



County of Fairfax, Virginia

MEMORANDUM

DATE: March 20, 2012

TO: Board of Supervisors

FROM: Susan W. Datta, Chief Financial Officer

SUBJECT: FY 2013 – Responses to BOS Questions – Package 2

Attached for your information is FY 2013 Budget Q&A Package 2 containing responses to budget questions from the County Executive's budget presentation, questions received via email, and the detailed FCPS report on the issue of dropouts, noted at the March 13 Board Budget Committee meeting. Responses to questions 1-15 were included in previous packages and additional responses will be included in subsequent packages. If you have any questions, please let me know.

The following questions are included in this package:

	Remaining Questions from 2/28/12 CE Presentation	Supervisor	Pages
16	Please provide a list of anticipated stormwater projects that the increased fee would be used to cover.	Foust	35-38
17	Please provide a breakdown of the 10 percent increase for health insurance costs, including the impact on both the County and the employee.	Gross	39
18	How does the 2.18 percent Market Rate Adjustment compare to other local jurisdictions? Include both base pay and full compensation in analysis.	Cook	40-41
19	Please provide additional information on the expanded animal shelter facility. Is all the new space being utilized? Does this expansion preclude consideration of a second shelter being built in the southeastern part of the County if land, funds etc. can be identified?	McKay	42
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20	What is the cost (including salaries, gas, car maintenance, etc.) incurred by the Sheriff's Department to service process in civil cases – excluding domestic cases? How much of that cost is recovered through charges assessed to the parties to the case? Assuming not all costs associated with the activity is recovered, of the remainder, is it paid through the state, County, or both, and what is the County's share?	Cook	43
21	What is the cost incurred by having Sheriff's Deputies present as bailiffs in civil courtrooms?	Cook	44
22	What process, if any, is used to substitute volunteer firefighters for paid firefighters as a way of reducing overtime costs?	Cook	45
23	What criteria are used to determine when a ladder truck is sent to respond to an emergency call? In an average year how many calls do the ladder trucks respond to, and of that how many do not ultimately require the equipment on the ladder truck in order to carry out the mission? Has the county studied policies from other localities to send smaller vehicles to certain emergency calls, with ladder trucks being held back and used only if needed? If so, what determinations have been made?	Cook	46

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County of Fairfax, Virginia

MEMORANDUM

24	How many take home vehicles are used by the Fire and Rescue Department? How many nights per year is each vehicle used for a reimbursable expense? What would be the cost savings, if any, if some or all of these vehicles were removed and replaced with a policy to pay mileage, at the federal rate, for reimbursable use of a personal vehicle?	Cook	47
25	What is the average number of firefighters on duty during each shift? How does that number compare with each of the five prior fiscal years?	Cook	48
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28	Please identify the maintenance needs of County facilities for the next five years for which funds have not been allocated? This question does not include routine maintenance, but longer term structural maintenance.	Cook	51-55
29	Excluding Public Safety, on average, how many County vehicles are unused each day, broken down by FCPS, Park Authority, and Other County vehicles?	Cook	56
30	What is the expenditure for the Middle School after School Program, and what fee would need to be imposed to make it budget-neutral?	Cook	57
31	How much money is spent on school lighting at night when buildings are not in use? Are there cost (and security) savings if sensor lights, cameras, and automated calls to police are used instead? Additionally, is there any effort made to calibrate the schools' HVAC systems to the occupancy of the building?	Gross	58
32	Over the last three years, how many employees with the school system have been terminated due to budget reductions? Please include a breakdown of the job classification.	Cook	59
33	How many non-teachers are employed by Fairfax County School System in the current year and how does that number compare with each of the last five years? This is not slots, but actual employees.	Cook	60
34	How many teachers are employed by Fairfax County School System in the current year and how does that number compare with each of the last five years? This is not slots, but actual employees.	Cook	61
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35	Please provide the detailed FCPS report on the issue of dropouts, noted at the March 13 Board Budget Committee meeting.	Hudgins/ Gross	62 (cover page, report then follows)

Attachment

Response to Questions on the FY 2013 Budget

Request By: Supervisor Foust

Question: Please provide a list of anticipated stormwater projects that the increased fee would be used to cover.

Response: The FY 2013 Advertised Budget Plan includes a total of \$35,155,455 for capital projects. The following provides a list of the major categories and funding amounts proposed for FY 2013. Specific projects will be based on the completed watershed plans and prioritized should the increased Service District rate be approved.

Stormwater Regulatory Program \$5,000,000

The County is required by Federal Law to operate under the conditions of a state issued Municipal Separate Storm Sewer System (MS4) Permit. The MS4 Permit allows the County to discharge stormwater from its stormwater systems into state and federal waters. The County currently owns and/or operates approximately 7,000 piped outfalls within the stormwater system that are governed by the permit. The current permit was issued in 2002 and expired in 2007, and the County has been operating under a state issued administrative extension, while the state and the Environmental Protection Agency (EPA) agree to new permit requirements. A draft permit has been prepared for the County which indicates that significant enhancements to all facets of the program will be required. In addition to the requirements outlined in the draft permit conditions, a recent EPA audit of the County's program identified the need for the County to initiate a high risk and industrial site inspection program for private properties throughout the County. The inspection of high risk and industrial properties is one of the permit requirements that the EPA focused on and identified the County's efforts as inadequate during the audit in June 2011. Also in 2011, the state adopted a new law that allows localities to enter private properties to inspect the site for potential contaminants to MS4 systems. This will require the County to implement an aggressive program to inspect private properties that drain to the storm sewer system and require mitigation of conditions that introduce contaminants into stormwater runoff. The permit further requires the County to better document the stormwater management facility inventory, enhance public out-reach and education efforts, increase water quality monitoring efforts, provide stormwater management and stormwater control training to all County employees, and to thoroughly document all of these enhanced efforts. County staff is currently developing the procedures to implement these additional requirements. Funding and staff are required to develop, manage and initiate these new mandated programs.

Dam Safety and Facility Rehabilitation \$6,198,569

The County currently has over 6,000 Stormwater management facilities in service that range in size from small rain gardens to large state regulated flood control dams, and by permit is responsible for inspecting and maintaining both County owned and privately owned facilities. This inventory increased by over 175 facilities between FY 2010 and FY 2011, and is projected to continually increase as new developments and redevelopment sites are required to install stormwater management controls. In addition, the County is required to provide a facility retrofit program to improve stormwater management controls on all existing stormwater management facilities that were

developed and constructed prior to current standards being in place. This program includes maintaining the control structures, including the dams that control and treat the water flowing through County owned facilities. This program also includes the removal of sediments that occur in both wet and dry stormwater management facilities to ensure that adequate capacity is maintained to treat the stormwater. This program results in approximately 25 retrofit projects annually that require redesign and construction management activities, as well as contract management and maintenance responsibilities. Additionally, this program funds the next phase of the Kingstowne Park Dam, which failed in October 2010. Potential large projects for FY 2012 and FY 2013 include the design of the spillway rehabilitation for Lake Huntsman to meet current state dam safety standards, as well as dredging of the facility to restore water quality. Preparation of specifications for the dredging of Royal Lake will also be proposed.

Conveyance System Rehabilitation \$6,500,000

The County owns and operates approximately 1,600 miles of underground stormwater pipe and paved channels with estimated replacement value of over one billion dollars. The County began performing internal inspections of the pipes in FY 2006. Of the initial pipes inspected, over 5 percent were in complete failure with an additional 15 percent requiring immediate repair. It is estimated that a fully funded rehabilitation and reinvestment program would require an investment of approximately \$10 million per year. Increased MS4 permit regulations apply to these 1,600 miles of existing conveyance systems and 43,000 stormwater structures. The permit requirements do not address the current backlog of operational maintenance and rehabilitation needs of the entire stormwater conveyance system infrastructure, but are additive and significantly increase inspection, reporting and management actions related to the infrastructure system. Additional funding is required to review the digital imaging of pipe interiors, develop corrective solutions and provide for design, construction management and oversight costs. Acceptable industry standards indicate that one dollar re-invested in infrastructure saves seven dollars in the asset's life, and \$70 dollars if asset failure occurs. The goal of this program is to inspect pipes on a 10-year cycle, and rehabilitate pipes and paved channels before total failure occurs. To achieve this goal the deteriorated pipe must be rehabilitated as soon as is practical after the deficiency is identified. If the pipe is not too deteriorated the County can take advantage of trenchless technologies which are less costly and invasive than replacement, as well as, minimize disruption to property owners. Areas selected for inspection include sections of pipe where surface inspection or citizen complaints identify existing problems which are likely the result of a deficiency in the pipe, as well as systematic inspection of neighborhoods with priority being assigned to older areas, and areas with historic deficiencies or areas with metal pipes.

Stream and Water Quality Improvements \$11,000,000

This program funds water quality projects necessary to mitigate the impacts to local streams and the Chesapeake Bay resulting from urban stormwater runoff. This includes water quality projects such as the construction of stormwater management ponds, implementing low impact development techniques on stormwater facilities, stream restorations and approximately 1,700 water quality projects identified in the completed countywide Watershed Plans. In addition to the new permit requirements, the EPA, who is the federal regulator that oversees the Federal Clean-Water Act, completed an audit of the County's current Stormwater program in June 2011. This audit indicates that several elements of the program are non-compliant. The full impact of the audit findings have not yet been finalized, and any penalties associated with audit findings have not yet been issued. In addition, the Chesapeake Bay Total Maximum Daily Load (TMDL)

requirements are the regulatory process by which pollutants entering impaired water bodies are reduced. The Chesapeake Bay TMDL was established by the EPA and requires that MS4 communities, as well as other dischargers, significantly reduce the nitrogen, phosphorous and sediment loads entering waters draining to the Bay by 2025. Compliance with the Bay TMDL will require the County to undertake construction of new stormwater facilities, retrofit existing facilities and properties, and increase maintenance. Preliminary estimates indicate that the projects needed to bring the County's stormwater system into compliance with the Bay TMDL could cost in the range of \$70 to \$90 million, per year. The Bay TMDL facility retrofit requirement is additive to the current design and construction efforts associated with 1,700 Watershed Plan projects and ongoing stream and flood mitigation projects. A phased approach to increasing funding and staffing is recommended in order to address the audit findings and begin to address Chesapeake Bay TMDL requirements. Citizens and local groups will be engaged as individual projects are developed and begin to move forward, however to avoid creating unrealistic expectations, staff does not engage citizens until resources have been identified to move the specific project forward. For various reasons, not all projects will move forward to construction and other projects will be added as opportunities and partnerships are identified.

Emergency and Flood Control Program \$5,900,000

In addition to the more traditional single structure flood protection projects, this new program is recommended to provide funding to address the larger and more frequent flooding problems experienced in the County. These funds will be used to design solutions for areas experiencing frequent and severe flooding that threaten citizen safety. Funds in this program will accumulate over time to support large scale projects without the issuance of debt. This program previously supported flood control projects resulting from storm events that impacted storm systems and flooded residential properties. It is recommended that the program be expanded to include projects that threaten citizen safety, which requires improvements along roadways. In FY 2006, major flooding generated approximately 70 flood control projects, and while the potential projects related to the more recent Tropical Storm Lee are currently in the determination phase, these property floodings are anticipated to generate an additional 35 to 40 flood control projects. These projects will require scoping, design and construction activities. In addition to projects designed to protect individual structures, this program will provide funding for flood protection on a community basis, as well as address frequent flooding of transportation systems that threaten citizen safety.

If the Board desires, this funding could be used to fund final design and preparation of construction documents for the Huntington Flood Control project. Because the Board adopted a policy in 2006 to not allow the use of Stormwater funds to address roadway flooding, staff does not have a current list of potential road flooding projects nor current estimates. However some projects that had previously been identified and could represent the types of projects that this program could address include: Old Mill Road near the Golf Course(\$1-5M); Burke Lake Road near Kilkenny(\$1-5M); Guinea Road near Colony View(\$1-5M); Cherokee Avenue near Navaho(\$1-5M); Lee Highway near Bradley(over \$5M); Prosperity near Eakin Park(\$4-8M); Besley near Old Courthouse(\$4-8M); and Leigh Mill near White Chimney(\$1M). If this Program is adopted, stormwater staff will meet with Fairfax County Department of Transportation and Office of Emergency Management staff as well as Board staff to identify areas subject to frequent flooding that threaten public safety and to develop a more comprehensive list, as well as to develop an approach to prioritizing projects.

Stormwater Related Contributory Program \$556,886

Contributory funds are provided to the Northern Virginia Soil and Water Conservation District (NVSWCD), and the Occoquan Watershed Monitoring Program (OWMP). The NVSWCD is an independent subdivision of the Commonwealth of Virginia that provides leadership in the conservation and protection of Fairfax County's soil and water resources. It is governed by a five-member Board of Directors, three of whom are elected every four years by the voters of Fairfax County and two who are appointed by the Virginia Soil and Water Conservation Board. Accordingly, the work of NVSWCD supports many of the environmental efforts set forth in the Board of Supervisors' Environmental Excellence 20-year Vision Plan. The goal of the NVSWCD is to continue to improve the quality of the environment and general welfare of the citizens of Fairfax County by providing them with a means of dealing with soil, water conservation and related natural resource problems. It provides County agencies with comprehensive environmental evaluations for proposed land use changes with particular attention to the properties of soils, erosion potential, drainage and the impact on the surrounding environment. NVSWCD has consistently been able to create partnerships and leverage state, federal and private resources to benefit natural resources protection in Fairfax County. FY 2013 funding of \$444,327 is included in Fund 125 for the County contribution to the NVSWCD.

The OWMP and the Occoquan Watershed Monitoring Laboratory (OWML) were established to ensure that water quality is monitored and protected in the Occoquan Watershed. Given the many diverse uses of the land and water resources in the Occoquan Watershed (agriculture, urban residential development, commercial and industrial activity, water supply, and wastewater disposal), the OWMP provides a critical role as the unbiased interpreter of basin water quality information. FY 2013 funding of \$112,559 is included in Fund 125 for the County contribution to the OWMP.

Response to Questions on the FY 2013 Budget

Request By: Supervisor Gross

Question: Please provide a breakdown of the 10 percent increase for health insurance costs, including the impact on both the County and the employee.

Response: The preliminary estimate of required January 2013 premium increases is 10 percent for each of the County's health insurance plans. This increase represents a budget projection only; actual premium decisions will be made based on updated experience prior to open enrollment. Due to the timing of budget development and adoption, premium increases for the County's health insurance plans are projected over a year in advance of when the increases are implemented. For example, the proposed January 2013 premium increases contained in the FY 2013 Advertised Budget Plan were developed in December 2011 based on data at that time and, as such, are factors utilized to build the budget. Premium increase projections are performed by County staff based on actual plan experience, utilizing enrollment data and trend analysis of claims experience. After initial premium projections are set for the budget, staff continues to monitor and track plan revenues and claims expenses. In Fall 2012, actual premium increases will be set in advance of open enrollment based on updated plan experience and analysis.

Full-time active employees currently pay 15 percent of health insurance premiums for individual coverage and 25 percent of premiums for two-party or family coverage. The projected 10 percent premium increases would increase employee biweekly premiums from \$2-20, depending on the plan and level of coverage. (It should be noted that, beginning in calendar year 2012, health insurance premiums are paid every pay period – spread across all 26 pay periods – rather than twice a month.) The estimated 10 percent premium increases are projected to have a General Fund impact of \$4.0 million in FY 2013, which represents a half-year impact as these increases would go into effect at the midpoint of the fiscal year. Once final premium decisions are made, any necessary budgetary adjustments will be made at a subsequent quarterly review.

Response to Questions on the FY 2013 Budget

Request By: Supervisor Cook

Question: How does the 2.18 percent Market Rate Adjustment compare to other local jurisdictions. Include both base pay and full compensation in analysis.

Response: The primary adjustments included in the FY 2013 Advertised Budget Plan impacting employees are proposed increases in compensation and health insurance premiums. The following table shows proposed compensation adjustments and health insurance premium increases for the city of Alexandria, Arlington County, Fairfax County Public Schools, Loudoun County, Prince George's County, and Prince William County. Due to the timing of budget releases, data was not available from Montgomery County or the District of Columbia.

	Proposed Salary Increases for FY 2013	Proposed Health Insurance Premium Increases
Fairfax	2.18% <i>The County Executive has proposed a 2.18% Market Rate Adjustment (scale adjustment & pay increase) for all employees. No Step increases for public safety employees or Pay for Performance increases for general employees are proposed.</i>	10.0% <i>Budgetary projections for Fairfax health insurance plans assume a premium increase of 10%. Actual premium adjustments will be decided in Fall 2012 prior to open enrollment based on updated experience.</i>
Alexandria	2.3-5.0% <i>The FY 2013 proposed budget includes funding for merit-based pay increases ranging from 2.3-5.0%. No across-the-board pay increases are funded. Additionally, the budget includes funding to align the General Schedule pay scale to the market by eliminating the two lowest steps and adding 2.3% to the top of the scale. Also, Sworn Public Safety employees at the top of their grade – and, thus, not eligible for a merit-based pay increase – will be eligible for a one-time 2.3% pay supplement (equivalent to one step) if warranted by performance.</i>	5.0-7.5%* <i>Depending on the health plan, premiums are expected to increase from 5-7.5%. *Additionally, it should be noted that the employee share of health insurance premiums is proposed to increase by 4% to a minimum of 20%.</i>
Arlington	2.5% <i>Arlington's FY 2013 budget proposal includes funding for merit/step increases, which average 2.5%. No COLA/market pay adjustment has been proposed.</i>	0.0-3.0% <i>Depending on the health plan, premiums are expected to increase from 0-3%.</i>

	Proposed Salary Increases for FY 2013	Proposed Health Insurance Premium Increases
FCPS	4.3% <i>Fairfax County Public Schools have proposed merit increments (averaging 2.3%) as well as a 2% market scale adjustment.</i>	6.4% <i>The FCPS Advertised Budget assumes an increase of 6.4%, including the impact of premium adjustments and plan participation shifts.</i>
Loudoun	0.0-2.0% <i>Loudoun County's budget proposal to their Board includes a 0% increase option (now on the table) up to an average increase of 2% for all County employees. No merit increases are assumed in the proposal.</i>	4.0% <i>The projected premium increase for active employees is 4% for plan year 2013.</i>
Prince George's	0.0% <i>No merit or cost-of-living adjustments are proposed for G-scale employees. The County is still in negotiations with the union.</i>	Unknown <i>Premium adjustments for calendar year 2013 will be decided mid-Summer 2012. The increase for 2012 was 4.9%.</i>
Prince William	3.0% <i>Funding is included in the proposed budget for a 3% Pay for Performance increase; this increase is provided for employees who receive a "fully achieves" performance rating. As part of the County's "Performance Plus" system, employees who receive ratings above "fully achieves" will receive bonuses on top of the 3% increase. A one-time bonus (not included in base pay) of 1% will be provided to employees with an "exceeds" rating and a 2% bonus will be provided for those with a rating of "greatly exceeds." The County proposes to increase the top of the pay scale to allow all to earn a merit this year.</i>	10.0% <i>The expected average increase for the County's health insurance plans is 10%.</i>

Response to Questions on the FY 2013 Budget

Request By: Supervisor McKay

Question: Please provide additional information on the expanded animal shelter facility. Is all the new space being utilized? Does this expansion preclude consideration of a second shelter being built in the southeastern part of the County if land, funds, etc. can be identified?

Response: Utilization of Expanded West Ox Animal Shelter
The expanded West Ox Animal Shelter is scheduled for completion in early 2013. The FY 2013 Advertised Budget Plan includes 2/2.0 SYE regular merit positions to help staff the expanded facility. In addition, the Fairfax County Police Department (FCPD) is implementing a multi-year workforce plan to provide adequate administrative and kennel staff to phase-in full utilization of the 15,000 square feet of new space (e.g., service lobbies, kennels, animal housing, and veterinarian suite).

South County

The expanded West Ox Animal Shelter does not preclude continued consideration and planning for a future South County Animal Shelter. Several years ago, a satellite facility near the Newington garage in South County was under consideration to meet the operational and community service needs for citizens in Springfield, Lorton, Alexandria, Fort Belvoir, Mount Vernon and the Route 1 corridor. Due to budget implications, no further action has been taken on this option and it is not included in the County Executive's FY 2013 budget recommendation. Under the current framework, the distance necessary to travel coupled with the increased risk of stress-induced illness from transport reduces the rate of redemption of strays from citizens living in South County. Given their proximity, many South County citizens utilize Alexandria, Arlington, or Prince William Animal Shelters, posing a service burden for neighboring jurisdictions.

Response to Questions on the FY 2013 Budget

Request By: Supervisor Cook

Question: What is the cost (including salaries, gas, car maintenance, etc.) incurred by the Sheriff's Department to service process in civil cases – excluding domestic cases? How much of that cost is recovered through charges assessed to the parties to the case? Assuming not all costs associated with the activity is recovered, of the remainder, is it paid through the state, County, or both, and what is the County's share?

Response: The annual cost of serving civil processes is \$2,122,806. State law limits the County's share of the fee revenue collected to \$66,271, with all additional revenues collected becoming State revenue. Because the Compensation Board pays 30.8 percent of the Sheriff's budget, then \$632,886 would be the share of the Compensation Board Revenue allocated to this program, leaving a net County cost of \$1,423,649. It should be noted that the expense was not reduced to net out restraining orders served because they amounted to less than one half of one percent of all services.

Response to Questions on the FY 2013 Budget

Request By: Supervisor Cook

Question: What is the cost incurred by having Sheriff's Deputies present as bailiffs in civil courtrooms?

Response: There are 10 Deputies assigned to civil cases in the Circuit Court, 2 Deputies in the General District Court, and 6 Deputies in Juvenile and Domestic Relations District Court. The cost to the Office of the Sheriff for these Deputies is \$1,255,730. It should be noted that most of these cases are quite volatile. One constraint should also be noted: based on a prior decision by the County Attorney, any Judge that requests a bailiff for safety is to have a bailiff provided.

Response to Questions on the FY 2013 Budget

Request By: Supervisor Cook

Question: What process, if any, is used to substitute volunteer firefighters for paid firefighters as a way of reducing overtime costs?

Response: The Fire and Rescue Department (FRD) continually explores opportunities to streamline operations in order to reduce overtime without compromising resident or firefighter safety; this includes maximizing volunteer utilization. In fact, operational overtime decreased approximately 5 percent from \$15.1 million in FY 2010 to \$14.4 million in FY 2011. The challenge with using volunteers is their limited availability during the weekdays as many of FRD's operational volunteers have daytime jobs and are unable to commit to 24-hour shifts. Therefore, volunteers are not used to meet minimum staffing levels. On weekends and when available, the department takes full advantage of volunteer availability and uses them to up-staff units, place additional units in service, fill in while career members are attending training or provide staffing to maintain a front-line unit in service.

Response to Questions on the FY 2013 Budget

Request By: Supervisor Cook

Question: What criteria are used to determine when a ladder truck is sent to respond to an emergency call? In an average year how many calls do the ladder trucks respond to, and of that how many do not ultimately require the equipment on the ladder truck in order to carry out the mission? Has the County studied policies from other localities to send smaller vehicles to certain emergency calls, with ladder trucks being held back and used only if needed? If so, what determinations have been made?

Response: Dispatch algorithms have been developed for specific incident types that assign the appropriate complement of apparatus based on their respective attributes and capabilities. Ladder trucks are dispatched on all reported fire incidents, gas leaks, rail emergencies, high angle or elevated rescues, hazardous materials incidents, elevator rescues, and investigations of hazardous conditions such as odors or unknown sources of smoke.

For medical emergencies, dispatch algorithms identify the closest first responder. Personnel assigned to the ladder truck are certified firefighter/EMTs and ladder trucks are equipped with AEDs and basic life support (BLS) equipment making ladder trucks the emergency medical services (EMS) first responder when it is the closest unit to a medical emergency.

Ladder trucks are equipped to perform a myriad of tasks commensurate with all hazards and fire ground tasks. Atmospheric monitoring devices, ventilation equipment, forcible entry and search and rescue tools, thermal imaging cameras, rope, ladders, 100 foot aerial devices, and salvage and overhaul equipment are just some of the examples of the capabilities of the unit.

On average, ladder trucks are dispatched to 19,867 calls annually, but are required to perform on-scene tasks for 6,643 calls. Discrepancy between the two figures can be explained by false alarms where the call is canceled once the vehicle is enroute, medical emergencies where another unit arrives first on-scene and places the truck in service, or a fire where only one truck is needed for the event. More specific counts for these calls are not available.

Smaller vehicles capable of performing ladder truck functions are referred to as “ladder tenders.” The Fire and Rescue Department continues to evaluate the ladder tender concept which has been adopted by departments particularly in the south and southwest where one story residential structures are predominant. While there is value in reducing the wear and tear on a large apparatus, the concept would involve the cost of adding vehicles into the fleet as well as the cost of maintenance and replacement. Additional research regarding long term gains realized by this approach and continued comparisons in demographics, occupancy types and incident activity is necessary to determine if this is a cost effective option for Fairfax County.

Response to Questions on the FY 2013 Budget

Request By: Supervisor Cook

Question: How many take home vehicles are used by the Fire and Rescue Department? How many nights per year is each vehicle used for a reimbursable expense? What would be the cost savings, if any, if some or all of these vehicles were removed and replaced with a policy to pay mileage, at the federal rate, for reimbursable use of a personal vehicle?

Response: Twenty-nine vehicles are authorized for take home usage. Department records indicate these vehicles were used in excess of 900 evenings for reimbursable activities over a twelve month period.

The Fire and Rescue Department (FRD) tracks the number of occurrences take home vehicles are utilized for after-hours meetings, events and emergency responses, but associated mileage is not recorded. Therefore providing a dollar figure to quantify the savings, if the department removed the vehicles and reimbursed for miles traveled, is impossible to estimate given data limitations. Furthermore, the usage during regular business hours for work related meetings that qualify as a reimbursable activity is not tracked.

All twenty-nine take home vehicles are used in accordance with County policies and directly support the department's mission. Take home vehicles have been authorized for personnel who have emergency call-out supervisory responsibilities. Individuals with take home vehicles are required to monitor the radio while operating a take-home vehicle and carry equipment in order to take necessary action if required. This includes providing assistance to disabled motorists, assisting on high-priority calls, or when otherwise necessary or prudent to act even when off-duty. These personnel are on-call twenty-four hours per day, seven days per week, unless on scheduled leave.

Take-home vehicles are necessary to maintain an operational level of staff, ensuring senior and critical staff is available to respond to emergency fire and rescue incidents on a twenty-four hour basis.

Response to Questions on the FY 2013 Budget

Request By: Supervisor Cook

Question: What is the average number of firefighters on duty during each shift? How does that number compare with each of the five prior fiscal years?

Response: In order to ensure Fairfax County receives the same level of Fire and Rescue coverage daily, the department operates with minimum staffing levels. This means there is a minimum number of field personnel that must be on duty at all times. Below is a chart which reflects the minimum staffing levels for the current fiscal year and the past five fiscal years. The chart illustrates minimum staffing levels have remained relatively stagnant except for the increase of one position in FY 2010, which resulted from the addition of the second safety officer.

It should be noted that the Daily Field Staffing Levels included below reflect all firefighting personnel, including the ranks of Battalion Chief, Fire Captain II, Fire Captain I, Fire Lieutenant, Fire Technician, Firefighter/Medic (Paramedic), and Firefighter.

FRD Daily Field Staffing Levels*

FY 2012	FY2011	FY2010	FY2009	FY2008	FY2007
334	334	334	333	333	333

** Includes Daily Paramedic on Duty count from the paramedic response on the next page.*

Response to Questions on the FY 2013 Budget

Request By: Supervisor Cook

Question: What is the average number of paramedics on duty during each shift? How does that number compare with each of the five prior fiscal years?

Response: The average number of paramedics on shift has remained consistent over the previous five fiscal years with the exception of an increase when the EMS Redesign was implemented starting in FY 2009. The previous EMS delivery model required 94 paramedics to staff 70 units while the current system requires 101 paramedics daily to staff 87 units.

It should be noted that a commensurate decrease in other firefighting personnel accompanied the increase in the number of paramedics in FY 2009 and FY 2010 based on the redefinition of the EMS model.

FRD Daily Average of Paramedics on Duty*

FY 2012	FY2011	FY2010	FY2009	FY2008	FY2007
101	101	101	97	94	94

**Paramedic figures are included in the Daily Field Staffing Levels chart included in the response to the question on the previous page.*

Response to Questions on the FY 2013 Budget

Request By: Supervisor Cook

Question: What is the average number of police officers on duty during each shift? How does that number compare with each of the five prior fiscal years?

Response: The Fairfax County Police Department (FCPD) establishes minimum staffing standards for each shift and station based upon calls for service as well as geographical and demographical data (e.g., time of day, natural barriers, traffic, travel time, and crime rates). While minimum staffing standards are reviewed each year to determine required changes due to budget or other factors, the following minimum staffing standards have been in effect since June 2006:

Division	Station	Day	Evening	Midnight
I	Fair Oaks	8	8	7
I	Reston	8	8	7
I	Sully	8	8	7
II	Mason	11	11	10
II	McLean	11	11	9
III	Franconia	11	11	10
III	Mt. Vernon	10 (9 Sat/Sun)	10	10
III	West Springfield	10	10	10
County Totals		77 (76)	77	70
Evening & Midnight Overlap Totals			147	

In addition to these minimum staffing standards, each station assigns additional police officers to shifts as needed and when staffing levels allow to meet mandated training requirements and to cover expected and unexpected leave without backfill overtime. It should be noted that FCPD has also developed emergency staffing plans for major events and disasters.

Response to Questions on the FY 2013 Budget

Request By: Supervisor Cook

Question: Please identify the maintenance needs of County facilities for the next five years for which funds have not been allocated? This question does not include routine maintenance, but longer term structural maintenance.

Response: The Facilities Management Department (FMD) current capital renewal backlog of unfunded projects is approximately \$18.1 million for FY 2013. Capital renewal is the planned replacement of building subsystems such as roofs, windows, elevators, electrical systems, HVAC, plumbing systems, carpet replacement, parking lot resurfacing, fire alarm replacement and emergency generator replacement that have reached the end of their useful life. Each year, FMD prioritizes and classifies capital renewal projects into five categories. Projects are classified as Category F: urgent/safety related, or endangering life and/or property; Category D: critical systems beyond their useful life or in danger of possible failure; Category C: life-cycle repairs/replacements where repairs are no longer cost effective; Category B: repairs needed for improvements if funding is available, and Category A: good condition. Funding for emergencies is provided annually to address major emergency repairs and replacements to County facilities in the event of a systems failure, or other unforeseen event.

Attachment 1 provides the current categorization of future projects not included as part of the FY 2013 Advertised Budget Plan. This spreadsheet provides the project, category ranking, facility name, year the subsystem/component was installed, and the description and cost of the repairs required. This list is reviewed and amended annually to develop the annual capital renewal requirements. This list is fluid and as time passes, many category D projects will become category F projects, C projects will become D projects and B projects will become C projects. In addition, component parts may reach the end of their useful life before expected or may last longer than anticipated. New items are added to the submission each year.

Attachment 2 reflects FMD's Capital Renewal five year identification plan and cost estimates of system projects. The identification and analysis of these cost estimates is based on the following facility inventory:

- ◆ 77% of County facilities are over 10 years old (139 Buildings)
- ◆ 69% of County facilities are over 15 years old (125 Buildings)
- ◆ 57% of County facilities are over 20 years old (104 Buildings)
- ◆ 40% of County facilities are over 30 years old (78 Buildings)

As a result of the limited staffing and increased project demands, development of a detailed 5-year plan has been delayed. However, funding in the amount \$240,000 is included in FY 2013 to continue a second facility assessment which began in FY 2012. The last facility assessment was conducted in 2004 on 92 selected facilities (approximately 4.2 million square feet of space), representative of the oldest facilities at the time. The assessment included a complete visual inspection of roofs and all mechanical and electrical components for each facility. Maintenance and repair

deficiencies were identified and funding requirements estimated. These 92 facilities represented approximately 50 percent of the inventory. In FY 2012, funding in the amount of \$215,000 was provided to conduct a facility assessment on 40 additional buildings, not previously evaluated. These assessments allow inspectors to evaluate major building systems, identify cost estimates associated with repair and replacement and plan for future renewal requirements. The continuation of this study in FY 2013 will allow for the evaluation of an additional 30 facilities not evaluated in 2004 or 2012 which are now aging and require a comprehensive review. This plan will provide the framework to further develop FMD's Capital Improvement Program (CIP) to ensure a well-developed funding strategy is in place to maintain the County's facility infrastructure. The plan will include assessment reports/cost estimates, analysis of facility condition information, as well as, life cycle analysis for component renewal which will be used in future capital renewal requirements.

FMD FY 2013 PRIORITIZED REQUIREMENTS FOR FUND 317

Attachment 1

CATEGORY LEGEND							
F = Life Safety/Imminent Failure D = Critical-Systems/Equipment Beyond Useful Life/Possible Imminent Failure C = Life Cycle-Systems/Equipment Fast Approaching Useful Life/Repairs Not Cost Effective B = Extra \$\$\$/Needed Repairs/Replacement to Improve Building Conditions A = Good Condition							\$0 \$10,278,000 \$5,920,000 \$1,906,000 \$0 \$18,104,000
Total							
PROJECT	PROJECT NAME	CATEGORY	YEAR INSTALLED	FACILITY NAME	REPLACEMENT DESCRIPTION	DEFICIENCIES	ESTIMATE
009133	Carpet Replacement	D	1998	New Beginnings	Replace carpet on 1st and 2nd floor.	Beyond expected life.	\$100,000
009133	Carpet Replacement	D	1970	Adult Detention Center	Replace carpet and tile.	Beyond expected life.	\$95,000
009136	Parking Lot and Garage Repairs	D	1991	Government Center	Repair and replace brick pavers.	Beyond expected life.	\$65,000
009133	Carpet Replacement	D	1992-1997	Lorton Library, Kings Park Library, George Mason Regional Library and Herndon Fortnightly Library (1st Floor).	Replace carpet in public areas.	Beyond expected life.	\$408,000
009136	Parking Lot and Garage Repairs	D	2007	Burke VRE	Concrete sealing and caulk repairs.	Beyond expected life.	\$450,000
003099	Building Repairs	D	1972	West Ox DVS Main Building	Replace siding on main building and fuel canopy, repaint interior.	Beyond expected life.	\$560,000
009602	Window Replacement	D	1950	Hollin Hall	Replace windows.	Beyond expected life.	\$500,000
009151	HVAC/Electrical Systems	D	1969	Sherwood Library	Replace HVAC components.	Beyond expected life, possible imminent failure.	\$150,000
009431	Emergency Generator Replacement	D	1992	Government Center	Replace Building Generators, Automatic Transfer Switches, Emergency Switchboards, Emergency Panels and Underground Fuel Tank (CONSTRUCTION ONLY).	Aged and obsolete system, repair parts not available, beyond expected life.	\$2,200,000
003100	Fire Alarm Systems	D	1999	Herndon Monroe Parking Garage	Replace fire sprinkler piping.	Beyond useful life, possible imminent failure.	\$250,000
009151	HVAC/Electrical Systems	D	1988	Adult Detention Center (North Wing)	Replace chiller and components.	Beyond useful life, possible imminent failure.	\$1,000,000
009151	HVAC/Electrical Systems	D	1990	Heritty Building	Replace 2 chillers and components.	Beyond useful life, possible imminent failure.	\$2,000,000
009151	HVAC/Electrical Systems	D	1990	Pennino Building	Replace 2 chillers and components.	Beyond useful life, possible imminent failure.	\$2,000,000
009151	HVAC/Electrical Systems	D	1992	Franconia Government Center	Replace Variable Air Volume (VAV) boxes and controls.	Aged and obsolete system. Increased maintenance required.	\$500,000
009136	Parking Lot and Garage Repairs	C	1997	Crossroads Rehab Center	Repair parking lot.	Fast approaching expected life, increased maintenance required.	\$125,000
009132	Roof Repairs and Waterproofing	C	1997	Crossroads Rehab Center	Replace roof.	Fast approaching expected life, increased maintenance required.	\$100,000
009132	Roof Repairs and Waterproofing	C	1991	Braddock Group Homes 10055 & 10075	Replace roof.	Fast approaching expected life, increased maintenance required.	\$100,000
009151	HVAC/Electrical Systems	C	1991	Braddock Group Homes 10055 & 10075	Replace HVAC components.	Fast approaching expected life, increased maintenance required.	\$100,000
009151	HVAC/Electrical Systems	C	1972	West Ox DVS Main Building	Replace electrical main switchboard.	Fast approaching expected life, increased maintenance required.	\$100,000
009151	HVAC/Electrical Systems	C	1944	Gum Springs Community Center	Replace HVAC control components.	Fast approaching expected life, increased maintenance required.	\$200,000
009151	HVAC/Electrical Systems	C	1970	Adult Detention Center	Electrical switch gears.	Fast approaching expected life, increased maintenance required.	\$150,000
009151	HVAC/Electrical Systems	C	1970	Adult Detention Center (East Wing)	Replace plumbing components.	Fast approaching expected life, increased maintenance required.	\$75,000

FMD FY 2013 PRIORITIZED REQUIREMENTS FOR FUND 317

Attachment 1

PROJECT	PROJECT NAME	CATEGORY	YEAR INSTALLED	FACILITY NAME	REPLACEMENT DESCRIPTION	DEFICIENCIES	ESTIMATE
009132	Roof Repairs and Waterproofing	C	1996	Mott Community Center	Replace roof.	Fast approaching expected life, increased maintenance required.	\$150,000
009132	Roof Repairs and Waterproofing	C	1958	Burke Station Road	Replace roof.	Fast approaching expected life, increased maintenance required.	\$100,000
009132	Roof Repairs and Waterproofing	C	1987	Embry Rucker Homeless Shelter	Replace roof.	Fast approaching expected life, increased maintenance required.	\$100,000
003099	Building Repairs	C	1972	West Ox DVS Main Building	Replace bay doors.	Fast approaching expected life, increased maintenance required.	\$240,000
009431	Emergency Generator Replacement	C	1990	Herrity Building	Replace generator (DESIGN ONLY).	Approaching end of useful life expectancy.	\$100,000
009431	Emergency Generator Replacement	C	1990	Pennino Building	Replace generator (DESIGN ONLY).	Approaching end of useful life expectancy.	\$100,000
009602	Window Replacement	C	1961	Burkeholder Building	Replace windows.	Fast approaching expected life, increased maintenance required.	\$1,300,000
009151	HVAC/Electrical Systems	C	2010	Government Center	Replace Uninterruptible Power Supply (UPS) system batteries.	Fast approaching expected life, increased maintenance required.	\$175,000
003099	Building Repairs	C	1982	Mount Vernon Police Station	Replace security camera system.	Approaching end of useful life expectancy; obsolete/unavailable parts.	\$175,000
009602	Window Replacement	C	1985	Reston Human Services	Replace windows.	Fast approaching expected life, increased maintenance required.	\$80,000
003099	Building Repairs	C	1950s	Hollin Hall	Replace floor tile.	Remove asbestos tiles.	\$200,000
009600	Elevator Replacement	C	1982	Jennings Building	Replace prisoner elevators.	Approaching end of useful life expectancy.	\$1,300,000
009133	Carpet Replacement	C	1992	Government Center	Replace public area carpet.	Approaching end of useful life expectancy.	\$500,000
009602	Window Replacement	C	1960	Police Annex	Replace exterior windows, both levels.	Approaching end of useful life expectancy.	\$450,000
009431	Emergency Generator Replacement	B	1992	Government Center	Replace roof (terrace).	Approaching end of useful life expectancy.	\$700,000
003099	Building Repairs	B	1991	Government Center	Complete interior painting.	Replace to improve building condition.	\$400,000
009151	HVAC/Electrical Systems	B	1974	Adult Detention Center (North Wing)	Replacement of HVAC components (Air Handling Units).	Increased repairs needed.	\$250,000
003099	Building Repairs	B	1990	Pennino Building	Replace parking garage stairwell railings, step caps and associated framing/anchors. Repair concrete as necessary.	Replace to improve building condition.	\$200,000
009133	Carpet Replacement	B	1992-1997	Chantilly Regional Library, Herndon Fortnightly Library (2nd Floor) and Great Falls Library	Replace carpet in public areas.	Replace to improve building condition.	\$356,000
Total							\$18,104,000

PROJECT COST SUMMARIES
FACILITY MANAGEMENT AND CAPITAL RENEWAL
(\$000's)

	Project Title/ Project Number	Source of Funds	Budgeted or Expended Through FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Total FY2013-FY2017	Total FY2018-FY2022	Total Project Estimate
1	<u>FACILITY CAPITAL RENEWAL</u> Emergency Building Repairs /	G, SH, X	C	1,600	1,811	5,086	3,221	3,221	14,939	13,000	27,939
2	HVAC/Electrical Renovation / 009151	G, SH	C	4,800	6,375	4,640	4,329	4,329	24,473	22,000	46,473
3	Roof Repairs and Waterproofing / 009132	G, SH	C	435	899	792	618	618	3,362	3,900	7,262
4	Fire Alarm System Replacements / 003100	G, SH	C	500	808	588	742	742	3,380	3,300	6,680
5	Parking Lot and Garage Repairs / 009136	G, SH	C	160	2,701	1,824	62	62	4,809	7,000	11,809
6	Carpet Replacement / 009133	G, SH	C	500	425	309	206	206	1,646	2,000	3,646
7	Emergency Generator Replacement / 009431	G, SH	C	1,200	850	619	618	618	3,905	3,000	6,905
8	Elevator Replacement / 009600	G, SH	C	6,025	2,550	1,547			10,122	4,300	14,422
9	Window Replacement / 009602	G, SH	C	65					65	1,000	1,065
10	Emergency Replacement of Failed Systems / 009145	G, SH	C		500	500	500	500	2,000	2,500	4,500
11	Public Safety Facilities Capital	B, U	6,100	2,700	200				2,900		9,000
	<u>FACILITY CAPITAL RENEWAL Subtotal</u>		6,100	17,985	17,119	15,905	10,296	10,296	71,601	62,000	139,701

Notes: Numbers in ***bold italics*** represent funded amounts. A "C" in the 'Budgeted or Expended' column denotes a continuing project.

Key: Stage of Development	
	Feasibility Study or Design
	Land Acquisition
	Construction

Key: Source of Funds	
B	Bonds
G	General Fund
S	State
F	Federal
X	Other
U	Undetermined

Response to Questions on the FY 2013 Budget

Request By: Supervisor Cook

Question: Excluding Public Safety, on average, how many County vehicles are unused each day, broken down by Fairfax County Public Schools (FCPS), Park Authority, and Other County Vehicles?

Response: The Department of Vehicle Services (DVS) does not track daily vehicle use, nor is it required for agencies to track *daily* vehicle use. While daily vehicle use is not monitored, the county does track *overall utilization by vehicle* to ensure that the fleet includes only vehicles that are required and used. On an annual basis, in accordance with Procedural Memorandum 10-06, the Fleet Utilization Management Committee (FUMC) performs a low utilization analysis identifying vehicles driven less than 4,500 miles per year. FCPS, Volunteer Fire and Rescue Department vehicles, and certain highly specialized vehicles are exempt from this analysis. However, public safety vehicles used for administrative purposes are included. This analysis includes each vehicle in the fleet, and requests that agencies justify the need for vehicles with low utilization. Vehicles without sufficient justification are recommended to be turned in as excess. Since FY 2004, 189 vehicles have either been turned in as excess or reassigned based on this review.

Notwithstanding the fact that daily vehicle use is not widely tracked, DVS requested agencies to provide information on the number of unused vehicles they have each day. Here is information based on the responses received.

FCPS: FCPS reported that they do not track vehicles that are unused each day. However, they indicated that the only time a bus would be unused would be while it is in the shop for service or repair. During these times a spare bus would be in use in its place.

Park Authority (FCPA): FCPA reported that less than 5 percent of their fleet of vehicles might go unused each day on average. That equates to approximately 9 vehicles. The FCPA said that most of their vehicles are motor pool vehicles not assigned to individuals. This allows them to be available for use on a daily basis. The exception is vans assigned to tradesmen (electricians, plumbers, painters, etc.). These vehicles are equipped with specialized tools for those staff members. These vehicles are used on a daily basis unless those employees are on vacation or out sick.

Other County Vehicles: Based on responses from other county agencies, an estimated total of 110 vehicles might go unused each day on average; however, approximately 80 of the 110 vehicles are assigned to DPWES, supporting Solid Waste, Stormwater, Land Development Services, and Wastewater. Many of these vehicles are specialized vehicles that are used for specific purposes such as support of sewage line repair/maintenance. Vehicles of this nature are used frequently but not every day. In addition, certain other specialized vehicles are used seasonally, such as those for yard debris pickup in the spring or leaf collection in the fall.

Like the Park Authority, some other agencies also have vehicles assigned to specific tradesmen and carrying specialized tools and supplies. Those vehicles may go unused on a day the assigned user is sick or on vacation. In addition, all agencies will experience some downtime for a small percentage of vehicles requiring maintenance or repair.

Response to Questions on the FY 2013 Budget

Request By: Supervisor Cook

Question: What is the expenditure for the Middle School After-School Program, and what fee would need to be imposed to make it budget-neutral?

Response: The County-funded expenditure for the Middle School After-School (MSAS) program totals \$3.26 million. The Fairfax County Public Schools (FCPS) funds another \$0.78 million, bringing the total program expenditure to \$4.04 million.

FCPS offers Middle School After-School programs at all 26 public middle school in the County. The program was initiated as a core component of the Board of Supervisors' efforts to reduce gang presence in the community. The MSAS program is a key element in both the school and County's initiatives to not only combat gangs but to improve student behavior, improve academic performance and develop healthy and successful youth. As such, significant effort was put into encouraging participation among as many middle school youth as possible. The decision not to implement a fee from the beginning of the program was a part of those efforts.

The 2011-12 school year MSAS registration totals 23,437 students. Of that number, 12,234 students attend the program at least twice per week and are considered regular attendees.

To make the MSAS program budget-neutral for both the County and FCPS given current registration levels, an approximate fee of \$172 per student per year would be required. To recover the County-funded expenditure, an approximate fee of \$139 per student per year would be required.

However, given roughly half of those registered students attend on a regular basis, it is prudent to utilize the regular attendees to provide a glimpse of what may occur if a new fee is implemented. Assuming only those that attend regularly would remain in the program post-implementation of a new cost recovery fee, an approximate fee of \$330 per student per year would be required to fully recover the cost of the program. To recover the County-funded expenditure, an approximate fee of \$266 per student per year would be required.

Please note that fee collection would be an issue as the system is not set up currently to administer program membership fees. This would need to be discussed by both partners (County government and FCPS) to determine the specifics of creating the process of collecting revenue, determining who collects it and deciding where it goes, etc. Additional administrative resources would be needed.

Response to Questions on the FY 2013 Budget

Request By: Supervisor Gross

Question: How much money is spent on school lighting at night when buildings are not in use? Are there cost (and security) savings if sensor lights, cameras, and automated calls to police are used instead? Additionally, is there any effort made to calibrate the schools' HVAC systems to the occupancy of the building?

Response: The following response was prepared by Fairfax County Public Schools (FCPS):

The estimated potential cost savings from turning off parking lot and security lights at all schools from midnight to dawn is \$175,000 per year. It is difficult to estimate the cost of a system as described in the question. It would require significantly modifying electrical circuits to the outdoor lighting, installing sensors and control switches on all fixtures and poles, installing security cameras (only 37 schools have external video surveillance in place now), installing network connectivity to each camera, and installing an automated control and notification system. However, current Fairfax County Code prohibits the use of automated dialing devices that place calls to 911 centers for alarms. The alarms would still have to be monitored, which is done by FCPS security personnel. Using a conservatively low estimate of \$100,000 per site for 202 school and administrative sites would result in an initial investment of \$20.2 million with a simple payback from electricity savings of 115 years. This estimate does not include ongoing maintenance and equipment replacements costs and the additional nonschool-based maintenance and Information Technology positions that would be required to operate and maintain a system as described.

A significant reduction in security operations costs would likely not be realized as exterior security is only a part of the scope of duties of security officers. With a system as described in the question in place, security officers would still be required to: check that buildings are secured, locked, and alarms are turned on; patrol building interiors, fields and playgrounds for intrusion, vandalism, trespassing and building protection such as flooding, fire, and freeze protection; and be available for crisis management. Officers would continue to be needed on regular patrol in order to rapidly respond to security issues detected by either interior or exterior security alarms. Furthermore, the use of sensors to activate lighting is limited by their detection range, and an unintended consequence may be the construction of large unlit areas that become attractive locations for unwanted behaviors. The timing of such devices would need to be adjusted to ensure adequate lighting for community use activities that regularly extend well into nighttime hours. Surveillance cameras do require some level of lighting to be functional. FCPS currently uses the least amount of lighting necessary to accomplish its goals.

Nearly all schools and administrative centers have automated energy management control systems that set back HVAC systems to unoccupied mode on a schedule. FCPS began installing these systems in 1978 when the energy management program was created and has installed them as a part of renovations or through retrofits over the past 33 years. The few buildings that currently do not have energy management systems have mechanical time clocks that turn systems off at night. FCPS has technicians that program the schedules coordinating with building and community use of each site. These systems, most of which have been in place for decades, save millions of dollars of energy costs per year.

Response to Questions on the FY 2013 Budget

Request By: Supervisor Cook

Question: Over the last three years, how many employees with the school system have been terminated due to budget reductions? Please include a breakdown of the job classification.

Response: The following response was prepared by Fairfax County Public Schools (FCPS):

Between FY 2009 and FY 2011, more than 1,400 positions were eliminated due to budget reductions. Vacancies that resulted from retirements and attrition, as well as additional positions resulting from membership growth, absorbed most of the employees that were impacted by the position reductions. There were, however, 141 FCPS employees who were unable to be placed in another position and laid off as a result of the reductions in force over the last three years. The chart below provides a breakdown of the employees by job classification.

Position	Layoffs
Management	3
Educational Specialists	2
Specialists	6
Technicians	4
Teacher	1
Clerical	63
Custodial	62

Response to Questions on the FY 2013 Budget

Request By: Supervisor Cook

Question: How many non-teachers are employed by Fairfax County School System in the current year and how does that number compare with each of the last five years? This is not slots, but actual employees.

Response: The following response was prepared by Fairfax County Public Schools (FCPS):

The chart below represents the number of non-teacher employees as of October 31 of each year for all of the ten School Board funds. Non-teacher employees reflect all US-scale positions which include:

- school-based employees:
 - clerical and custodians
 - principals and assistant principals
 - psychologists and social workers
 - technology support specialists and school-based technology specialists
 - public health attendants and public health training assistants
- other support employees:
 - divisionwide support positions
 - bus drivers and attendants
 - food service employees

Fiscal Year	Number of Instructional Assistants	Number of Non-Teachers	Total
FY 12	2,526	9,340	11,866
FY 11	2,411	9,182	11,593
FY 10	2,350	9,411	11,761
FY 09	2,224	9,635	11,859
FY 08	2,228	9,555	11,783

A five-year chart of positions by fund is included in both the proposed and approved budget documents.

Response to Questions on the FY 2013 Budget

Request By: Supervisor Cook

Question: How many teachers are employed by Fairfax County School System in the current year and how does that number compare with each of the last five years? This is not slots, but actual employees.

Response: The following response was prepared by Fairfax County Public Schools (FCPS):

The chart below represents the number of teacher scale employees as of October 31 of each year for all ten School Board funds. Teacher scale includes all teacher categories as well as guidance counselors, librarians, audiologists, and physical/occupational therapists.

Fiscal Year	Number of Teachers
FY 12	14,838
FY 11	14,351
FY 10	14,153
FY 09	14,137
FY 08	14,030

A five-year chart of positions by fund is included in both the proposed and approved budget documents.

Response to Questions on the FY 2013 Budget

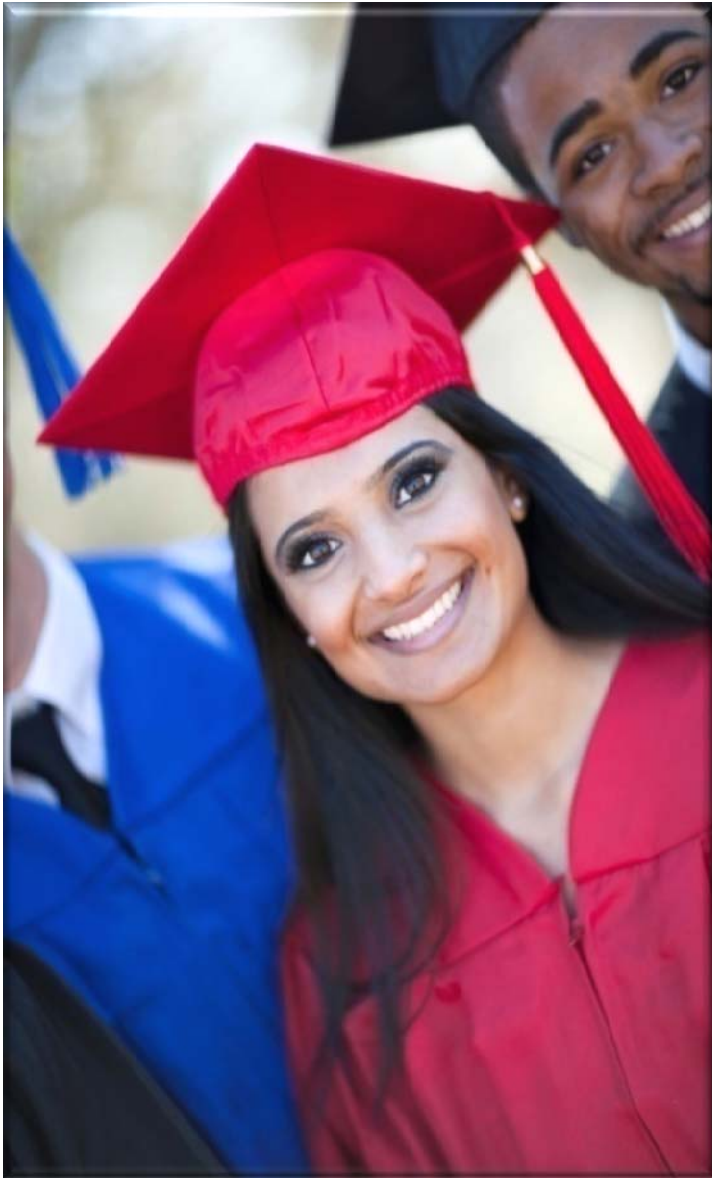
Request By: Supervisors Hudgins and Gross

Question: Please provide the detailed FCPS report on the issue of dropouts, noted at the March 13 Board Budget Committee meeting.

Response: The following response was prepared by Fairfax County Public Schools (FCPS):

Attached is the FCPS dropout analysis report. In addition, following is a link to the annual dropout report created by FCPS. The school data is in this report.

www.fcps.edu/it/studentreporting/historical/pdfs/dropouts/drop0910.pdf



Final Report:

**Superintendent's
High School Graduation
Task Force**

**Richard Moniuszko, Ed.D.
Chair**

June 13, 2011

Office of the Superintendent
Fairfax County Public Schools



Introduction

Graduation rate, or its converse, dropout rate, has been a significant national and local issue for a number of years. Although FCPS has traditionally had a low dropout rate when compared to other school systems, even a small percentage of “non-graduates” results in a significant number of students who leave school unprepared for their future. Beginning with school year 2011-2012, the Virginia Department of Education will use each high school’s Graduation and Completion Index (GCI) as one component of school accreditation. In fall 2010, Superintendent Jack Dale provided an FCPS Task Force on High School Graduation with the following charge:

- Review FCPS Graduation Rate Using Both State and Local Measures
- Develop a Profile of FCPS Students who do not complete high school on time
- Identify the reasons why FCPS students are not graduating on time
- Make recommendations to address the issues identified

Dr. Richard Moniuszko, Deputy Superintendent was assigned to chair the Task Force, which started meeting in January 2011, and completed its work in June 2011.

Task Force Composition

Dr. Richard Moniuszko, Deputy Superintendent (Chair)

Assistant Superintendents:

- Terri Breeden, Professional Learning & Accountability
- Kim Dockery, Special Services

Central Office Staff:

- Lillian Grady, SOL and Remediation
- Greg Hood, School Counseling Services
- Frances Ivey, PreK-12 Curriculum and Instruction
- Jim Johnson, PLA Special Projects
- Kathy Oliver, Student Testing
- Mary Ann Panarelli, Intervention and Prevention Services
- Teddi Predaris, Language Acquisition and Title I
- Michelle Rahal, Test Analysis and Administration
- Laura Robinson, IT Decision Support

School-Based Staff:

- Bruce Butler, Principal, South Lakes HS
- David Czarnecki, Director, Student Services, Holmes MS
- Andrea Garris, Principal, Annandale Terrace
- Jennifer Glaser, Director, Student Services, Fairfax HS
- Penny Gros, Principal, Key MS
- Abe Jeffers, Principal, Lee HS
- Larry Jones, Principal, Bryant Alternative HS
- Nardos King, Principal, Mount Vernon HS
- Eric Kinneman, Director, Student Services, Mountain View HS
- Mary McNamee, Principal, Lynbrook ES
- John Ponton, Principal, Annandale HS
- Doug Tyson, Principal, Kilmer MS

External Staff:

- Kerin Hilker-Balkissoon, Director, Pathways to the Baccalaureate Program, NVCC

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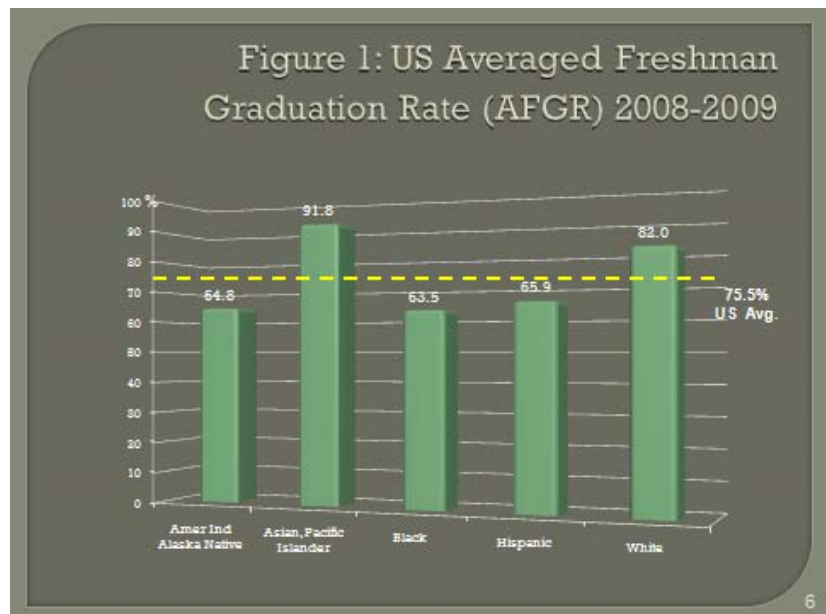
I. THE NATIONAL VIEW

During the past decade, nearly one-third of all public high school students failed to graduate. Close to five million American 18- to 24-year-olds lack a high school diploma.¹ Among developed nations, the U.S. ranked about 20th out of 28 in high school graduation rates.²

A. A Nationwide Problem

Although some indicators suggest a modest improvement in the last few years, the rate at which American students complete high school has remained essentially the same for 30 years. Students from historically disadvantaged minority groups (Hispanic and Black) have little more than a fifty percent chance of finishing high school with a diploma. By comparison, graduation rates for Whites and Asians are 75 and 77 percent nationally.³ The national graduation rate among students of color hovers around 25 percentage points below their White peers. Males graduate from high school at a rate eight percentage points lower than female students. The pace of successful high school completion for males from historically disadvantaged minority groups consistently falls at or below the 50 percent mark. Students in grades 10 through 12 from low-income families drop out at four times the rate of students from high-income families.⁴

More recent graduation data, shown in Figure 1, reflect some improvement in these outcomes. For comparability, the national graduation rate information provided here and elsewhere in this report refers to the “Averaged Freshman Graduation Rate” (AFGR) as defined by the National Center for Educational Statistics. That statistic estimates the percent of students entering grade nine in any given year who graduate four years later with a regular or advanced high school diploma.⁵ There are three other four-year cohort methods for calculating graduation rate that directly impact FCPS:



¹ David Hurst, Dana Kelly, and Daniel Princiotta, *Educational Attainment of High School Dropouts 8 Years Later*, (Washington, D.C.: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics (2004).

² Organization for Economic Co-Operation and Development, 2006.

³ Editorial Projects in Education, *Diploma Count 2010: Graduating by the Number: Putting Data to Work for Student Success*, special issue (2010).

⁴ U.S. Department of Education, NCES, *Digest of Education Statistics 2009*.

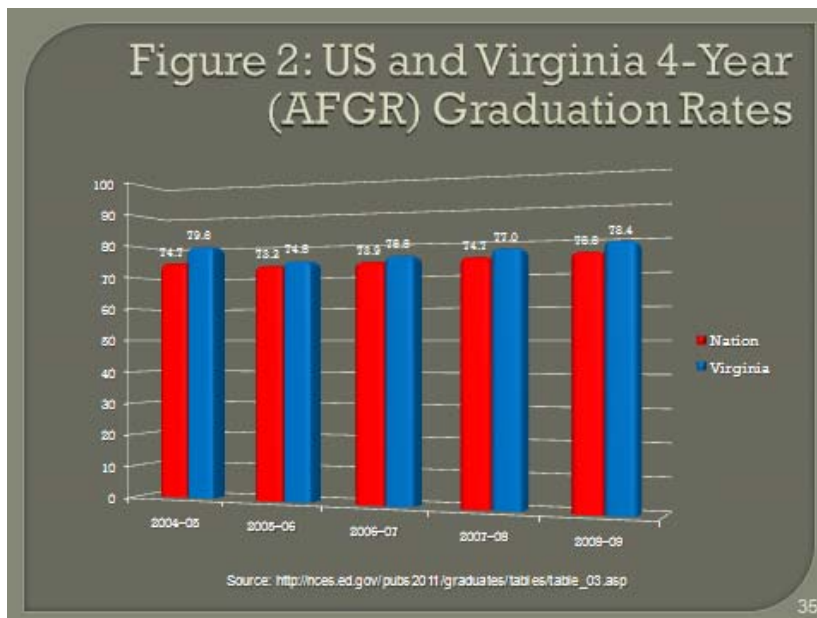
⁵ To minimize the effects of historically high grade 9 retention rates, the AFGR establishes the base “freshman” cohort by averaging the enrollment of that class in grades 8-10.

1. Federal Graduation Indicator (FGI), which is used at the high school level to calculate Adequate Yearly Progress for No Child Left Behind;
2. Virginia Graduation and Completion Index (GCI), which will be used beginning 2011 for high school accreditation by the Virginia Department of Education; and
3. Virginia On-Time Graduation Rate (OGR), which was used to generate the four year “non-graduate” FCPS data in this report.

See Appendix 1 for a detailed description of each of these cohort graduation rates.

Using the AFGR methodology to facilitate comparisons, no state had higher than an 88 percent graduation rate, and 10 states had rates below 66 percent. Graduation rates in the Northeast (73 percent) and Midwest (77 percent) were higher than the overall national figure, while graduation rates in the South (65 percent) and West (69 percent) were lower than the national figure. Virginia’s 2007-08 four-year graduation rate, at 77 percent, is slightly above the national experience.

More than half of the Nation’s dropouts come from ten percent of its high schools. Termed “dropout factories” in *Building a Graduation Nation*, these schools have grade 9 graduation



rates four years later of 60 percent or less.⁶ They are found in virtually every state and are especially concentrated in poor urban and isolated rural areas. All Fairfax County Public Schools’ (FCPS) high schools have graduation rates that are well above the threshold definition for dropout factories.

B. Why Be Concerned?

The earnings of a high school dropout are only about 70 percent those of high school

graduates. Over a lifetime, a high school dropout earns an average \$636,000 less than a college graduate and \$260,000 less than high school graduates.⁷

⁶ Robert Balfanz, John M. Bridgeland, Laura S. Moore, Joanna Horning Fox; *Building a Grad Nation: Progress and Challenge in the High School Dropout Epidemic*; Civic Enterprises, Everyone Graduate Center (Johns Hopkins, University), America’s Promise Alliance; November 2010

⁷ Henry Levin, Clive Belfield, Peter Muennig, and Cecilia Rouse, *The Costs and Benefits of an Excellent Education for All of America’s Children* (New York, N.Y.: Columbia University, Teachers College, (2007).

Dropouts pay about 42 percent of what high school graduates pay in federal and state income taxes each year (\$1,600 and \$3,800, respectively). Over a lifetime, the difference in the discounted (2007) present value of federal and state income tax revenues is about \$60,000 per dropout. These estimates suggest a yearly “loss” on the order of \$36 billion in state and federal income taxes.

The Bureau of Justice Statistics reports that 68 percent of the nation’s state prison inmates are dropouts. Higher crime rates among dropouts, of course, imply additional innocent victims, together with their added pain and economic loss. Dropouts constitute 62 percent of White inmates, 69 percent of Black inmates, and 78 percent of Hispanic inmates.⁸ Furthermore non-graduates require substantially higher levels of welfare support, subsidized medical services, and other forms of publically financed assistance. It is estimated that U.S. taxpayers could save \$45 billion annually in “social costs” if the number of high school dropouts were cut in half.⁹

C. Common “Causes” Nationwide

Dropping out is more a long-term process than an event – a process that, for some students, begins early in their academic careers. Research has found that as early as elementary school, dropouts differ from students who graduate from high school.¹⁰ The first five years of development are a critical period for learning. When children enter school without a basic knowledge of the world around them and their place in it, they are at a disadvantage. Early deficits in the vocabulary and spatial skills they need to take the next steps in learning can have negative effects that persist throughout their school careers.

Following nearly 13,000 Philadelphia students, Balfanz and Herzog (2006) found that 48 percent of all sixth-grade students had four school-related risk factors associated with an increased likelihood of not completing high school: course failure in English; course failure in Math; unsatisfactory behavior; and poor attendance (80% or less).¹¹ Sixty percent of these students eventually left school without graduating. More recent research has defined even earlier markers for potentially dropping out, as shown in results of a just released study by Donald J. Hernandez of Hunter College at City University of New York¹². He found that students who cannot read at-level by grade 3 are four times less likely to graduate by age 19 than those who read proficiently. If those students also come from impoverished backgrounds they are 13 times less likely to graduate.

These findings suggest that schools could build “early warning” data systems to identify potential dropouts while there is still time to implement appropriate, targeted interventions.

⁸ U.S. Department of Justice 2004, 2009.

⁹ Henry Levin, Clive Belfield, Peter Muennig, and Cecilia Rouse, *The Costs and Benefits of an Excellent Education for All of America's Children* (New York, N.Y.: Columbia University, Teachers College, (2007).

¹⁰ Russell W. Rumberger, *Early Predictions of High School Graduation and Dropout* (2007).

¹¹ Robert Balfanz and Lisa Herzog, *Keeping middle grades students on track to graduation* (2006).

¹² Preview of “Double Jeopardy: How Third-Grade Reading Skills and Poverty Influence High School Graduation” by Donald J. Hernandez, published in Education Week, April 8, 2011.

There is a difference between the exact moment when students leave school and the process of disengaging from school, often beginning well before they arrive at the point of their decision to quit. A lack of engagement with school is considered a precursor to dropping out. Signs of disengagement may provide the best indicators of when to target resources for dropout prevention, particularly if students are not yet failing core coursework. For prevention to be effective, schools must engage all students in learning, and they must focus specifically on the problem of re-connecting students who have become disengaged from classroom learning.

The impact of another strong risk factor, *retention*, varies depending upon when it occurs. Retention in any grade has a negative impact on a student's odds of making it through the ninth grade, but retention in the middle grades is particularly problematic.¹³ Once students get off-track by grade 9, bringing them to successful high school graduation is extremely difficult. If these students reach middle school already overage for their grade, then experience a second grade retention in the middle grades, they begin to disengage from schooling altogether. And as schools in the middle grades and beyond fill up with overage and under-motivated students, school cultures themselves become vulnerable to depressed expectations and mediocre practice.

Teachers appear divided about the effect of retention on students' self-concept and whether retention for an extra year for growth and maturity is justified.^{14,15} In a survey of views on grade repetition, teachers and principals described common characteristics of retained children as under-motivated and developmentally immature. At the same time they agreed that emotional immaturity is an appropriate rationale for retention.¹⁶ Tomchin and Impara (1992) believe that it is critical for schools to implement staff development in which teachers (a) examine their own beliefs about retention, (b) are presented with research evidence about the short- and long-term effects of retention, and (c) are trained in school-wide classroom intervention strategies.

The risk factors commonly found by researchers to best predict dropout for high school students are high absenteeism, being over-age by two years, having low grades, and having a child. Using these factors should help identify a group of students with the highest probability of dropping out. Dynarski and Gleason (1998) found that these factors would, in fact, identify a group where one in three students would actually drop out.

¹³ Alexander, K. L., Entwisle, D. R., & Kabbani, N. S. , *The dropout process in life course perspective: Early risk factors at home and school*, Teachers College Record, 103, 760–822. (2001).

¹⁴ Tanner, C.K., & Combs, F.E., *Student retention policy: The gap between research and practice.*, Journal of Research in Childhood Education, 8, 69–77, (1993).

¹⁵ Tomchin, E.M., & Impara, J.C., *Unraveling teachers' beliefs about grade retention*. American Educational Research Journal, 29, 199–223, (1992).

¹⁶ Byrnes, D., & Yamamoto, K.Y., *Academic grade retention of elementary pupils: An inside look*. Education, 106, 208–214, (1985).

In summary, current research has identified three major groupings of risk factors that can be modified to improve school outcomes and enable school personnel to create early interventions that hold some promise of changing the trajectory of many students.¹⁷

- *Academic Failure:* The results of poor basic skills become more obvious as students move through the school system, often culminating with failure on high-stakes tests or in key courses at the secondary level. A cycle of failure and boredom ensues that leads to poor academic self-esteem and renewed efforts by failing students to escape from school as soon as possible.
- *Disinterest in School:* Many students do not have access to either role models or good advice for school success. Often, these students are isolated by economics, social status, or geography from communities in which they might encounter positive, non-family role models. Many of the adults they actually see are struggling with the economic and employment consequences of their own school failure and are poorly equipped to give effective guidance for school success.
- *Social and Economic Pressures:* The negatives range from: lack of family support for education; to family economics that depend on student earnings or their provision of child care; to other issues such as divorce or mobility that interfere with a student's ability to attend to school requirements. These factors are strongly influenced by the broader social context of schools, families, and communities.

A detailed listing of factors found in one or more studies to be significantly associated with high incidences of dropouts at the several school levels is provided in Figure 3.

¹⁷ Dynarski, M., Clarke, L., Cobb, B., Finn, J., Rumberger, R., and Smink, J., *Dropout Prevention: A Practice Guide* (NCEE 2008–4025). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education, (2008).

FIGURE 3
SIGNIFICANT RISK FACTORS BY SCHOOL LEVEL¹⁸

RISK CATEGORY AND RISK FACTOR	Elementary School	Middle School	High School
Individual Background Characteristics			
• Has a learning disability or emotional disturbance		x	x
Early Adult Responsibilities			
• High number of work hours		x	X
• Parenthood			X
Social Attitudes, Values, & Behavior			
• High-risk peer group		X	x
• High-risk social behavior		X	x
• Highly socially active outside of school			x
School Performance			
• Low achievement	X	X	X
• Retention/over-age for grade	X	X	X
School Engagement			
• Poor attendance	X	X	X
• Low educational expectations		X	X
• Lack of effort		x	x
• Low commitment to school		x	X
• No extracurricular participation		x	X
School Behavior			
• Misbehavior	x	x	X
• Early aggression	x	x	
Family Background Characteristics			
• Low socioeconomic status	X	X	X
• High family mobility		X	
• Low education level of parents	x	x	X
• Large number of siblings	x		x
• Not living with both natural parents	x	x	X
• Family disruption	x		
Family Engagement/Commitment to Education			
• Low educational expectations		X	
• Sibling has dropped out		x	x
• Low contact with school		X	
• Lack of conversations about school		X	x
KEY: "x" indicates that the risk factor was found to be significantly related to dropout in one study. "X" indicates that the risk factor was found to be significantly related to dropout in two or more studies.			

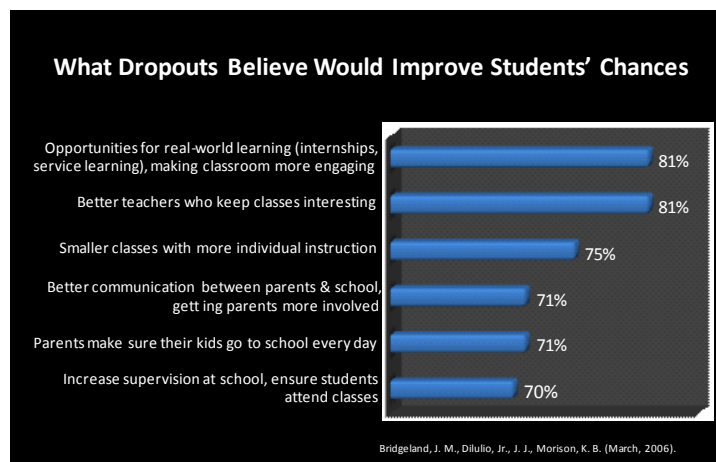
¹⁸ Adapted from "Dropout Risk Factors and Exemplary Programs"; Cathy Hammond, Dan Linton, Jay Smink, and Sam Drew; National Dropout Prevention Center/Network and Communities in Schools, Inc.; May 2007.

II. POTENTIAL SOLUTIONS

A. What Dropouts Say

Clues as to what might be effective dropout prevention strategies can be found in the research into what students, themselves, say. According to a landmark 2006 study of the issue, “The Silent Epidemic: Perspectives of High School Dropouts”:¹⁹

- *Supportive Relationships* – Only 56 percent of dropouts said they could go to a staff person for school problems, and just 41 percent had someone in school to talk with about personal problems.
- *Outside Support* – More than three out of five (62 percent) said their school needed to do more to help students with problems outside the classroom.
- *Quality Instruction* – Four out of five dropouts (81 percent) wanted better teachers, and three-fourths wanted smaller classes with more individualized instruction.
- *Added Time to Learn* – More than half (55 percent) felt that more needed to be done to help students who had problems learning, and 70 percent believed more tutoring, summer school, and extra time with teachers would have improved their chances of graduating.
- *Real World Connections* – Four out of five (81 percent) said there should be more opportunities for real-world learning, and some called for more experiential learning. They said students need to see the connection between school and getting a good job.
- *Parental Involvement* – Seventy-one percent of dropouts surveyed felt that the keys to keeping students in school were better communications between parent and school and increased parental involvement in their child’s education.



¹⁹ John M. Bridgeland, John J. Dilulio, Jr., Karen Burke Morrison, *The Silent Epidemic: Perspectives of High school Dropouts*, Civic Enterprises and Peter D. Hart Research Associates, March 2006.

B. What Works – District Level

A substantial body of disciplined research into what strategies are effective at helping students to graduate on-time has recently emerged. Much of what students say would be helpful has been borne out by this research. The essence of these findings is:

- *Use Early Warning Data Systems to Identify Students Likely to Drop Out* – Louisiana has pioneered the development of a state early warning data system. It flags students as at risk of dropping out if: they are absent 10 percent of the days enrolled; their disciplined days are 7 percent or greater; their current grade point average is 1.00 or less; their GPA has dropped by at least 0.50 points; or they are overage for grade.²⁰ Virginia is currently piloting a similar system that might be adapted and extended for use in FCPS.
- *Target Investments to Promising Dropout Prevention Strategies* – Research suggests that reducing class sizes from 25 to 15 for kindergarten through grade 3 could increase cohort graduation rates 11 percentage points.²¹ Improving teacher quality and early reading skills have similarly been linked to decreased dropout rates.²²
- *Connect Students to Supports* – Since Georgia launched its graduation coach initiative, the percentage of dropouts per year fell from 4.7 percent to 3.7 percent. After a year of work with graduation coaches, 40 percent of the students at risk no longer demonstrated attendance problems.²³ Alabama provides another example in a similar program that will provide \$1.7 million in funding to 25 pilot schools to hire dropout prevention advisors.²⁴
- *Create Pathways for All Students to Graduate from High School* – Clear connections to postsecondary and workforce interests, including dual enrollment, internships, and apprenticeships, keep students engaged in school with a focus on their future goals.

C. What Works – School Level

In *Gaining Traction, Gaining Ground* (2005), the Education Trust reported on actions principals can take at the school level to make substantial improvements for struggling students.²⁵ These strategies have produced results well above state averages for achievement, graduation, and college attendance. All are linked to improving success and educational opportunities for the most challenged high school students. Figure 4 summarizes these results, showing how high-impact high schools differ from average schools in ten key

²⁰ Patricia Merrick, *Louisiana Dropout Early Warning Systems (DEWS)* (2009).

²¹ Henry Levin, Clive Belfield, Peter Muennig, and Cecilia Rouse, *The Costs and Benefits of an Excellent Education for All of America's Children*, New York, N.Y.: Columbia University, Teachers College, (2007).

²² Dolores A. Stegeline, *Early Literacy Education: First Steps Toward Dropout Prevention: Effective Strategies for School Improvement and Dropout Prevention*, Clemson, S.C.: National Dropout Prevention Center, (2002).

²³ Georgia Department of Education, *Georgia Graduation Coach Initiative: 2007-2008 Report*, (2009).

²⁴ Alabama Department of Education, 'Statewide Pilot Programs Aimed to Boost Graduation Rates, news release (2007).

²⁵ Stephanie Robinson, Amy Stempel, Isis McCree. The Education Trust, *Gaining Traction, Gaining Ground: How Some High Schools Accelerate Learning for Struggling Students*, 2005.

leadership domains. Virtually all of these practices are employed to some degree in most FCPS schools. The challenge is to achieve focus and consistency in their application.

Figure 4 School-Level Actions to Improve Graduation Rates

Action	High Impact School Practice	Average Impact School Practice
Teacher Placement	Principals are more likely to consider student achievement data to determine which classes teachers will be assigned. They review and analyze achievement data, observe teachers' strengths and weakness to ensure struggling students get the teachers who can best accelerate learning.	Principals are more likely to assign teachers to classes based on teacher preference and seniority. For example, department heads often teach only honors and AP classes, while struggling students are taught by less experienced teachers.
Support for New Teachers	Support for new teachers is structured and focuses on curriculum and instruction. New teachers are given model lesson plans, are paired with veteran teachers who teach the same class, and given opportunities to observe master teachers.	Support for new teachers tends to focus on personal support. For example, new teachers meet with administrators to chat about how things are going. The focus is on teacher motivation, rather than helping teachers to develop skills to better serve their students.
Hiring Practices	Principals work within their district system, but aggressively and proactively identify and recruit highly qualified teachers. They may conduct informal interviews and urge good candidates to apply through the district. They may even raid other school faculties, looking for good teachers who will support the school's culture.	Principals tend to feel constrained by district procedures and do not feel empowered to work creatively with it. They tend to take the list of candidates provided by the district and choose the "best of the bunch" from among them, seldom recruiting teachers that they think might be a good fit.
Support for Students	Student support programs tend to be mandatory and are triggered by assessments that signal the student is struggling – participation in the programs is not an option.	Student support programs tend to be voluntary –students and parents are notified of availability of help, but the decision to participate is generally left up to them.
Early Warning Systems	Schools have "early warning" systems to catch students before they fail. Counselors analyze seventh and eighth grade student test scores for entering ninth-graders to identify students who are struggling. Identified students are assigned to a variety of supports, including mandatory summer school, freshman academy classes, or after-school tutoring.	Schools tend to offer support after students have failed a course – e.g., getting an "F" in a course may result in participation in a computerized skill-acquisition course.
Grade Level Support	If possible, academic support programs for students are not remedial, but support concurrent grade-level courses, which allows students sufficient time over four years to complete the college preparatory sequence of courses.	Academic support services for students tend to be remedial in nature. Struggling ninth-graders are placed in remedial courses, delaying access to grade-level work, thus limiting the time available to students to take the necessary sequence of college-preparatory courses.
Use of Data	Principals tend to be hands-on when it comes to analyzing data. They use data to actively supervise and oversee teacher and student performance. Principals institute formal methods of analyzing data with teachers to determine course content, strengths and weaknesses. Principals may review each student's transcripts to ensure correct placement or to recognize students who have improved performance.	Principals tend to rely on teachers and departments to use data to monitor student performance and are not as involved in the analysis. At one school, for instance, the principal copied data for teachers and asked them to analyze it, but did not work directly with departments to sort out the reasons behind student achievement or how to improve results.
Class Sizes	Administrators tend to make class sizes smaller for struggling students, even if this means larger class sizes for honors and AP classes.	Class sizes are relatively uniform, with no proficiency level having smaller classes than another.
Consistency	Teachers collaborate to ensure that course content is consistent no matter who is teaching.	Teachers work individually to determine class content.
Use of Time	Students who arrive behind in ninth grade spend more time in courses with substantial reading than do students who are proficient. Administrators also act vigorously to protect time by limiting announcements over the PA system to emergencies, prohibiting students from being pulled from class except for emergencies, and requiring instruction to be "bell to bell".	Administrators tend to consent to intrusions into academic time, such as announcements calling students to the office and early release for athletes.

Source: Robinson *et al.*, 2005

D. What Works – Effective Program Models

The previously cited authors of the meta study, “Dropout Risk Factors and Exemplary Programs,” identified 50 strategies and programs which research has shown in multiple instances to be effective at preventing dropouts.²⁶ Among the more familiar of these were: Advancement Via Individual Determination (AVID); Big Brothers, Big Sisters; Career Academies; and Success for All. The full listing, together with their descriptions, can be found in Appendix G of that report.

These programs applied a combination of 22 intervention strategies aligned with the risk factors shown in Figure 3 above. The strategies are listed below:

Academic support	Gang intervention/prevention
Adult education	Life skills development
Afterschool	Mental health services
Behavioral interventions	Mentoring
Career development/job training	Pregnancy prevention
Case management	School/classroom environment
Conflict resolution/anger mgmt	Service-learning
Court advocacy/probation/transition	Structured extracurricular activities
Family engagement	Substance abuse prevention
Family strengthening	Teen parent support
Family therapy	Truancy prevention

Those most commonly and effectively used were: life skills development, family strengthening, academic support, behavioral interventions, and family therapy. Each of these key strategies is described below:

- *Academic Support* – Help with remediation; support learning other than tutoring (e.g., computer labs); academic skills enhancement programs using instructional methods designed to increase student engagement in learning (e.g., cooperative learning techniques and “experiential learning” strategies); other activities to increase bonding to the school; and homework assistance and tutoring.
- *Behavioral Interventions* – Individualized interventions designed to decrease a specific behavior by shaping and reinforcing a desired replacement while tracking changes over time; also those interventions designed to improve the individual's overall quality of life (i.e., student development).

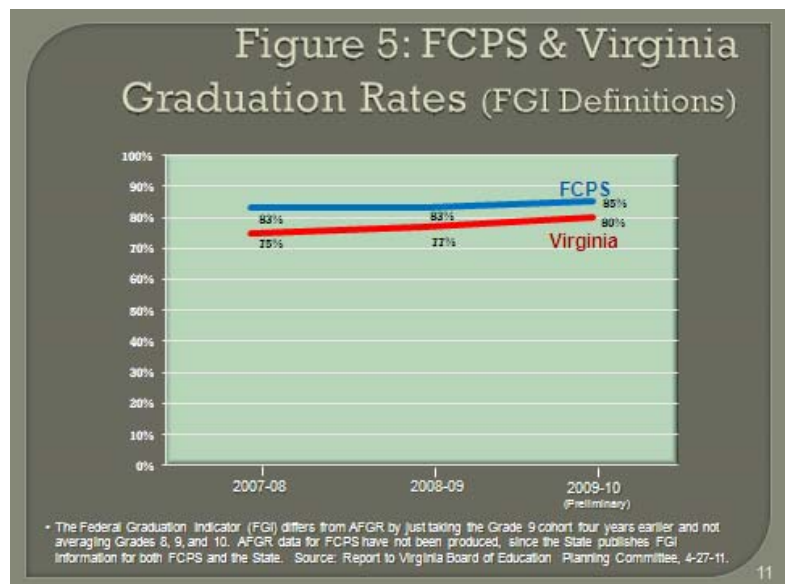
²⁶ Cathy Hammond, Dan Linton, Jay Smink, and Sam Drew, “Dropout Risk Factors and Exemplary Programs”, National Dropout Prevention Center/Network and Communities in Schools, Inc.; May 2007.

- *Family Strengthening* – Parents educated on specific parenting, management, and communications skills; education on various topics such as abuse and sexuality; training on ways to assist the child academically.
- *Family Therapy* – Modifications to maladaptive patterns of family interaction and communication.
- *Life Skills Development* – Communication skills; ability to cope effectively with relationships; problem solving/decision making; critical thinking; assertiveness; peer selection; low-risk choice making; self-improvement; stress reduction; consumer awareness; peer resistance; recognition and appropriate response to risky or potentially harmful situations; appreciation of diversity; social influences on behavior; conflict resolution skills and social skills; leadership skills/training; and health education.

III. Who Graduates in FCPS?

A. FCPS and State High School Completion

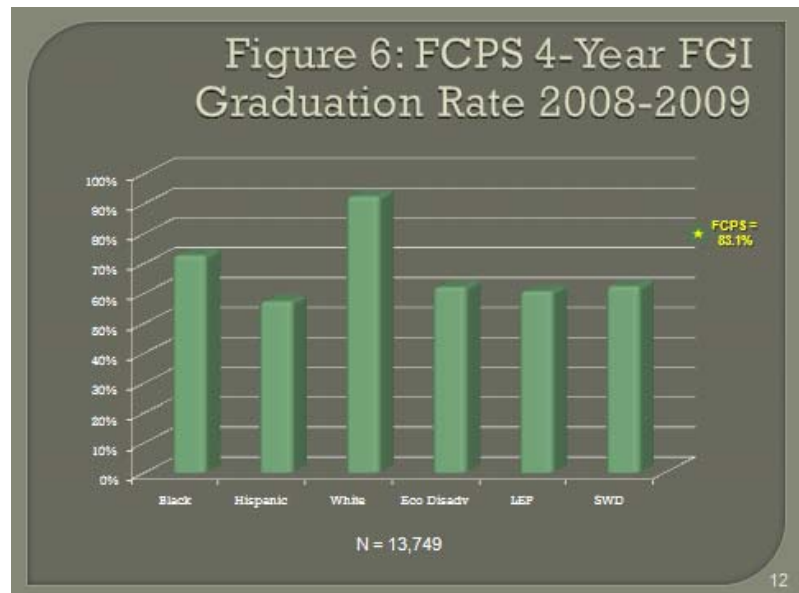
The four-year Federal Graduation Indicator (FGI) rates of Virginia and FCPS students for the classes of 2008 through 2010 are shown in Figure 5. Although the FCPS rate has been essentially the same over the past three years, at just below 85 percent, it has remained at a level ranging from five to ten percentage points *above* both the state and national rates.²⁷



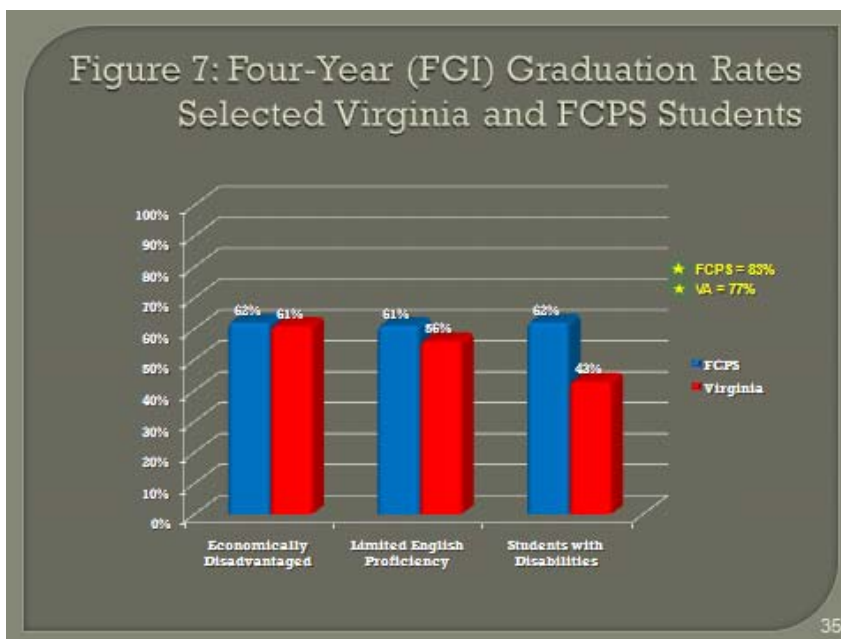
²⁷ NOTE: the FGI differs from the AFGR by using only the grade 9 enrollment four years earlier to define the cohort, rather than averaging enrollment at grades 8, 9, and 10 for the same cohort. It includes only those students who graduate with either regular or advanced diplomas four years after they enter grade 9. This graduation measure offers the Virginia and FCPS graduation data that are most closely aligned with the Federal AFGR information provided in this report.

However, the graduation rates for all FCPS student subgroups are not at the same level. The Division's 2009 four-year graduation rate for Hispanic students was more than 35 percentage points below FCPS' overall rate. It was also about nine percentage points below the national Hispanic average. (See Figure 6)²⁸

A significant difference between FCPS and national data is the graduation rate for Black students, who graduated at a rate of nearly 73 percent compared, with the US mean for Black students at 64 percent.



FCPS students facing other circumstances that could hinder their achievement also graduated at four-year rates somewhat lower than the overall Division average, but still substantially above state comparisons. For example, nearly 62 percent of the class of 2009's Students with Disabilities graduated within four years. (Figure 7) That this rate is nearly 20 percentage points below the FCPS average is not surprising, since students with "late" graduations and Modified Diplomas are not included. But that figure also is almost 20 percentage points *above* the comparable state rate. Our students with Limited English



Proficiency also graduated at rates about 20 percentage points below the total (but still well above the state rate), while FCPS' Economically Disadvantaged students similarly graduated at a rate about 20 percentage points below the overall FCPS figure, while marginally above the state's disadvantaged student rate.

²⁸ Education Week has just published new graduation information based on the Common Core of Data showing Montgomery and Fairfax Counties as having the highest graduation rates among large districts. See: [Education Week \(premium article access compliments of EdWeek.org\)](http://www.edweek.org/premium/article-access-compliments-of-EdWeek.org)

Students With Disabilities and English Language Learners who entered school in Virginia for the first time after reaching their twelfth birthday are entitled to a free public education through age 22. Since some of these students need additional time through a fifth or sixth year of high school to complete graduation requirements, a more comprehensive comparison of graduation rates includes a sixth year cohort. According to VDOE's most recent On Time Graduation Rate (OGR) six-year calculation (2008 cohort), FCPS ELLs had a graduation rate of 81 percent, compared with 64 percent in Arlington, 69 percent in Prince William, and 79 percent in Loudoun for the comparable ELL cohort. Similarly, the six year graduation rate for FCPS students with disabilities was 89 percent, compared with 86 percent in Arlington, 83 percent in Prince William, and 94 percent in Loudoun.

B. Profiles of FCPS Students Who Did Not Graduate in Four Years

To examine the nature of students in FCPS who do not graduate four years after entering 9th grade, data were collected on the 2009-10 cohort of FCPS students who started high school in September 2006. The cohort was selected using the Virginia On-Time Graduation Rate (OGR), which groups "Non-Graduates" into three categories:

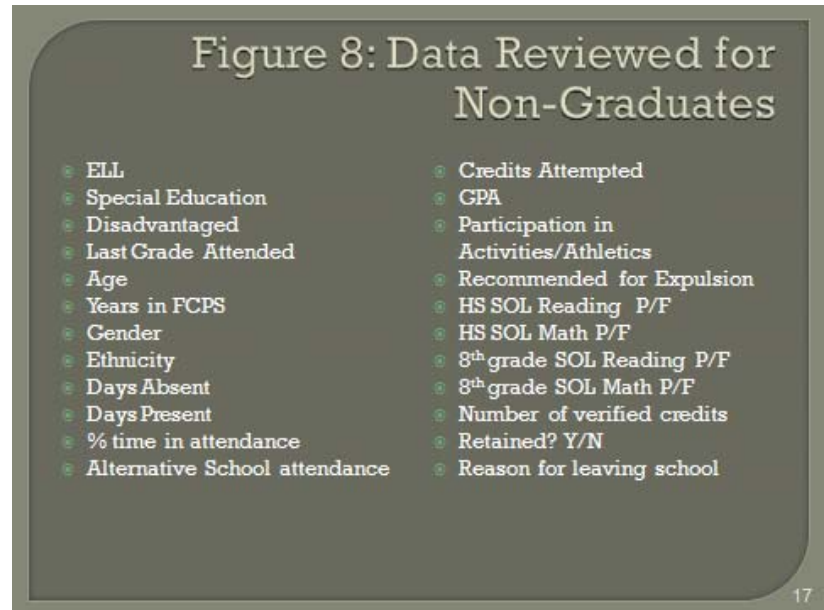
- *Completer* - Students who earned a Certificate of Program Completion or GED through FCPS
- *Dropout* - Students coded as dropouts and students who remain unconfirmed. Many unconfirmed students were coded by schools as transfers to other VA public schools, but VDOE has no record of these students enrolling in another Virginia public school after leaving FCPS
- *Still Enrolled* - Students enrolled in FCPS as of the end of the 2009-10 school year, plus long-term absence students who were expected to return to FCPS. Not all of these students subsequently enrolled in FCPS for the 2010-11 school year

The OGR calculation reassigns eligible English Language Learners (ELLs) and students with a disability to a future cohort if they are school-aged (22 and under) and enrolled for a fifth or sixth year of high school. Consequently, these students are not included in the four-year cohort data provided in this report.

	% of Non-Graduates	% of Total FCPS Population
Asian	11.8%	19.0%
Black	15.1%	10.4%
Hispanic	44.2%	18.7%
White	24.8%	45.3%
Other	4.1%	6.6%

The resulting four-year cohort of “non-graduates” totaled 1172 students, 185 who were still enrolled in school, 200 who were “completers”, and 787 students who were listed as “dropouts”. For each of these 1172 students who were enrolled in a traditional or alternative high school, data on student risk factors were compiled. The factors considered are listed in Figure 8.

For those four-year cohort students still enrolled, the ethnic distribution was fairly even – with Black, Hispanic, and White students each comprising 25 to 30 percent of the total, while other sub-groups were substantially less represented. The majority of FCPS dropouts were Hispanic (53.2%); the White sub-group comprised the next largest percentage (18.3%), and Black students were 14.1 percent of the total. It was noted that Black students are dropping out of FCPS at significantly lower rates than both Virginia and the nation.



The demographic composition of these non-graduates, compared with their representation in overall 2009-10 FCPS enrollment, is presented in the adjoining table.

Figure 9 summarizes the key risk factors associated with the 2010 cohort of FCPS dropouts versus completers and those still enrolled. These findings begin to offer clues as to why some of our students do not graduate – clues mirroring many of the conclusions from the body of national research.

Figure 9**Selected Characteristics of 2010 FCPS Non-Graduates**

Indicator	Enrolled + Completers	Dropouts
Percent ELL	12.7%	48.3%
Percent Special Ed	9.9%	16.4%
Average Years in FCPS	8.6	5.9
Percent Male	57.4%	59.0%
HS Attendance Rate (%)	87.7	82.7
% Attended Alternative School	64.7%	48.3%
Average Credits Earned	15.4	12.1
Average GPA	1.67	1.59
Percent Participated in Activities	7.5%	3.0%
% Recommended for Expulsion	10.1%	10.4%
Percent Passed SOL, Reading	43.9%	14.6%
Percent Passed SOL, Math	74.5%	37.5%
Percent Disadvantaged	32.2%	33.0%
Percent Retained	66.8%	50.8%

Among the more striking of these observations is that:

- English Language Learners (ELLs) comprised 48.3% FCPS dropouts (381 of 790 students) in the four-year cohort. However, it also should be noted that there were 1028 school-age ELL students still enrolled and working on graduation requirements beyond the four-year time period. Research has demonstrated that these students often require additional time to develop academic language proficiency in order to complete graduation requirements. These students were reassigned to an appropriate, later cohort.
- A large percentage of dropouts were unable to pass Math and Reading SOLs (62 percent and 85 percent respectively).
- Few in any non-graduate category participated in extra-curricular activities; a third were economically disadvantaged; and over half of dropouts had been retained in at least one grade. These retention figures, however, may be under-reported, since those appearing in a cohort of non-graduates are very likely to have been retained at some point in their educational careers.

The Task Force requested further analysis of the middle school achievement data regarding these 1172 FCPS students. This analysis revealed that 24.2 percent did not pass their Virginia SOL Reading test in grade 8, and 49.7 percent were unable to pass their Virginia SOL Mathematics test in grade 8. The Task Force also requested additional data on language proficiency. That information showed that, among those listed as “dropouts,”

Spanish was the most common first language among ELL students (49.9%), followed by Vietnamese at 2.8%, and 33 other first languages listed in even lower concentrations.

The following narratives describe in greater detail the circumstances faced by representative FCPS dropouts, completers, and students who are still enrolled:

Who are our dropouts?

AB:

- Born in the United States but moved with his parents to El Salvador at a young age where he did not have any formal schooling for approximately seven years. He was sent back to the United States to live with an aunt and entered middle school as an 8th grader where he began receiving ESOL services. The aunt could no longer care for him he was withdrawn from FCPS to live with family in Prince William County, where he completed grades 9 and 10. A family friend took over guardianship and he was re-enrolled in FCPS as a 11th grader during the 08-09 school year. He never returned to school for 2009-10. While at high school, he was referred to Local Screening, but not eligible for special education services.
- **Primary risk factors:** ELL, mobility, academic gaps, economically disadvantaged

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Who are our completers?

EF:

- EF raised in a single family home, and was frequently absent from school during his 9th grade year (16 days). Although academically capable his 9th grade GPA was 1.4. Sophomore year he was removed from honors classes, and showed some improvement in his grades (GPA 2.28). He was hospitalized at Dominion Hospital in the Spring of 2009 for depression, with 40 discipline referrals during his school career, dating back to elementary school. His junior and senior year, his GPA declined significantly although his attendance increased. He was referred to Alternative High School and graduated there.
- **Risk factors:** Attendance, alternative schools

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Who are those still enrolled?

GH:

- GH attended two different FCPS high schools after the family moved here from New York State. His mother was ill and died shortly after the family moved to this area. While in HS, the student had significant absences and reportedly was not engaged while present for classes. He lived with a blended family that included his aunt and cousins; the other children in the household reportedly exhibited similar attendance and behavioral concerns. He was enrolled in a regular high school for only a month, before referral to Adult High School in November 2010, where he currently attends.
- Primary Risk factors: Attendance, Alternative School, Average GPA, Retained

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Who are those still enrolled?

DJ:

- DJ attended two different FCPS high schools after the family moved here from New York State. His mother was ill and died shortly after the family moved to this area. While in HS, the student had significant absences and reportedly was not engaged while present for classes. He lived with a blended family that included his aunt and cousins; the other children in the household reportedly exhibited similar attendance and behavioral concerns. He was enrolled in a regular high school for only a month, before referral to Adult High School in November 2010, where he currently attends.
- Primary Risk factors: Attendance, Alternative School, Average GPA, Retained

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C. Task Force Conclusions – Reasons for FCPS Students' Non-Graduation

To understand why FCPS students, in particular, do not successfully complete high school, the Graduation Task Force reviewed the relevant research and analyzed the statistical characteristics of 1172 class of 2010 non-graduates, as reported above. The Task Force also asked affected high school principals and counselors to provide further Information from their direct work with a random sample of non-graduates representing each of their high schools. This information, when evaluated through the eyes of Task Force members similarly experienced with students facing such challenges, produced findings reflecting both objective fact, and subjective understanding of students' personal circumstances. As a result, the FCPS Graduation Task Force concluded that FCPS students do not graduate for three broad categories of reasons, similar to the reasons reflected in the national research: Academics, Socio-Economic Factors, and Disinterest in School. Specific concerns within these categories were:

Academics:

- level of English language proficiency
- poor reading skills
- attendance problems
- few graduation credits
- lack of success on SOL tests
- lack of schooling in home country

Why
FCPS
Students
are
unable to
Graduate
in 4
years?

 <small>Academic Issues</small>	<ul style="list-style-type: none"> Lack of English language proficiency Poor reading skills Attendance problems Few graduation credits Lack of success on SOL tests Lack of schooling in home country
 <small>Socio/Economic Issues</small>	<ul style="list-style-type: none"> Substance abuse Mental health issues Over age for high school completion Transportation to alternative schools Pregnancy Opportunity to obtain GED in less time Fear of immigration status Behavior problems Child care issues
 <small>Disinterest in School</small>	<ul style="list-style-type: none"> Parents not supportive or effective Lack of "connectedness" to school Need to work to support family

Socio-Economic Factors:

- substance abuse
- mental health issues
- over-age for high school completion
- lack of transportation to alternative schools
- pregnancy
- opportunity to obtain GED in less time
- fear of immigration status
- behavior problems
- child care issues

Disinterest in School:

- parents not supportive or effective
- lack of "connectedness" to school
- need to work to support family

Five of these characteristics are infrequently mentioned in the research, reflecting the differences between the Fairfax community and the national data.

- level of English language proficiency
- lack of schooling in home country
- lack of transportation to attend an alternative school
- opportunity to obtain GED in less time, and
- fear related to immigration status

IV. RECOMMENDATIONS FOR ACTION

Recommendation #1 – Utilize Data Systems to Identify Students At-Risk of Dropping Out and to Monitor Progress:

The Task Force examined the Virginia Early Warning System (VEWS), recently made available to school divisions by the Virginia Department of Education. It is conceptually well-founded, but not scalable to a school division of FCPS' size. The Task Force recommends the design and implementation of an early warning system based on the new FCPS student information system (ISIS). This early warning system should include the risk factors identified by the Task Force. Periodic school and district-level reports should be compiled to reflect student outcomes with respect to these risk factors. Additionally, the Task Force identified a number of problems that must be corrected in the data used to calculate the Virginia On-Time Graduation Index to ensure accurate calculation of the dropout rate. Associated detailed recommendations are:

Develop an FCPS early warning system that includes academic and social risk factors in an ISIS-based program:

- Provide periodic school-/district-level reports on new students and current students identified by these factors as at-risk
- Use reports to continually monitor at-risk students' academic/social performance
- Identify elementary, middle and high school students for specific interventions to address their risk factors

Ensure that information regarding student withdrawals and re-entry is accurate:

- Establish consistent terminology and clear definitions regarding reasons for students' exiting school
- Provide training for student information system operators and administrators who monitor data to ensure full understanding and consistent application of the defined reasons for exiting
- Request changes to the Graduation and Completion Index (GCI) to reflect the high mobility and multi-national nature of FCPS students

Recommendation #2 – Provide Targeted Academic Intervention to Students At-Risk of Dropping Out

In reviewing the data for FCPS students who were unable to complete high school in four years, the Task Force found that many students enter high school with Reading skills inadequate to completing their coursework. Although a number of these students came to FCPS from other countries and had limited educational experiences, some attended school in FCPS for eight years or more. Reading and Language interventions should address the needs of both groups of students. The specific recommendations are:

- Expand pre-K programs to ensure students enter with more comparable language and experiences
- Require intervention for students in grades K-3 to ensure reading at grade-level
- Provide diagnostic reading tests for middle school students who are unable to pass the Reading SOL
- Provide training for high school teachers on how to teach reading in content areas
- Provide an intensive Reading class for grade 9 students who did not pass the grade 8 SOL Reading Test
- Encourage high school principals to employ a Reading Specialist
- Establish “credit recovery” programs for students who are in danger of failing core courses
- Investigate expansion of the Transitional High School concept to provide an intensive “catch-up” program for students who need both academic support and English language literacy
- Provide intensive professional development for HS teachers in differentiation of instruction in content, literacy, and culture for English Language Learners
- Explore employing “Graduation Advisors” for at risk students in middle and high school
- Implement goal-setting as part of Student Learning Plans for at-risk students

Expand access to FCPS Alternative School programs to meet student needs:

- Provide transportation for students who wish to attend FCPS Alternative School Programs

- Investigate the use of “Transition Support Resource Centers” (TSRC) as “school-within-a-school” programs

Action Recommendation #3 – Provide targeted social/emotional intervention for students and families

Many FCPS students were unable to graduate on-time because of substance abuse, depression, and other social/emotional issues that interfered with learning. Academic and social intervention at an earlier age should be used to mitigate the need for grade retention. FCPS alternative school programs can address some of these needs, but transportation to these schools can be problematic for some students. Specifically, FCPS should:

- Expand mentoring and advocacy programs (including advisory groups) for middle and high school students
- Coordinate internal resources with Fairfax County and other community agencies, expanding community partnerships to provide services to students at-risk of not graduating on time
- Use a “case management” approach to share information on student services and to monitor progress
- Engage parents as educational partners (K-12) through PIQE, PEP or other program models²⁹

Action Recommendation #4 – Improve Student “Connectedness” to School

Many FCPS students who do not finish high school lack adult guidance and support for the successful completion of education. Parents may work multiple jobs, be unfamiliar with the American system of education, or fear discovery of their immigration status. Accordingly, the Task Force recommends that FCPS:

- Explore the concept of a “graduation advisor” for every high school student identified as at-risk to not graduate
- Encourage and monitor student participation in school activities to ensure school connectedness
- Ensure that students set aspirational academic and career goals, and review them on a regular basis
- Provide multiple paths to graduation as needed, including GED and alternative programs (e.g., Woodson AHS, Bryant, etc.)

²⁹ Parent Institute for Quality Education

- Establish student mentoring programs, pairing at-risk students with successful peers
- Expand programs to more school sites for parents from other cultures to reinforce the necessity of high school completion (e.g. Parents as Educational Partners)

APPENDIX 1

The several graduation and dropout measures discussed in this paper are defined as follows:

- *(U.S.) Averaged Freshman Graduation Rate (AFGR)*: “The averaged freshman graduation rate (AFGR) provides an estimate of the percentage of public high school students who graduate on time – that is, 4 years after starting 9th grade –with a regular [or advanced (ed)] diploma. The rate uses aggregate student enrollment data to estimate the size of an incoming freshman class and aggregate counts of the number of diplomas awarded 4 years later. The incoming freshman class size is estimated by summing the enrollment in 8th grade for 1 year, 9th grade for the next year, and 10th grade for the year after and then dividing by 3. The averaging is intended to account for higher grade retention rates in the 9th grade.”³⁰
- *Federal Graduation Indicator (FGI)*: T FGI Graduates are defined as students who earn Advanced Studies, Standard, or IB Diplomas. On-time graduates are graduates who earn one of these three diplomas within four years of the first time they entered the 9th grade. The formula for the Federal Graduation Indicator equals [on-time graduates in year x] divided by [(first-time entering 9th graders in year x minus 4) plus (transfers in) minus (transfers out)]. Four-, five-, and six-year federal graduation indicators are calculated in a manner that is consistent with the federally prescribed methodology.
- *Virginia On-Time Graduation Rate (OGR)*: The Virginia On-Time Graduation Rate expresses the percentage of students in a cohort who earned a Board of Education-approved diploma within four years of entering high school for the first time. Percentages are based on longitudinal student-level data and account for student mobility and retention and promotion patterns. Students with disabilities and students who are limited English proficient who were still enrolled in school were moved into next year's cohort, consistent with the formula approved by the Virginia Board of Education. Completions counted include Regular, Advanced, GED, Modified Standard, and Special diplomas.
- *(Virginia) Graduation and Completion Index (GCI)*: Beginning with accreditation ratings announced by the Virginia Board of Education in fall 2011, high schools must earn a minimum of 85 points on the graduation and completion index – as well as achieve the required pass rates on state tests in English, history/social science, mathematics and science – to be *Fully Accredited*. The Graduation and Completion Index awards:³¹

³⁰ <http://nces.ed.gov/pubs2011/dropout08/findings6.asp>

³¹ www.doe.virginia.gov/support/.../superintendent_presentation_1.ppt

- 100 points for students who graduate with a(n)
 - Advanced Studies Diploma
 - Standard Diploma
 - Modified Standard Diploma
 - Special Diploma or General Achievement Diploma
 - 75 points for students who earn a GED
 - 70 points for students still in school
 - 25 points for students who finish high school with a Certificate of Completion
- Schools awarded 85 points are “fully accredited”. Those awarded 80-84 points are “provisionally accredited”, and those awarded 79 points and lower are “accredited with warning”.

For purposes of computing the index, qualified ELL and students with disabilities are reassigned to later cohorts.

The following table provides a summary comparison of these three graduation measures.

Table A
Federal and State Graduation Rate Comparison

Based on Year of Entry in Ninth Grade	Virginia's On-Time Graduation Rate (OGR)	Federal Graduation Indicator (FGI)	Graduation and Completion Index (GCI, New)
	Four, Five and Six Year Rates	Four, Five and Six Year Rates	Four Year Rates
INCLUDED AS GRADUATES			
Standard Diploma	YES	YES	YES
Standard Technical Diploma *	YES	YES	YES
Advanced Diploma	YES	YES	YES
Advanced Technical Diploma *	YES	YES	YES
Modified Standard Diploma	YES	NO	YES
Special Diploma	YES	NO	YES
General Achievement Dipl **	YES	NO	YES
Special Certificates	NO	NO	Reduced Point Value (25 pts)
GED	NO	NO	Reduced Point Value (75 pts)
Still in School	NO	NO	Reduced Point Value (70 pts)
ADJUSTMENTS			
Adjustment for Disabled	YES (moved to later cohort)	NO	Moved to later cohort
Adjustment for ELL	YES (moved to later cohort)	NO	Moved to later cohort
* Begins for Class of 2016. ** Not currently used in FCPS. SOURCE: Adapted from http://www.vaascd.org/VirginiaGraduationRates.pdf			