	54.4%
Prince William	26,617	33.5%
Peer Division Average	**22,544**	**35.6%**
Arlington	6,694	31.2%

Source: Washington Area Boards of Education Guide FY 2012, pg. 40

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Table B.12 Graduates by diploma type

School Division	Percents of Total							
	Standard Diploma	Advanced Studies Diploma	Special Diploma	Certificate of Program Completion	GED Certificate	GAD Diploma	Modified Standard Diploma	Total Graduates and Completions (Count)
Alexandria	52.9%	34.3%	4.2%	0.0%	6.3%	0.0%	2.2%	714
Falls Church	18.9%	79.0%	0.0%	0.0%	0.0%	0.0%	0.0%	143
Loudoun	24.9%	71.4%	1.1%	0.3%	1.2%	0.0%	1.1%	3,926
Peer Division Average	**32.3%**	**61.6%**	**1.8%**	**0.1%**	**2.5%**	**0.0%**	**1.1%**	**1,594**
Arlington	33.4%	61.0%	1.3%	0.0%	0.0%	0.0%	3.7%	1,327

Source: 2009-10 Virginia DOE Graduation, Completion and Dropout Data – High School Graduates and Completers

Table B.13 Graduates by continuing education plans

School Division	Percent of Total					
	Attending Two-year Colleges	Attending Four-year Colleges	Other Continuing Education Plans	Employment	Military	No Plans
Alexandria	23.2%	47.6%	20.6%	4.1%	3.0%	1.4%
Falls Church	12.7%	80.0%	1.2%	2.4%	1.8%	1.8%
Loudoun	28.5%	60.7%	3.4%	4.7%	1.9%	0.9%
Peer Division Average	**21.5%**	**62.8%**	**8.4%**	**3.7%**	**2.3%**	**1.4%**
Arlington	19.5%	65.1%	4.2%	5.6%	1.1%	4.5%

Source: 2009-10 Superintendent's Annual Report, Table 5

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Table B.14 Dropout percentage

School Division	Grades 8-12 Total Membership (Count)*	Total Dropouts (Count)**	Dropout Percentage
Alexandria	3,664	60	1.64%
Falls Church	846	2	0.24%
Loudoun	21,782	115	0.53%
Division Average	**8,764**	**59**	**0.67%**
Arlington	6,977	191	2.74%

*Source: 2009-10 Superintendent's Annual Report, Table 2

**Source: 2009-10 Superintendent's Annual Report, Table 6

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Appendix C – BDMP Technology Report Detail

BDMP Recommendation A: Develop written policies and procedures related to remote access (p42) (Priority 3)

Related finding(s) by BDMP:

A7. Some applications in use in APS do not accommodate remote access functionality. The IS department supports remote access to the APS network. However, some applications or components of applications are not accessible remotely. The example referenced most frequently by users during interviews was EasyGradePro. Currently, the IS department is considering replacing EasyGradePro with eSchoolPLUS grade book functionality, which will provide this remote access functionality.

T10. Remote access to some APS applications is cumbersome and not user–friendly. APS users reported that they are able to access some APS applications remotely, but the process to do so is cumbersome and the resulting network performance is sometimes too slow to perform desired tasks. Reported examples were primarily related to functionality within STARS (Strategic Transformation of Administrative Resource Systems), including the lack of availability of verification tables while working remotely.

BDMP Action Items to Implement Recommendation

1. Determine the applications to which IS will provide remote access

2. Complete the implementation of the new platform

3. Determine the technology that will be used to deliver remote access capabilities

4. Document policies and procedures related to remote access

5. Update existing documentation based on new remote-access capabilities

6. Manage the change and train users on the new functionality

BDMP Recommendation B: Develop enterprise-wide change management policies and procedures (p44) (Priority 3)

Related finding(s) by BDMP:

A8. Updates of APS applications, resulting in new or modified functionality, are not adequately communicated to users. As IS upgrades or modifies the configuration of applications used at APS, the implications to end-users are not always communicated. The result is that users are faced with unfamiliar interfaces that reduce productivity, and users do not fully leverage new or updated functionality.

M12. **The IS department does not have established and well-documented change management procedures.** Change management procedures are lacking for application upgrades, application configuration, system implementation and other technology changes. As a result, users are not aware of

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all changes and their benefits. In addition, IS staff are often not aware of the changes in order for them to effectively support the systems they impact and train users on new functionality.

T11. **Technology training for technology users at APS is sometimes limited due to instances of a lack of communication within IS.** A training group exists within IS and consists of seven resources tasked with delivering training activities for all employees. There are times when the training group is not engaged in the implementation of new technologies throughout APS, which presents challenges in ensuring users are adequately trained to use those systems. Ongoing refresher training efforts are sometimes shared with the instructional technology coordinators (ITCs) in the schools. It was reported that the ITCs are not always involved in the implementation of new technology and cannot satisfy end-users requests for training

BDMP Action Items to Implement Recommendation

1. Assign resources to develop the change management practices

2. Establish a Change Advisory Board

3. Develop and document a process for requesting changes

4. Develop and document a process for reviewing requested changes

5. Develop and document a process for implementing approved changes

6. Develop and document a process for measuring the effectiveness of implemented changes

BDMP Recommendation C: Redesign IS organization structure and update job descriptions (p47) (Priority 1)

Related finding(s) by BDMP:

M1. The current IS organizational structure is not optimized to assist APS in meeting the overall needs of the organization. Several IS and APS staff reported challenges associated with the current organizational structure in the IS department. In the five or six years prior to the current IS assistant superintendent joining APS, multiple reorganizations occurred resulting in some individuals receiving promotions and others demotions. The current structure is creating challenges in how IS works to assist in meeting the needs of APS.

M2. **The career ladder and related job descriptions within the IS department are not adequately documented, and those that are documented are not current or consistent with the marketplace.** Some IS job descriptions are nearly ten years old. The lack of current job descriptions has resulted in confusion of responsibility, and thus accountability. Corresponding pay scales have not been updated, and some individuals are being paid less – or in some cases more – than what the position would typically pay today

M9. IS department resources are being used to support regular business functions involving particular applications. It was reported that members of IS are responsible for performing specific business functions, such as semi-monthly payroll processing, quarterly processing, and reporting and generation

of assignment notices and teacher contracts. This impacts the ability of the IS staff to perform their other responsibilities and also creates silos of knowledge within APS.

M11. **The roles and responsibilities of ITCs vary from school to school.** This issue has led to some ITCs being used for roles not related to supporting technology education. The original intention of these resources was to improve the effectiveness of technology in aiding instruction.

M13. **It appears that some groups within IS, such as the network group, do not have an appropriate number of resources in comparison to their expected workload.** Published best practice staffing levels are not in place in some groups within the IS department. One such group is the functional area that is performing typical network administration duties. It appears to have fewer staff than an organization similar in size to APS may have. Other groups in IS appear to have more staff than a similarly sized organization typically may have. In addition, the responsibilities for a particular role are not necessarily represented by that role's title

T4. **User accounts are not appropriately configured to support the roles of particular individuals within the IS department.** Although IS has made improvements in this area recently, it was reported that a lack of standard user configuration procedures and consistent job descriptions have caused the user accounts to be configured inappropriately. In some cases, users do not have enough access to perform their job functions and in others, some users have more privileges than a resource in their position should typically have. As a result, some instances of sharing user logins have occurred. Without a consistent, documented policy for access levels, security control is diminished.

BDMP Action Items to Implement Recommendation

1. Determine titles and responsibilities for jobs based on new organizational structure

2. Work with personnel services to finalize job descriptions

3. Publish job descriptions in IS

4. Consider adding appropriate certifications to job descriptions

BDMP Recommendation D: Update existing and develop new service level agreements (SLA) (p49) (Priority 3)

Related finding(s) by BDMP:

M3. **Consistent SLAs that cover all services offered by IS are not in place at APS.** It was reported that an SLA was implemented at one point but it is currently not followed by all groups within IS. As a result, documented standards for the levels of service that users should expect do not currently exist. This has led to ambiguity in how to resolve issues, as well as who is responsible and accountable for supporting particular groups of users.

M10. Procedures for support beyond standard business hours are not established. Support for APS users is generally available from 7:00 AM to 5:00 PM on weekdays. Due to the multiple groups in the IS

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department that provide support, the hours vary depending on the type of support requested. Some support procedures are not consistently followed and/or are not adequately documented.

T5. **Users reported a perception that the IS department has limited individuals with the ability to support Macintosh computers.** Currently, there are approximately 250 Macintosh computers throughout APS, and a large number of Apple iPads are being deployed. While some individuals within the IS department have expertise related to Mac support, users reported that they are not aware of dedicated resources. A documented support policy for Macs or iOS devices does not exist.

BDMP Action Items to Implement Recommendation

1. Identify two to three individuals to be responsible for developing the SLA
2. Collect all existing IS and vendor SLAs
3. Create an inventory of all service capabilities IS offers
4. Create a listing of all service needs that the organization has
5. Define service response times and durations based on type of event
6. Define service response times and durations based on service level
7. Regularly update SLAs

BDMP Recommendation E: Centralize and standardize project management methodologies and tools (p51) (Priority 3)

Related finding(s) by BDMP:

M4. **It was reported by many IS staff that the current communication methods within the department could be improved to ensure that appropriate staff are aware of current and planned projects.** It was reported by many individuals that there is a need for an improved communication mechanism so that planned IT projects and new systems being deployed are communicated to appropriate staff. While management does meet on a bi-weekly basis, non-management staff expressed that communication is not always "pushed down".

M7. **The implementation of the new "platform" at APS is not adequately planned and does not leverage best practices of project management.** The IS department developed a "concept plan" for the platform and moved forward with the project. To implement needed improvements quickly, the IS department has put this project on a fast track. A formal implementation project plan that includes key considerations such as the project timeline, project team, necessary business process changes, a training plan, and a communication plan does not exist. Technology implications such as how applications will operate on the updated platform have not been fully explored and tested. User input has also not been widely gathered to ensure that new platform meets their needs and that the implementation has buy-in from users.

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M14. **The process for selecting new technologies to implement is not documented**. Many IS department staff reported challenges in implementing and supporting technologies because they were not involved in the selection process for these technologies. In addition the true cost is often not analyzed to understand the resource levels that will be needed to support various technologies.

M16. **A documented process for identifying, prioritizing, and managing IT projects does not exist.** A process or system and a related set of policies and procedures for selecting, managing, prioritizing, collaborating and implementing IT projects does not exist, which can make project management and support difficult.

M17. General IT management policies and procedures are not fully documented. It was reported that not all general IT policies and procedures are fully documented. Examples include back up procedures, change management, updated support call handling and acceptable use polices.

BDMP Action Items to Implement Recommendation

1. Develop internal project management function

2. Document policies and procedures for selecting, prioritizing, and managing IT projects

3. Communicate and train IS staff on policies related to IT project management

Recommendation F: Develop policies and procedures for managing enterprise-wide support (p54) (Priority 3)

Related finding(s) by BDMP:

M5. **A single system and related policies and procedures for tracking and managing support requests for all areas of IS does not exist.** The Service Support Center uses the technology tool *HEAT* (FrontRange Solutions) while the Enterprise Support Group uses *Bugzilla* to track support requests. An additional tracking mechanism is the Access database used by User Support Group (or TSS) to track training activities. While the nature of the requests largely dictates which system is used and ultimately which APS resources address the issues, overlap exists which has led to confusion and lack of accountability in the resolution as well as the assigned priority of some support requests. In addition, the benefit of sharing resolution strategies among the organization is not realized.

T9. A documented process to manage requests for information from the planning and evaluation division does not exist. Requests for information from the planning and evaluation division do not follow a documented process. Staff from this division will often work independently to fulfill requests which may result in duplicated efforts

T17. **End-users expressed dissatisfaction with either the functionality or the appearance of the APS website.** End-users reported the current APS website lacked both aesthetics and appropriate content management capabilities. The school and community relations group manages and updates the website and the IS department is not directly responsible for it. However, IS staff reported they often hear complaints about the website as users have the perception it is managed by IS.

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BDMP Action Items to Implement Recommendation

1. Document requirements for a support request tracking system

2. Select and implement a single support tracking system

3. Define and document support roles within IS

4. Regularly review and monitor metrics and reports from support tracking system

5. Leverage reports and metrics to identify training needs and ineffective technologies

Recommendation G: Develop policies and procedures for professional development and training (p57) (Priority 3)

Related finding(s) by BDMP:

M6. Professional development opportunities for IS staff have been impacted due to budget constraints. For example, in the past some mid-level management in the IS department received training in ITIL best practices. However, the training budgets at APS were significantly reduced last fiscal year, which has decreased the availability of training opportunities for IS staff.

BDMP Action Items to Implement Recommendation

1. Determine training and professional development strategy

2. Establish minimum training levels for respective job descriptions

3. Develop individual development programs

4. Allocate budgets for training

5. Develop process for requesting training opportunities

Recommendation H: Develop disaster recovery and business continuity plan (p59) (Priority 3)

Related finding(s) by BDMP:

M15. **A comprehensive disaster recovery/business continuity plan that describes how all information systems will be restored does not exist.** APS does not have a business continuity and disaster recovery plan to ensure it will still be able to serve its users following a catastrophic incident.

BDMP Action Items to Implement Recommendation

1. Identify project team to develop disaster recovery and business continuity plan

2. Engage a consultant to conduct a risk assessment

3. Document current business processes

4. Develop disaster recovery and business continuity plan

5. Continually update and test the plan

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BDMP Recommendation I: Conduct an ERP business process and needs assessment analysis (p61) (Priority 2)

Related finding(s) by BDMP:

A1. **There is a desire at APS for greater use of workflow functionality within the Oracle ERP system (otherwise known as STARS)**. It was reported that the STARS application supports workflow functionality, such as routing approvals for purchases, which is currently being used by the finance department for purchasing business processes. However, Finance reported a desire to configure workflow approvals based on categories of purchases, and other business processes within APS could benefit from implementing workflow functionality.

A2. The manner in which the STARS budgeting module is being used by APS has made position control problematic. It was reported that APS staff are exporting budgeting information from STARS into a Microsoft Access database in order to calculate and run reports. Since some of the budgeting analysis is taking place in Access, the ability to leverage the payroll and human resources information for position control is difficult.

A10. **It is not clear who is responsible for the management of project costing in STARS**. Based on interviews with the personnel services and finance departments, it is not clear how APS currently tracks labor costs and cost allocations in the STARS system. It was reported that documented policies and procedures do not exist.

A11. **Grants and projects are manually tracked in an Excel spreadsheet**. It was reported that APS has implemented Oracle's grants/project module, but the functionality is not being utilized by staff. Currently, grants are managed by downloading data from the general ledger and importing to an Excel spreadsheet. This results in disparate data repositories.

A12. **A lack of integration of APS applications necessitates the use of manual workarounds**. Paper-based processes, as well as the use of disparate Excel spreadsheets and Access databases, are common in APS when data needs to be analyzed and reported among applications. The use of these tools occupies a large amount of time from IS and APS resources.

A14. **APS is currently using a third-party vendor for applicant tracking (WinOcular).** The STARS application has an applicant tracking product (Oracle - iRecruitment) but APS has not implemented this functionality based on a decision by the personnel services department. Currently, the WinOcular application does not interface with STARS.

BDMP Action Items to Implement Recommendation

1. Determine if internal APS resources will be used to develop business processes analysis, needs assessment and requirements documentation

2. Document and diagram business processes

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3. Conduct a gap analysis to understand needs of APS that are being met by APS and those processes that are being performed manually

4. Based on the business processes analysis and needs assessment process, develop a list of functional and technical requirements

5. Become involved in vendor (Oracle) user groups to understand how other similar organizations are meeting similar requirements as APS

6. Discuss unmet requirements with Oracle to understand options for meeting requirements

7. Hire a business analyst for the enterprise services group

8. Issue an RFI to the vendor community to understand functionality available in other systems and potential maintenance costs

Recommendation J: Develop policies and procedures to improve data quality in applications (p64) (Priority 2)

Related finding(s) by BDMP:

A3. **APSnet is used to store critical data due to limited functionality in eSchoolPLUS**, the division's student information system (SIS). It was reported that eSchoolPLUS does not accommodate the storage of certain critical data and as a result, APSnet is being used for this purpose. This result in similar or identical data residing in different systems and increases the time required for report generation.

A6. **Data quality and data standards are a concern for application users at APS**. Users of eSchoolPLUS, STARS, and other applications indicated that an effort was made to assign data ownership to specific functional areas, but the effort has not succeeded. In addition, data is stored outside of the enterprise applications that are in place, and prescribed data audit practices are not widely used. The lack of confidence in current data quality impacts APS employees' willingness to use enterprise applications and encourages siloed data repositories.

A15. Challenges exist with tracking and reporting teacher certification and professional development information. It was reported by APS users that certification data is maintained within STARS and professional development data is in the Electronic Registrar Online (ERO) system. When this information must be reported together, staff relies on manual processes utilizing Excel. In addition, some certification information is stored in eSchoolPLUS, but information is not easily transferred due to a lack of integration of applications

BDMP Action Items to Implement Recommendation

1. Address in conjunction with recommendations I and K.

2. Update existing data dictionary

3. Develop business rules for validating data

4. Eliminate disparate systems used for tracking data that can be stored in eSchoolPLUS and STARS

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5. Work with SunGard to potentially retire APSnet by having the capability to move data stored in APSnet into eSchoolPLUS

6. Conduct scheduled data audits

7. Identify owners of data responsible for ensuring data integrity

8. Implement reporting tool that can go across multiple systems

9. Synchronize teacher certification data between eSchoolPLUS and STARS

BDMP Recommendation K: Conduct an SIS business process and needs assessment analysis (p66) (Priority 2)

Related finding(s) by BDMP:

A4. APSnet and eSchoolPLUS are not integrated in a manner that supports efficient sharing of data. It was reported that the lack of effective integration between APSnet and eSchoolPLUS creates redundant data entry and inefficiencies in sharing data between the two applications.

A5. The current eSchoolPLUS configuration does not allow the system to easily produce all state reports. It was reported that APS cannot easily generate reports from eSchoolPLUS that are required by the state of Virginia. This leads to additional manual processes and lost productivity. In addition, this information is stored in another system, separate from eSchoolPLUS.

A9. **Report generation from eSchoolPLUS and other APS applications require significant manual configuration, data manipulation and data clean-up**. Reports are generated from multiple applications in use at APS for multiple purposes including assessment, planning and evaluation. With most applications, particularly with eSchoolPLUS, the reports that are generated are not complete and require a significant amount of IS department time and resources in order to perform data manipulation and clean-up.

A13. **The configuration of eSchoolPLUS is not optimized for the business needs of APS**. It was reported that the system was incorrectly or incompletely configured, which results in inefficiencies and manual processes. For example, screens and fields where drop-down menus do not contain relevant data regularly necessitate manual data entry and may cause errors.

BDMP Action Items to Implement Recommendation

1. Determine if internal APS resources will be used to develop business processes analysis, needs assessment and requirements documentation

2. Document and diagram business processes

3. Conduct a gap analysis to understand needs of APS that are being met by APS and those processes that are being performed manually

4. Based on the business processes analysis and needs assessment process, develop a list of functional and technical requirements

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5. Become involved in vendor (SunGard) user groups to understand how other similar organizations are meeting similar requirements as APS

6. Discuss unmet requirements with SunGard to understand options for meeting requirements

7. Hire a business analyst for the enterprise services group

8. Issue an RFI to the vendor community to understand functionality available in other systems and potential maintenance costs

BDMP Recommendation L: Conduct a needs assessment for a document management system (p69) (Priority 2)

Related finding(s) by BDMP:

T1. APS does not have a single enterprise-wide document/records management system. APS users reported that a large amount of time is spent finding and tracking paper records. In addition, there are large amounts of paper storage in various locations at APS

BDMP Action Items to Implement Recommendation

1. Identify primary resources to collect document management requirements/standards

2. Consult functional area resources to develop a list of all document management requirements/standards

3. Assess APS' ability to satisfy document management requirements/standards

4. Develop an action plan to improve APS' ability to satisfy document management requirements/standards

BDMP Recommendation M: Conduct a network analysis (p71) (Priority 1)

Related finding(s) by BDMP:

T2. Best practices related to security and risk management to protect APS are not fully implemented within the IS department. Several best practices are not utilized within the IS department to reduce security threats to APS. For example, there is no role-based security or a dedicated resource within IS to focus on security. In addition, firewalls are logged but not monitored, and patch management tools (such as MS WSUS/Patchlink) are not utilized, resulting in patches being applied only once per year. Patching of servers is done on an ad hoc basis

T6. The wireless network at APS has multiple areas where performance is inconsistent. In certain buildings there are areas where the wireless signal is weak or non-existent. As some computer labs are being converted to mobile labs, the demand for wireless capability will be increasing throughout APS.

T7. IS maintains two separate networks throughout APS. When demand for network access grew in prior years, it was determined that separate networks would exist for administration and instruction to ensure that sensitive data would be protected within each network. With increases in security

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technology capabilities, maintaining separate networks is not necessary. Transitioning to a single network with appropriate controls will require an initial investment, but significant infrastructure support time and costs could be saved by utilizing a single network.

T12. While implementation of a new platform is underway, the current APS network has areas of potential security weaknesses. The design of the network is not optimal and security tools are not in place to best mitigate potential threats. The IS department currently employs McAfee anti-virus software. It was reported that McAfee is not meeting the needs of IS to adequately mitigate the risk of malware threats. There is currently a plan to implement enhanced anti-virus software or an intrusion detection system (IDS). While costly to mitigate, it was also reported that there is at least one instance of a single point of failure, which is the 6513 switch. Another security weakness is the limited number of backup resources at APS with a high degree of knowledge of the network.

T15. Critical network hardware in place in APS is outdated, including an EMC CX400 storage area network (SAN) that is eight years old; a Novell 6.5 file server that is prohibiting the adoption of best of breed technologies; and additional file servers that are more than five years old.

BDMP Action Items to Implement Recommendation

1. Identify resources to conduct a security assessment

2. Analyze primary areas of the network

3. Develop projects and initiatives to address the findings of the network analysis

BDMP Recommendation N: Analyze and consider implementing VoIP technology (p73) (Priority 1)

Related finding(s) by BDMP:

T8. APS does not use voice over internet protocol (VoIP) technology for telecommunications. Currently, APS uses a Mitel phone system and has made significant infrastructure upgrades towards supporting VoIP technology. A documented plan to upgrade the remaining infrastructure does not exist and a budget has not been secured to complete the transition. While costly to implement initially, VoIP phone systems offer significantly improved performance, additional functionality and can reduce support costs.

BDMP Action Items to Implement Recommendation

1. Re-evaluate the viability of the current Mitel system

2. Develop a non-binding request for information (RFI) and issue it to the vendor community to understand the current market offerings and their potential costs

3. Analyze the total cost of ownership over a five and 10 year time period

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Recommendation O: Complete the platform infrastructure replacement project (p74) (Priority 1)

Related finding(s):

T13. The standard technology platform in use throughout APS is outdated. The platform includes many aspects of technology including workstation configuration, network tools, and hardware. Users throughout APS and IS department staff reported that components of the platform are outdated and are largely impacting productivity, as well as creating support challenges and security threats. For example, the instance of MS Office 2003 and Internet Explorer version 6 prohibit some documents and web-pages to be shared or opened among or by APS employees.

T14. The workstation management/application delivery system is overly complex and inefficient. IS staff uses a mix of applications, scripts, and manual processes to image workstations. While the actual time to complete the imaging process is time consuming, the actual staff time needed to monitor the process is minimal. Many sites expect customizations or utilize numerous, site-specific instructional tools which results in significant staff time preparing and supporting workstations.

T16. The APS email system is outdated. The IS department currently employs Novell GroupWise for approximately 5,000 mailboxes. One dedicated IS resource supports the email system. Some email archiving is currently performed utilizing Google Postini.

BDMP Action Items to Implement Recommendation

1. Develop a detailed project schedule and plan for each of the projects in the platform plan

2. Incorporate the designs provided by the outside consultants into the plan

3. Where possible, document business and technical requirements for projects in the platform to ensure goals and objectives of the new platform are met

4. Create a formal end user group to review and approve the business requirements for the platform plan

5. Test the new platform technologies prior to training

6. Train end users on new platform technologies

7. Transition support of new platform technologies to IS support group

8. Incorporate project management best practices throughout the implementation of the plan including monitoring and reporting project risks and issues, creating a decision log to track important decisions made, monitor progress against requirements and report project status on a regular basis

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