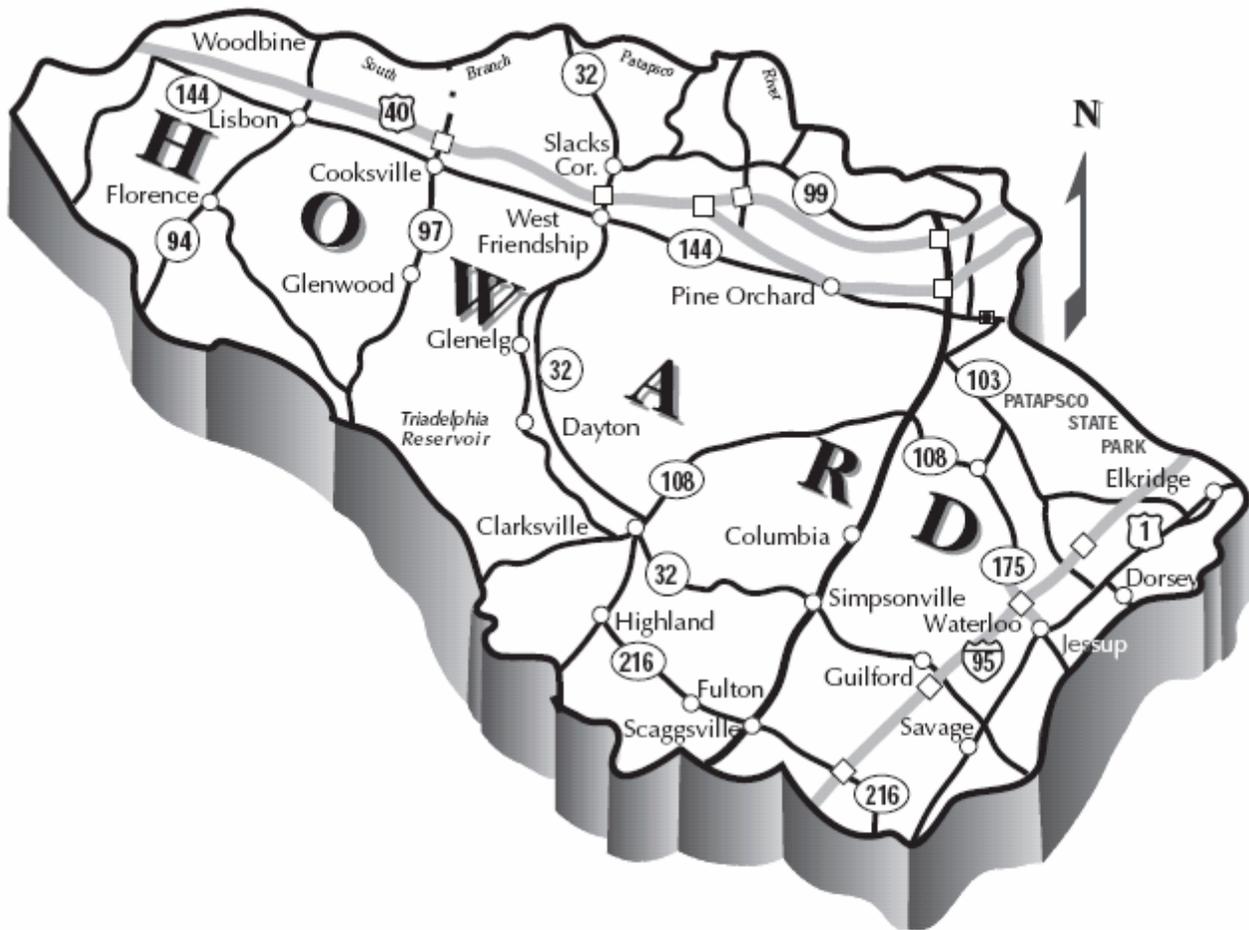

FEASIBILITY STUDY



June 2011

THE HOWARD COUNTY PUBLIC SCHOOL SYSTEM

Feasibility Study

An Annual Review of Long-Term Capital Planning and Redistricting Options

June 2011

Howard County Board of Education

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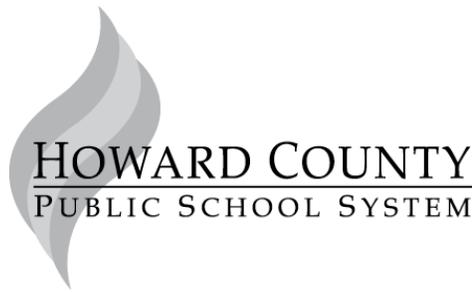
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June 9, 2011

To: Board of Education Members

From: Sydney L. Cousin, Superintendent

A handwritten signature in black ink, appearing to read "S. L. Cousin", is positioned to the right of the "From:" line.

Subject: June 2011 Feasibility Study – An Annual Review of Long-term Capital Planning and Redistricting Options

This document evaluates Long-Range Capital Improvement Program/Redistricting Plans for the school years 2012–2023. Site acquisition planning for needs beyond this period is also presented in the document. Staff provides recommended changes to the Capital Improvement Program for FY 2013 and suggested redistricting to support the Capital Improvement Program.

Redistricting that would take effect at the start of the 2012–2013 school year is considered for this year. A goal of this study is to identify the best scenario for sequencing redistricting to make best use of capacity in a time of significant capital budget challenges. Some plans may be adjusted over the next year based upon observed conditions and feedback in the redistricting process. I believe this report promotes open discussion about goals for redistricting which allows for transparency in the long-range planning process.

I look forward to working with the Board of Education on the review of this document.

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I. Introduction

Each year, the Board of Education reviews capital planning options and redistricting scenarios through a feasibility study. The annual student enrollment projection is introduced in this report along with scenarios that are intended to provide a comprehensive look at suggested capital additions, renovations, and any attendance area adjustments that are anticipated within the ten-year Capital Improvement Program period. Plans examined in this document may only be implemented through the Board of Education's approval of both the capital budget and any change to current school attendance areas. This report is the starting point for the annual process of developing the capital budget.

This document presents a single staff recommendation. Other scenarios may be developed in future attendance area review processes. Staff continues to use scorecards in an attempt to show how plans compare to the eleven policy considerations in Policy 6010 School Attendance Areas.

This is a planning document and the recommendations presented for review are not final. The conditions which have influenced past enrollment projections may change. New plans may be needed to react to population shifts or new residential development plans. Experience has shown that by presenting this report annually, assumptions and trends can be given consideration on a regular basis and appropriate adjustments can be made to the capital budget or redistricting plans. Redistricting proposals are not certain until approved by the Board of Education.

The recommendation in this document is presented for each organizational level (elementary, middle, and high) using a pre- and post-measures format. The pre-measures format shows the effect of projected enrollment without any redistricting. The pre-measures format also shows FY12 Capital Budget projects as approved. The post-measures format shows the impact of projected enrollment within a redistricting plan. The post-measures format includes capital projects recommended in this document for the FY13 Capital Budget. If these projects are not approved, other plans must be developed. These same reports and other tables are included in the electronic document [A Supplement to the 2011 Feasibility Study](#)¹.

The redistricting process includes the following:

Feasibility Study. Projects in the Capital Improvement Program that increase student capacity will be tested in the feasibility study with a redistricting plan consistent with stated redistricting policy goals. Plans will be linked within and across organizational levels to form a short- and long- range redistricting plan. The Board of Education will review the plan and set direction as appropriate during the capital budget presentations each year. In years where redistricting is anticipated, the Attendance Area Committee will critique the plan, providing review and comment to the Superintendent.

Recommending Redistricting Plans. In years where redistricting is planned, staff will refine the goal directed short- and long-range plan based on the most current set of projections that conform to System-Level-Process Requirements. The Attendance Area Committee will apply the direction set by the Board of Education, the System-Level-

¹ <http://www.hcpss.org/boundarylines/>
2011 Feasibility Study

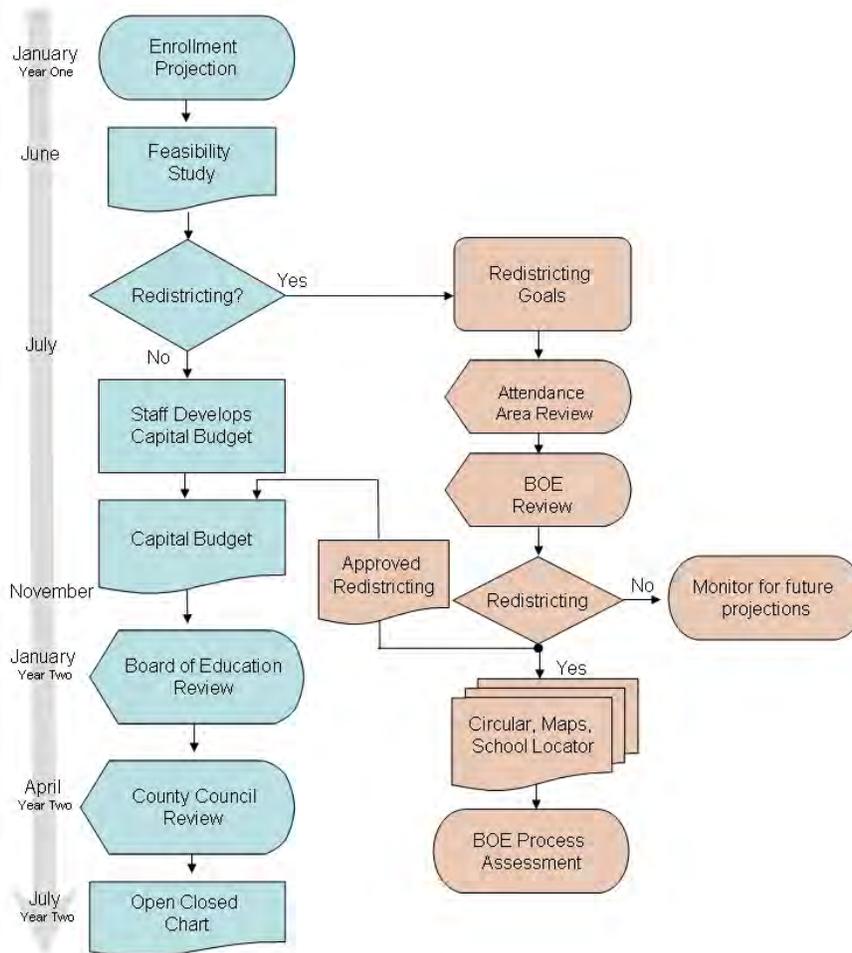
Process Requirements, and the standards and factors in Policy 6010. Staff will make modifications as appropriate. The plan will be presented at regional meetings, critiqued by the public, and adjusted as appropriate.

Approving Attendance Area Adjustments. In years where redistricting is occurring, the Board of Education will schedule public hearing(s) in accordance with Policy 2040 Public Participation in Meetings of the Board of Education on the proposed attendance area adjustments. Their deliberations will also include a public work session(s) with staff and the members of the Attendance Area Committee.

Assessing the Process. In years where redistricting is occurring, the Board of Education will assess the process at the end of the redistricting cycle. Modifications will be made as appropriate prior to the beginning of the next cycle.

After the feasibility study has introduced the new projection, tested redistricting scenarios, and recommended capacity adjustments, the capital budget is prepared. In years where redistricting is occurring, the capital budget and redistricting processes run in parallel, as illustrated in the following chart.

Figure 1. Capital Budget and Redistricting Process



II. Executive Summary

This feasibility study forms the basis for the development of the Capital Improvement Program. The following sections highlight staff considerations included in this study.

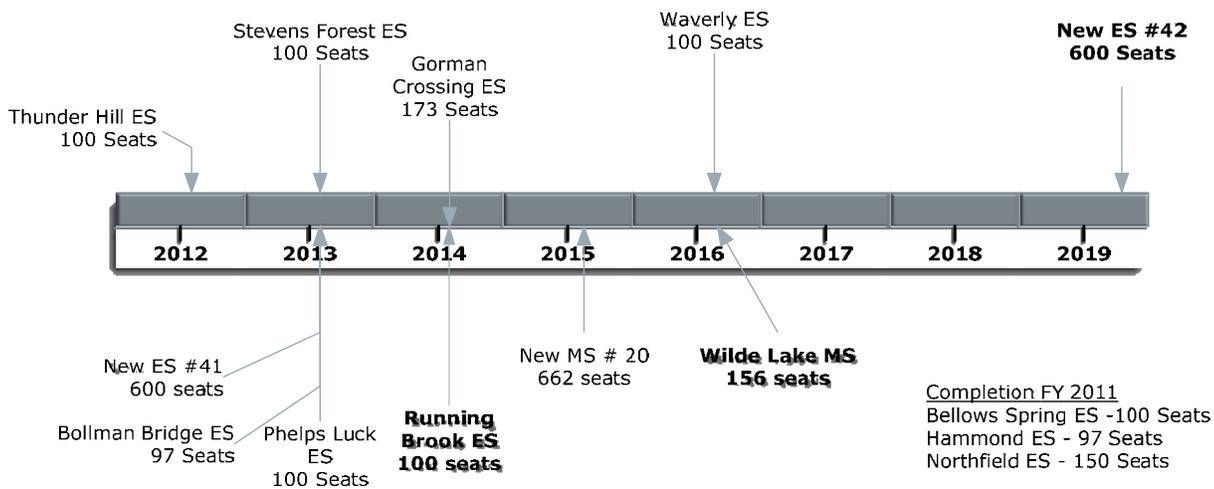
A. Capacities

Projections continue to support construction of a new northeastern elementary school to open 2013 and a new northeastern middle school to open 2015 in the Route 1 Corridor. Even with recommended redistricting, a second new elementary school in the eastern part of the county is needed as early as 2019. The additions and new schools approved as part of the FY 2012-2021 Long-Range Master Plan are included in the assumptions for this document. These include the Bollman Bridge ES (construction in progress), Phelps Luck ES (design development phase completed), Stevens Forest ES (design development phase completed), and Thunder Hill ES (construction in progress) renovation projects, as well as a 173 seat addition to Gorman Crossing ES in 2014. This projection supports consideration of additions to other schools in the southeastern region. The 100 seat addition at Waverly ES is to be

funded in FY 2016 and is critical for managing growth from Ellicott City to Turf Valley. Finally, an addition at Wilde Lake MS will be critical to help manage growth in student enrollment stemming from the Columbia Town Center development. This study validates the need for the existing projects and recommends including the following new projects in the FY 2013-2022 Long-Range Master Plan:

1. Running Brook ES Addition: Enrollment projections indicate additional capacity is needed at this school. The addition should be planned for 2014.
2. New Elementary School #42: The second elementary school is clearly needed for the eastern part of the county. This capacity is being planned for 2019 and will require further study of redistricting alternatives in future feasibility studies.

Figure 2. Proposed Capital Improvements (New recommendations in bold)



B. Redistricting Approach

Ideally, redistricting should be done as infrequently as possible moving as few students as necessary within the constraints listed in Policy 6010 School Attendance Areas. Redistricting is recommended for the Board of Education to consider in the fall of 2011, and which would be implemented in August 2012. It would be followed by more comprehensive movement in the following years to coincide with the completion of new construction projects, including the new northeastern elementary school. The primary goals of the proposed 2012 redistricting plan are to relieve Gorman Crossing ES in advance of the planned construction project and to begin to access available capacity in the west.

The staff recommendation is a result of an evaluation of multiple scenarios in a process completed over the last several months. Other proposals may be developed and evaluated by future Attendance Area Committees or in future feasibility studies. In many cases staff recommendations are modified as a result of the Attendance Area Committee process and the Board of Education has ultimately adopted a different plan than was originally proposed in the Feasibility Study.

Board of Education policy standards recommend consideration of redistricting under certain conditions. While these conditions include opening a school or adjusting to some other change, the most likely trigger is when school capacity utilization projections fall outside the minimum or maximum target range of 90–110 percent school capacity over a period of time.

When redistricting is considered, Policy 6010 School Attendance Areas identifies eleven factors to be considered in the development of plans:

1. Educational welfare of the impacted students in both the sending and receiving schools.
2. Frequency with which students are redistricted.
3. Impact on the number of students bused and the distance bused students travel.
4. Cost.
5. The demographic makeup and academic performance of students in both the sending and receiving schools.
6. Number of students to be redistricted.
7. Maintenance of feeder patterns.
8. Changes in a school's program capacity.
9. Impact on specialized or regional programs.
10. Functional and operational capacity of school infrastructures.
11. Building utilization. (90- 110 percent where possible)

Capacity utilization over time and the number of students redistricted are often given the most attention. The other factors are emphasized to different degrees. The distribution of enrollment growth and capacity is never perfect, so it can be difficult to make plans that satisfy all factors and move few students.

C. Recommendations

1. Plan must strike a balance between policy considerations.

Scenario testing over the years has shown how difficult it is to satisfy all eleven policy considerations equally for redistricting without creating a plan that moves a tremendous number of students. The recommendations presented in this report are analyzed in relation to these eleven considerations. This discussion will help to initiate the 2012 attendance area review process.

2. Comprehensive multi-year redistricting beginning in 2012 is planned.

The following schools are currently above 110 percent capacity utilization (based upon the official September 30, 2010 enrollment report), are projected to see significant student population growth over the next several years, and have no approved capital plans for classroom additions which can entirely handle this growth. Consequently these schools should be under consideration for potential redistricting after 2012:

- | | |
|----------------------|------------------------|
| 1. Atholton ES | 6. Gorman Crossing ES |
| 2. Bellows Spring ES | 7. Laurel Woods ES |
| 3. Deep Run ES | 8. Running Brook ES |
| 4. Elkridge ES | 9. Swansfield ES |
| 5. Forest Ridge ES | 10. Talbott Springs ES |

11. Veterans ES
12. Waterloo ES
13. Bonnie Branch MS
14. Ellicott Mills MS

15. Elkridge Landing MS
16. Mayfield Woods MS
17. Murray Hill MS
18. Howard HS

In order to develop a viable redistricting plan, other school attending areas which are not part of the schools listed above may be included as part of the ultimate redistricting plan. Considerations and redistricting alternatives are discussed in Section IV Needs and Strategies. Specific redistricting recommendations are listed in Section V of the document.

3. Long-term planning is needed for additional elementary and middle capacity.

At the elementary and middle levels, available capacity in the west can be used to help balance capacity utilization; however, capacity needs remain in the east, requiring additions, a new elementary school (2013), and a new middle school (2015). Staff is actively pursuing land acquisition opportunities for school sites in the eastern part of the county for all levels.

This study demonstrates the need for a second new elementary school in the east for 2019 despite planned additions and recommended redistricting, which helps to illustrate the fact that this year's projection is higher at the elementary level than in previous years. Experience has shown that obtaining sites is difficult so alternative sites for the first elementary school will be reserved for future use. Beyond the current CIP and new recommendations for additions in this document, careful consideration of options for additional classroom seats at existing locations like Laurel Woods ES and Guilford ES must be weighed in the next capital budget and June 2012 Feasibility Study. Future growth will also occur in Columbia and Turf Valley. The Running Brook ES and Wilde Lake MS recommendations provide interim capacity for Columbia. The 2015 redistricting plan in this document intends to balance Turf Valley growth with existing capacity. Continued growth is expected and new schools may be required for these areas.

III. Planning Considerations

This section identifies planning assumptions and considerations. The annual projection is developed with assumptions about enrollment growth that have evolved over the years. Other planning considerations involve implications for capital facilities. Some of the previous planning assumptions have been adjusted, while others have been added for this study. This section presents a discussion of the major components and adjustments included in this year's planning assumptions.

A. Projections

Projections used for this study were generated in the spring of 2011. The projection model and methodology used by the Howard County Public School System (HCPSS) is based on historic cohort survival ratios – the number of students that “survive” from one grade level (cohort) to the next. Then the effects of new housing yields and the net effects of resale of

existing housing stock and apartment turnover are added to the projection. Using the births and actual enrollment data history², these variables are combined to project the total student enrollment at each school for September 30 of each future year. The projection is presented out to 2025 in this document, although it extends further into the future. It should be noted that the trends shown after the first five or six years are less reliable; however, certain decisions like site acquisition are appropriately informed by the later part of the projection.

Since the 2008 Feasibility Study, staff has included a comparison of previous projections in the form of a gap analysis. This analysis considers the consistency of projections rather than comparing the accuracy of a projection to the actual number.³ The true test of each projection is an accuracy test after the actual enrollment is known. This report is made to the Board of Education every February and may be accessed on the HCPSS website in the BoardDocs® repository. Planning issues can become apparent by examining the consistency of the current projection to those made in previous years.

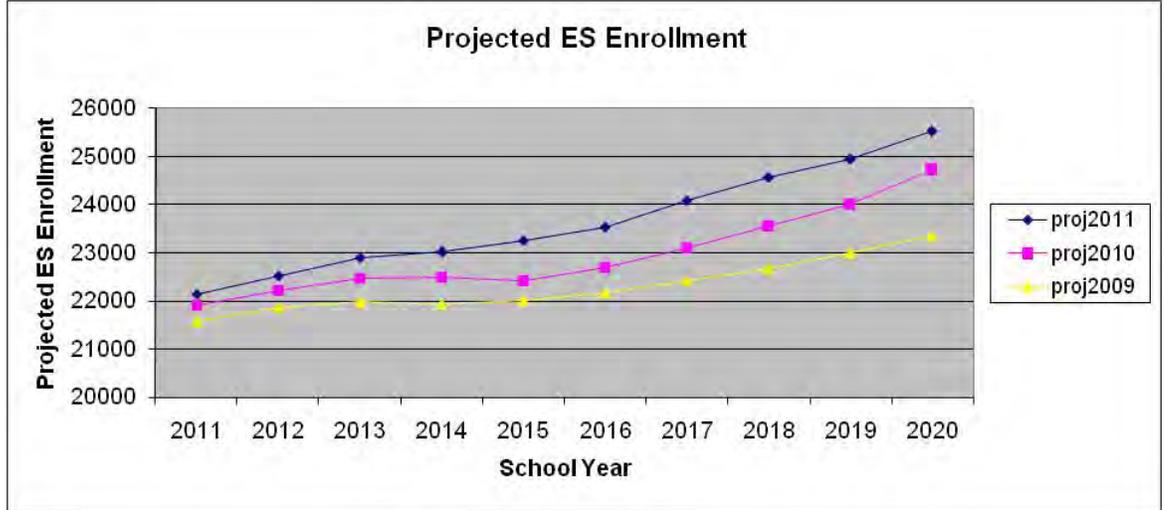
When several years of enrollment projections are graphed, the basic trends are consistent in each of the projections. By using a ten-year series, these three consecutive annual projections share some years of data. This brings some stability to the projection but still allows the projections to indicate differences, so that changing trends can be apparent.

The trend in the 2011 projection is for elementary enrollment to increase by 3,724 students by 2020. As a result of this enrollment growth, the capacity utilization of all elementary schools combined will begin to exceed 100 percent. As shown in Figure 3, on the next page, the 2010 elementary projection falls above the 2008 and 2009 projections, following a similar slope to the two previous years' projections. The trend in the 2011 projections is for middle school enrollment to increase by 1,898 students through 2020. The middle school projection for 2011 falls between the 2009 and 2010 projections until 2016 when it exceeds the 2010 projection. The high school projection for 2011 tracks closely with the 2010 projection. The trend in the 2011 projection is for high school enrollment to increase by 2,067 students by 2020.

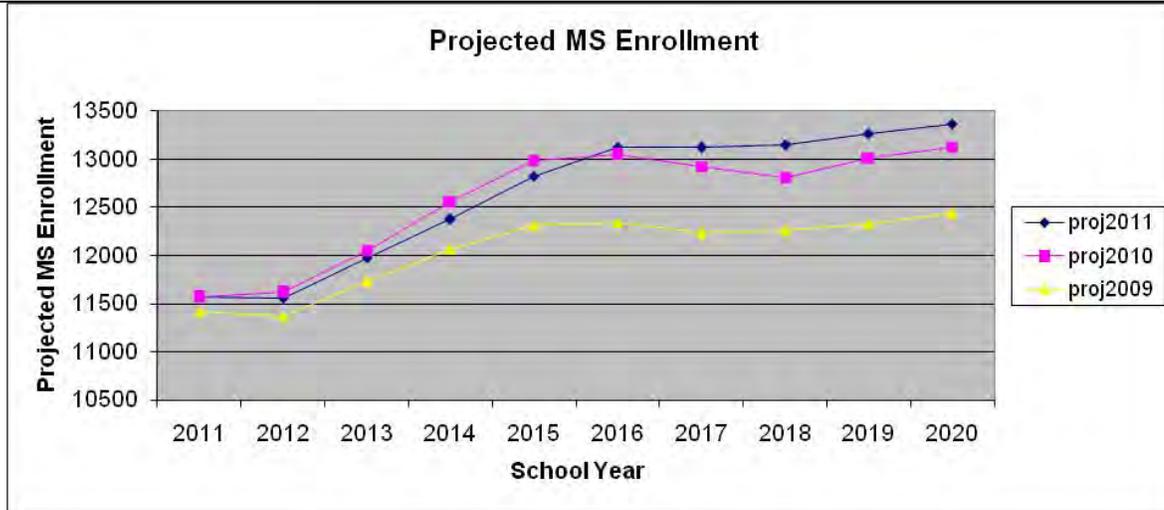
² A five-year series, in this case September 30, 2006 through 2010 enrollments, is used in the projection.

³ Each year School Planning provides a projection accuracy report which compares the projection to the actual September 30 enrollment.

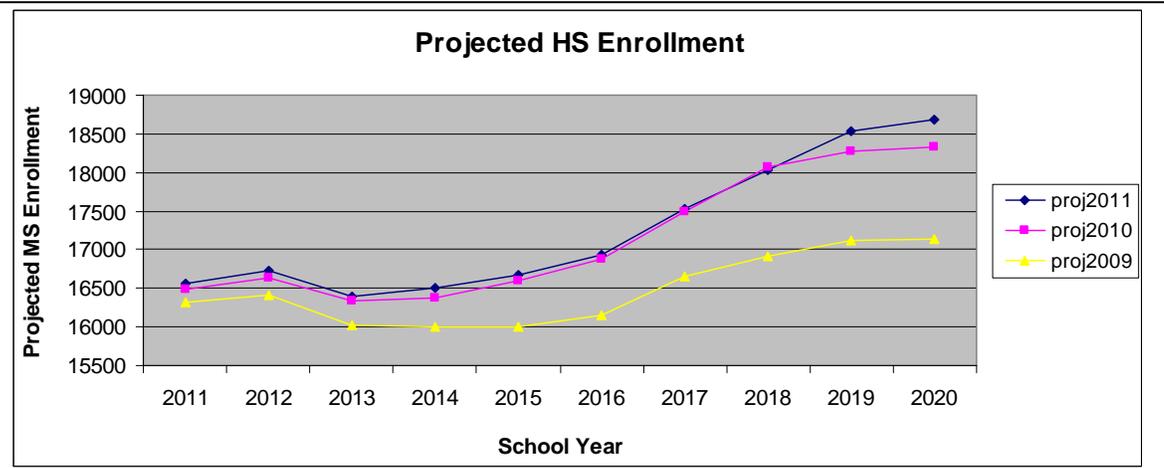
Figure 3. Comparison of Projections



The graphs on the left consider the elementary, middle, and high school projections for this year in comparison to the projections made for 2009 and 2010



These overall depictions of the projection by level help to show general relationships in trends.



The 2011 projection is higher at the elementary level. The middle and high school level projections for 2011 track very closely with the 2010 projection.

When developing the annual projection, School Planning staff reviews the differences between previous projections to determine if data inputs were correct or if any assumptions should be reconsidered. Projections are simply an organized way of making assumptions based upon available data. The simple explanation for differences between projections is different data. Specific contributing factors to differences between projections include:

1. **Changes In Development Horizon.** Each year Department of Planning and Zoning provides a housing projection for each school. New approvals or changes to phasing of existing projects can alter the timing and intensity of growth at specific schools.
2. **Difficulty Projecting Kindergarten.** Kindergarten is typically the most difficult grade to project because the time between the data point (birth) and enrollment is five years as opposed to one for all other survival ratios. Another source of variation in the data set is changed eligibility time for kindergarten. The state requirement to provide full-day kindergarten also has impacted our data set as parents who used to pay for private full-day kindergarten switched to public school. These changes are mostly behind us and we now have a number of similar years to compare for developing projections. In theory these changes will have some impact on projections until the cohort which started kindergarten in 2004 graduates in 2017.
3. **Changing Housing Yields.** For the past few years, staff has observed lower elementary pupil generation, particularly in the west, for single family detached housing units. Conversely, higher housing yields are being observed for multi-family units. This impacts the northeast and southeast where many such units are anticipated. Individual projections for each school helps to capture local effects.
4. **Changes in Cohort Survival Ratios.** With each new data set, the newest survival ratio is added to the five-year historical base. If it is different, as has been the case with enrollment that is not associated with move-ins, a new historical average results. The new average is then amplified throughout the model, meaning the projection, over time, can be sensitive to a relatively small change in the survival ratio. The more immediate impact to projected enrollment is the initial size of the cohort.
5. **Changes at Feeder Schools.** If an elementary school feeding a middle school increases or decreases, the effect can be magnified at the middle school, particularly if several feeder schools change in the same direction. The effect of the outgoing cohort may also have an impact.
6. **Geographically Matched Data.** In the past, the Department of Planning and Zoning kept land use data manually using different basic geographic units from the planning polygons used by the Office of School Planning. This required some interpretation to transfer the data. Now DPZ provides their land use data using HCPSS planning polygons. With the implementation of the new student information management system, improvements to address data verification procedures have enhanced the quality of the data. In both circumstances, the increased precision has influenced the projection.

B. Capacities

Capital planning and Adequate Public Facilities Ordinance (APFO) regulatory review⁴ of development depend upon accurate capacity assessments and sound projections to derive capacity utilization projections. Capacities of schools dictate the calculation of capacity utilization percentage. This measure allows for a level comparison of the effect of projected enrollment. By Board of Education policy, a school with capacity utilization over 110 percent is referred to as *over-utilized* while a school below 90 percent capacity utilization is referred to as *under-utilized*.

Capacities have been actively studied since 2005. The systemwide facility assessment survey by Gilbert Architects has provided additional information relating to each level. Capacities for high schools were revised by the Board of Education in 2009. It is expected that minor adjustments will be made to existing elementary and middle school capacities as classroom counts are validated using the facility assessment results and other internal validation methods. Redistricting planning at any level will be more equitable if the most accurate capacities are assigned.

C. Regions

This study presents school information in six regions. The regions were originally designed to correspond to planning regions used by the county. As new facilities have been built, the school planning regions were not adjusted. The service areas of the six regions do not match up by level—elementary, middle and high. This disconnect, however, has not been a problem for developing projections and redistricting scenarios because modeling is done at the school and planning polygon level, with the results then summed for regions.

Howard County Department of Planning and Zoning has not needed HCPSS regions to align with their planning areas. The Adequate Public Facilities Ordinance Housing Unit Allocation charts allocate units based upon fixed planning areas. When new developments are proposed, the Adequate Public Facilities Ordinance School Test (elementary and middle) is based upon whether the assigned schools are open or closed. A region test is made at the elementary level only. The law closes a region to development if capacity utilization for the region exceeds 115 percent, even if the assigned elementary school does not exceed 115 percent. This condition is projected; however, by the time this condition occurs it is likely HCPSS will have taken steps to address the enrollment growth by building new capacity or redistricting.

The school regions remain important in making comparisons and discussion of the impact of real estate trends on student enrollment in different areas of the county. The regions serve a general purpose for identifying trends but staff can re-aggregate data in several logical grouping of schools to study specific matters. A recent example is evaluation of proposed development of Downtown Columbia.

⁴ Capacity is only relevant to APFO at the elementary and middle level. There is no high school capacity test.
2011 Feasibility Study

D. Capital Planning and Sewer Service Area

Some of our facilities are outside of the sewer service area and require on-site treatment systems. For example, the Bushy Park Replacement Project required construction of a new shared septic system with Glenwood MS. This was due to the need to meet more stringent groundwater discharge permit requirements mandated by the Maryland Department of the Environment. HCPSS currently has different types of on-site waste water treatment systems in operation which include conventional septic systems and systems which manage or treat effluent prior to discharging into the fields. The most technically advanced and costly systems are membrane batch reactors (MBR) and sequencing batch reactors (SBR) which are essentially modular automated sewage treatment plants. Existing conventional septic facilities will eventually fail due to age or new standards will require costly improvements. The following facilities are operating with on-site wastewater treatment:

School (s)	System Type	Note
Glenelg HS	SBR	
Marriotts Ridge HS/Mount View MS	SBR	
Glenwood MS/Bushy Park ES	SBR	
Folly Quarter MS/Triadelphia Ridge ES	Septic with sand filtration	MBR under construction
Manor Woods ES	Septic with sand filtration	
West Friendship ES	Septic	
Dayton Oaks ES	SBR	

While the systems currently in place are well designed and maintained, there is no guarantee that future requirements for discharge will not be more stringent. For this reason, staff now considers new sites that would require on-site waste treatment to be a significant cost consideration. Future capital planning will seek projects that have access to public sewer, consistent with the Maryland Smart Growth Act, and local planning implementation which direct new residential growth into Priority Funding Areas within the sewer service area.

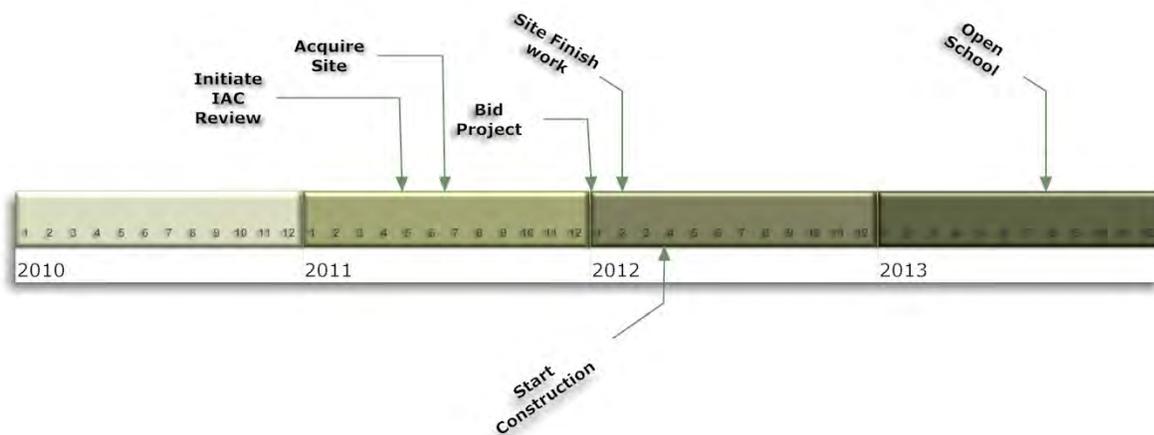
E. Land Bank

The HCPSS maintains a bank of sites for future school construction. A critical component of the capital budget is Site Acquisition and Construction reserve. This fund allows the HCPSS to strategically position this land bank for long-term need. For many years, most of the land bank consisted of sites that came out of Columbia planning and development. Howard County has aided the school system in the past through exchanges of county land where needed. Recent legislation may allow site acquisition at little or no cost when associated with changes in phasing of development along the Route 1 Corridor; however it is likely that other needs along the Route 1 Corridor will require use of the site acquisition fund in the near future. HCPSS will continue to reach out to local and state agencies to best coordinate improvements to the land bank inventory. To this end the efforts of Howard County Government staff have been greatly appreciated. A full inventory of

school sites is presented annually in the capital budget.

The most acute need at this time remains to secure a site for New ES #41. The timeline shown below indicates that acquisition of the site needs to occur as soon as possible to meet planning timelines for an August 2013 school opening. The Board of Education and the Interagency Committee on Public School Construction (IAC) must approve acquisition of the school site prior to submission of the schematic design documents. Once the schematic design documents are submitted, there are a series of other actions which must be approved by the Board of Education and numerous other regulatory agencies to proceed to the point of awarding contracts and beginning construction. Every effort will be made to accelerate review of site options and meet the August 2013 opening.

Figure 4. New ES #41 Timeline



IV. Needs and Strategies

Prior to examining the redistricting plan it is necessary to review the implications of the new projection and identify needs and potential strategies.

A. Elementary School Section

Capacity utilization that is outside of the acceptable range (90–110 percent) requires attention and leads staff to develop a plan for change. Adequate Public Facilities Ordinance restrictions are triggered at 115 percent. At the countywide level, elementary capacity utilization is projected to remain between 90 percent and 110 percent for the next decade. While it is possible to balance all schools countywide, the challenge has been that the capacity and enrollment growth do not share the same geography. There is surplus capacity in the Western Region due to lower than anticipated pupil generation rates and larger facilities. The Northern and Columbia East Regions are within acceptable levels, but there are specific schools exceeding policy targets. The Columbia West, Northeastern, and Southeastern Regions are beginning to exceed 110 percent. The growth in enrollment in these areas can be attributed first to new development and secondly to neighborhood turnover. Redistricting is recommended in the context of upcoming capacity projects

with phases in 2012, 2013, and 2015. Future redistricting to open a second eastern elementary school will occur in 2019 or later.

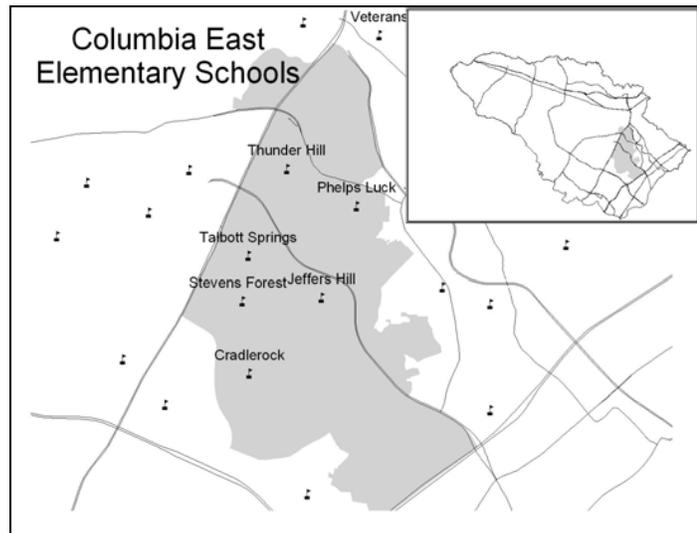
Columbia East Region⁵

Need:

Capacity utilization is projected to be above 110% for Phelps Luck ES and Talbott Springs ES.

Strategy:

Construct classroom addition at Phelps Luck ES to be completed in 2013 and consider redistricting for Talbott Springs ES.



Phelps Luck ES and Talbott Springs ES will exceed policy targets for capacity utilization in 2011. This is the third consecutive year of high projections for Talbott Springs ES. The planning of the Phelps Luck ES and Stevens Forest ES renovations include alternative designs which provide additional classrooms. These alternates could better position the schools to serve existing attending areas and programs, as well as to relieve overcrowding at Talbott Springs ES in the future.

⁵ This region includes Cradlerock School, referencing the lower level school which has been renamed Cradlerock ES for the upcoming school year. Projections have always been separated by level.

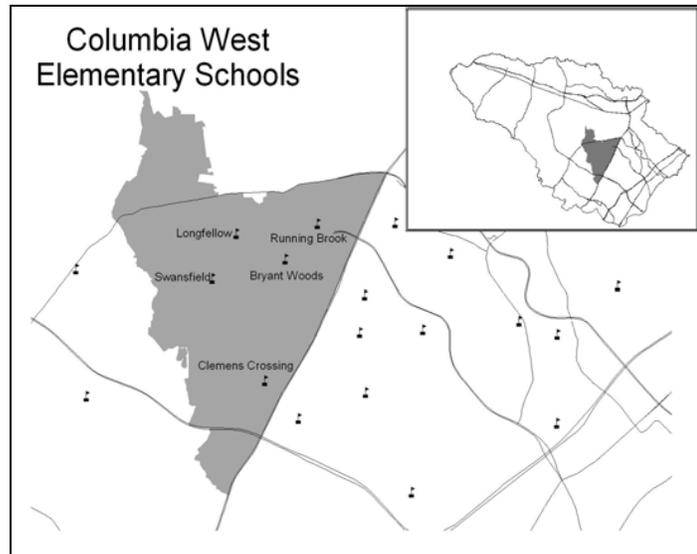
Columbia West Region

Need:

The Columbia Town Center development will impact this region, especially Running Brook ES. The region exceeds 110% by 2020 in this projection, ultimately requiring the need for an additional elementary school if pupil generation rates remain as forecast today.

Strategy:

This region will be a part of studies associated with the recently approved Downtown Columbia development.



The Columbia Town Center Proposal has been approved and the 2011 projection accounts for build-out of this project. Contingencies will be evaluated based upon community enhancements, programs and public amenities approved with the project to address needs at the elementary and middle levels. When the amount of proposed development for Downtown Columbia is projected using current assumptions, Running Brook ES begins to exceed 110 percent in 2013 and is at 200 percent utilization in 2027. Previous feasibility studies considered the possibility of a plan to redistrict from Clemens Crossing ES to use capacity at Pointers Run ES. The resulting space at Clemens Crossing ES could then accept the southern portion of the Running Brook ES attending area where the Columbia Town Center growth is expected. The plan presented in this document chooses instead to access capacity at Pointers Run ES to help relieve severe overcrowding in the southeast region. In view of this need, staff recommends building a 100 seat addition at Running Brook ES in 2014.

Some combination of new capacity and redistricting will be required to accommodate growth in Columbia Town Center. If pupil generation ratios appear lower than anticipated, plans can be adjusted. Table 2 lists the surrounding schools that could participate in a redistricting to absorb the impact of this proposed development. The capacity utilization projected for 2013 is shown including the additional capacity that is planned for Stevens Forest ES and Thunder Hill ES. While the combined group is near 100 percent utilization, Running Brook ES and Talbott Spring ES both exceed 110 percent utilization.

**Table 2. Combined ES Capacity and Utilization
Columbia Town Center**

School	Capacity	2013 Utilization
Bryant Woods ES	355	94.1
Clemens Crossing ES	522	90.4
Running Brook ES	405	113.8
Stevens Forest ES	333 (433 in 2013)	73.2
Talbott Springs ES	443	137.5
Thunder Hill ES	468 (468 in 2012)	89.3
Combined Group	2,526	99.4

Figure 5. Columbia Town Center ES Schools

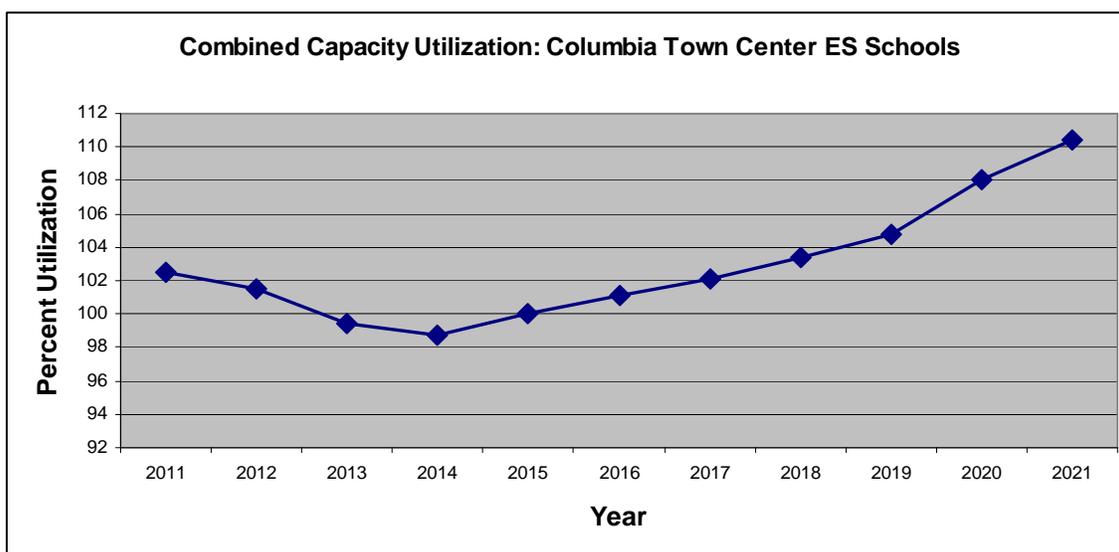


Figure 5 shows the combined utilization of the same schools shown in Table 2. Utilization declines through 2014 when the additions at Stevens Forest ES and Thunder Hill ES come online. Redistricting in 2013 as presented in this report can make use of this additional capacity. The effects of the Columbia Town Center Proposal can be absorbed with other anticipated development through the year 2021 when capacity utilization of this group of schools will reach 110 percent. Capacity utilization for the group continues to grow until it appears to surpass 120 percent in 2026, which equates to 573 seats above 100 percent utilization. A redistricting strategy alone, which uses schools that are reasonably nearby, will not provide an adequate solution to accommodate the projected growth.

Faulkner Ridge Center, currently used as a staff development and training facility, is being closed on July 1, 2011. Considerations for using this site as a new school may be examined in the future.

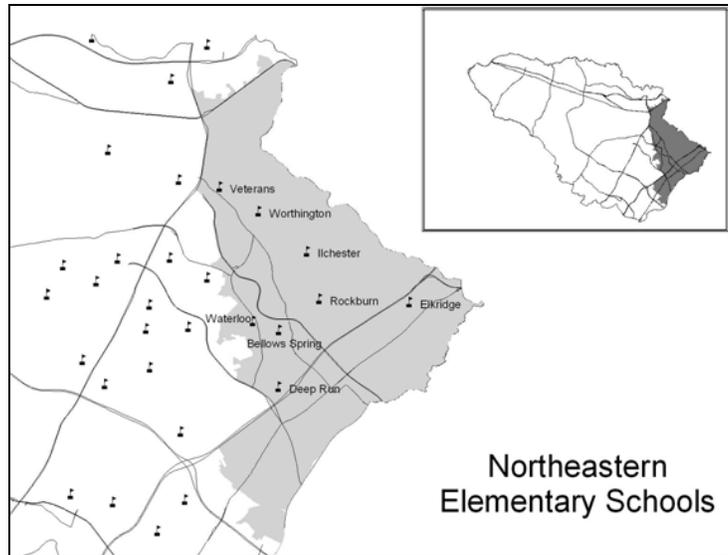
Northeastern Region

Need:

Significant enrollment growth is projected. Available capacity in this region as well as adjacent regions is not sufficient to absorb long-term projected enrollment growth.

Strategy:

Long-term growth trends in this region can only be accommodated by the opening of a new school, which is currently scheduled to be constructed and ready to open in 2013, primarily to accommodate enrollment growth at Bellows Spring ES, Elkridge ES and Deep Run ES. Consider a second new school for 2019.



Bellows Spring ES exceeds 110 percent capacity utilization in 2012 with enrollment projected at nearly double its existing capacity in a decade. Deep Run ES and Elkridge ES and other schools adjacent to this area will also be severely impacted by new development in the Corridor Activity Center zoning along Route 1.

Redistricting presented in this document is designed to open the new school in 2013. The school attending area would be comprised of the eastern portions of the Bellows Spring ES, Deep Run ES⁶, and Waterloo ES attending areas as well as a portion of the Elkridge ES attending area. The fact that Waterloo ES has an “island” of attending area situated within the southeastern portion of the Bellows Spring ES attending area is a current weakness that can be leveraged as a strength when creating a new school attendance area. In the event that the new school must be delayed further into the future, alternative redistricting may require temporary assignments of islands from Elkridge ES and Bellows Spring ES attending areas to noncontiguous schools where capacity exists. The latter part of the projection indicates additional need which should be monitored. In the meantime, a school site should be acquired for the land bank in the southern portion of the proposed New ES #41 attending area.

Capacity utilization at Veterans ES is above 110 percent and clearly needs relief. For this reason redistricting in the northern part of the Veterans ES attending area is recommended to access capacity at Waverly ES, through St. John’s Lane ES. The original plan to open Veterans ES with the current attending area was based on projections made at least five years ago. Subsequent projections have consistently indicated overcrowding trends at Veterans so it is now appropriate to reconsider boundaries given current and projected

⁶ Polygon 1030 is currently assigned to Deep Run ES and has no projected enrollment because there are no residences in that area. This area could logically be included in the New ES #41 attending area, particularly because an imminent capital road project will connect Dorsey Run Road from Guilford Road to Meadowridge Road. It could also be assigned to Bollman Bridge ES. Either choice has no impact on the schools’ capacity utilization.

enrollment. The plan shown for 2013 requires a different perspective on long-term plans for western schools, including West Friendship ES as is discussed in that section.

Figure 6. Northeastern Region Elementary Utilization

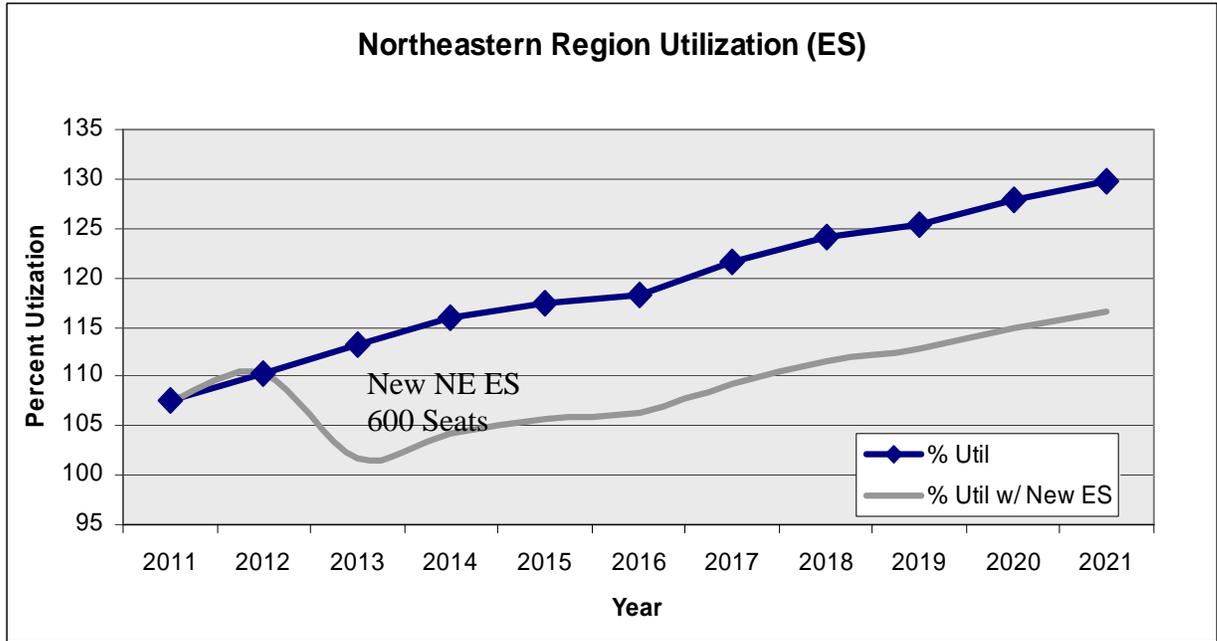


Figure 6 shows that capacity utilization in the region will exceed 110 percent in 2012 and growth continues through much of the projection. Capacity utilization is also shown with New ES #41 opening in 2013, and confirms the need for a second school in this region as early as 2019.

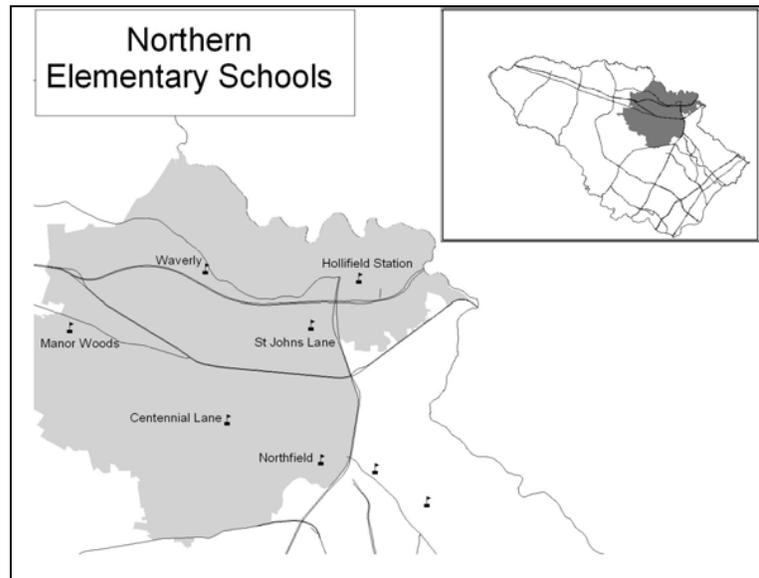
Northern Region

Need:

Manor Woods ES requires relief after 2014.

Strategy:

Consideration of redistricting or capital options in later years.



In the years beyond 2014, Manor Woods ES is projected to be above the 110 percent capacity utilization standard and trending above 200 percent. This condition has varied depending upon the timing of the Turf Valley development. A key feature of capital planning for this development is the Phase II addition at Waverly ES. Constructing this

addition in 2016 and redistricting can help relieve overcrowding at Manor Woods ES. Growth at Veterans ES presents an additional challenge because a redistricting solution for Veterans is likely to increase Waverly ES enrollment. Even without this challenge, Waverly ES could not aid Manor Woods ES in absorbing growth at Turf Valley. There is additional capacity available in the Western Region. This document presents redistricting for 2015 which would use capacity at Bushy Park ES, Triadelphia Ridge ES, and West Friendship ES. This plan utilizes West Friendship ES as a Turf Valley holding school, allowing use of this facility as long as possible. A new elementary school in Turf Valley that is sized to the current educational specifications is needed by 2020. This school could be a replacement for West Friendship ES. Much of the territory for existing schools will be based no matter which school they are assigned, but a Turf Valley school could have an assigned walk area.

Southeastern Region

Need:

Significant enrollment growth is projected. Available capacity in this region as well as adjacent regions is not sufficient to absorb long-term projected enrollment growth.

Strategy:

In 2012, consider redistricting to utilize available capacity in the Western Region. Build an addition at Gorman Crossing ES and consider additions at Guilford ES and Laurel Woods ES. Seek sites and development opportunities for the long-term.

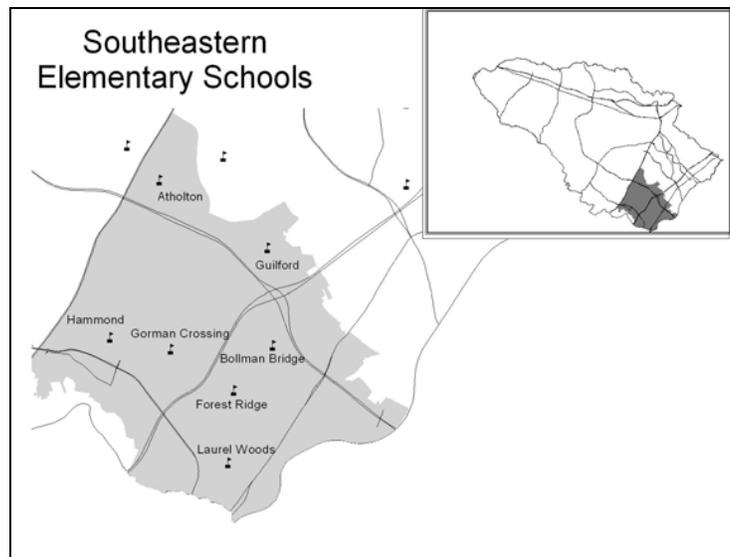
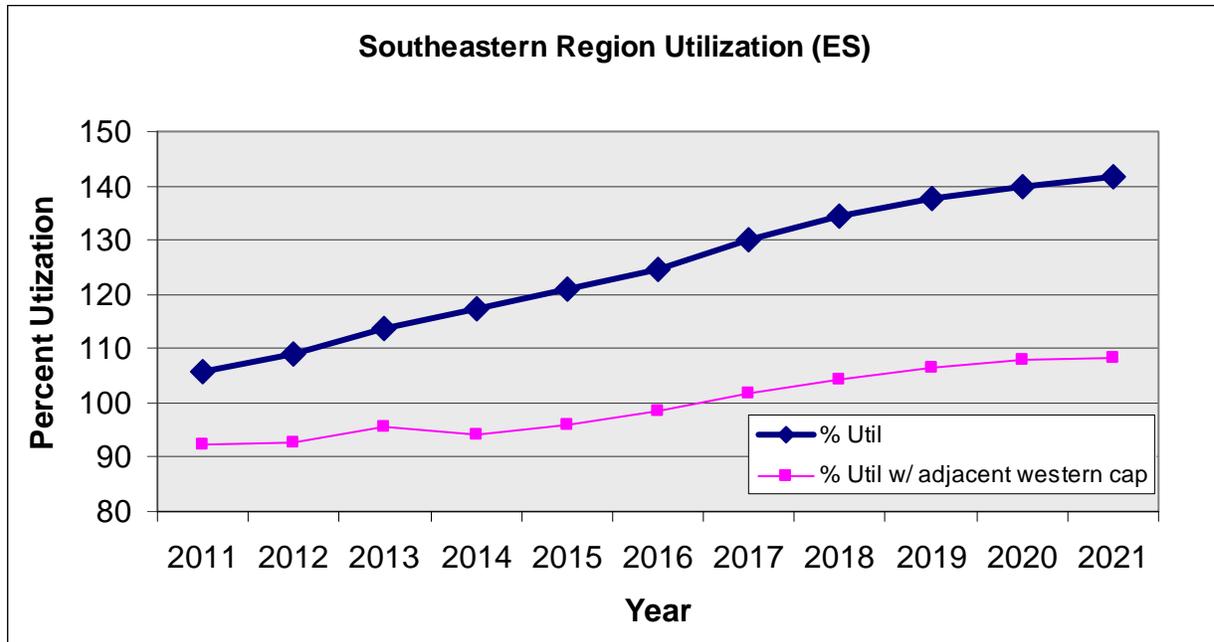


Figure 7. Southeastern Region Elementary Utilization



Adjacent capacity in the Western Region can provide some relief but capital options are also necessary.

Figure 7 indicates the need for redistricting and capital projects within this region. Atholton ES, Forest Ridge ES, Gorman Crossing ES and Laurel Woods ES currently exceed 110 percent utilization. The region exceeds 110 percent utilization in 2013 and this level of utilization continues for the foreseeable future. The recommended redistricting plan for 2012 utilizes available capacity at three Western Region elementary schools. These schools are Fulton ES, Pointers Run ES, and Dayton Oaks ES. In Figure 7 the projections and capacity of these schools are added to the Southeast Region to demonstrate how important it is to consider using this existing capacity. Figure 7 does not show the impact of geography (Dayton Oaks ES is 17 miles from the center of the Southeastern Region.⁷), but the recommended redistricting and capital planning considerations attempt to mitigate distances traveled. Many redistricting strategies are possible to utilize existing capacity in the adjacent Western Region, but any plan must “cascade” projected enrollment growth through schools to balance capacity. This is done by trading attendance areas through schools (e.g. send from Gorman Crossing ES to Hammond ES, then send from Hammond ES to Fulton ES, and finally send from Fulton ES to Dayton Oaks ES) while still leaving sufficient capacity at Fulton ES to manage the future Maple Lawn development. Ultimately the additions recently completed at Hammond ES, under construction at Bollman Bridge ES and planned for Gorman Crossing ES will be required to accommodate the growth in this area. Redistricting polygons 7 and 1007 from Gorman Crossing ES to Fulton ES in 2012 would relieve overcrowding at Gorman Crossing ES until the addition can be built in 2014.

Atholton ES needs redistricting and is not scheduled for any additions. If the current projection holds, Atholton ES should be considered for redistricting in 2012. One approach is to look at an “island” of the Atholton attending area, which includes polygons 17, 18, 1017 and 1018, and is split by Murray Hill Road. The portion south and west of

⁷ The center of the Southeast region lies between Forest Ridge ES, Bollman Bridge ES, and Gorman Crossing ES.
2011 Feasibility Study

Murray Hill Road (polygons 17 and 1017) is not immediately adjacent to the Hammond ES attending area, but the intervening portion of the Guilford attending area is undeveloped and separated by streams from the developed portion. If the Hammond ES and Guilford ES boundaries could be extended to include this area approximately 211 students could be redistricted out of Atholton ES.

To accommodate the Atholton ES students, approximately 200 students should be moved from the Hammond ES attending area to the Fulton ES attending area which currently extends east across Route 29. Adding areas to the east would free capacity at Hammond ES for this comprehensive redistricting. The polygons are situated in the southeast quadrant of the Route 29 and MD 216 interchange. This group (polygons 8, 221, 1008, 1221, 1227, and 2221) is projected to yield approximately 200 students. The concept can be extended further east along the area south of MD 216 to include a portion of the Gorman Crossing ES attendance area.

The 2012 plan involving Fulton ES would send 94 students (polygons 119, 194, 1119 and 1194) to Dayton Oaks ES and 246 students (polygons 114, 117, 122, 125, 126, 296, 1114, 1115, 1117, 1125, 1296, 2114, 2115, and 3115) to Pointers Run ES, balancing the combined total of 303 students being sent from Gorman Crossing ES and Hammond ES. Additional redistricting may be required in the future at Fulton ES to accommodate the growing enrollment from Maple Lawn. Adjacent schools like Dayton Oaks ES, Pointers Run ES, and Clarksville ES can be used if necessary.

The resulting Fulton ES attending area is shifted to the east. The Atholton ES, Gorman Crossing ES, and Hammond ES attending areas will be better centered relative to the respective school buildings. The Dayton Oaks ES attending area was already fairly large as is the case for most schools in the western region. This is due to the lower density of settlement in this part of the county. Staff has heard concerns about busing distances when this plan was presented in the past. The distance of the Fulton ES polygons recommended for Dayton Oaks ES is not much different than the distance of some polygons that are currently assigned to Lisbon ES or Bushy Park ES. An alternative which would still balance capacity would be to send more of the Fulton ES polygons to Pointers Run ES.

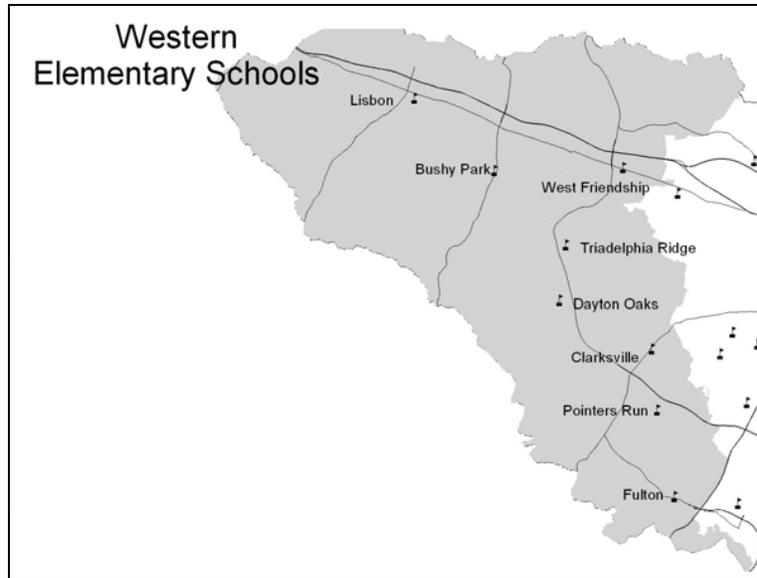
Western Region

Need:

More fully utilize capacity in the Western Region.

Strategy:

Redistricting from the Northern and Southeast Regions.



Elementary capacity in the Western Region exceeds need. Ten years ago, overcrowding in western elementary schools was significant. The September 30, 2000 enrollment report indicates that the region was at 120 percent capacity utilization. The construction of Dayton Oaks ES, the replacement of Bushy Park ES and lower enrollment trends for the region have lowered the overall capacity utilization, which is now approaching 70 percent for the region. The projections which preceded the construction of the new Bushy Park ES and Dayton Oaks ES anticipated larger pupil generation rates than the existing housing stock has produced. Redistricting plans outlined in the northern and southeastern region sections anticipate using some of this capacity in other parts of the system. The plans presented in this document will be further evaluated as part of the Attendance Area Committee process to ensure proper balance and to avoid any return to the crowding of a decade ago.

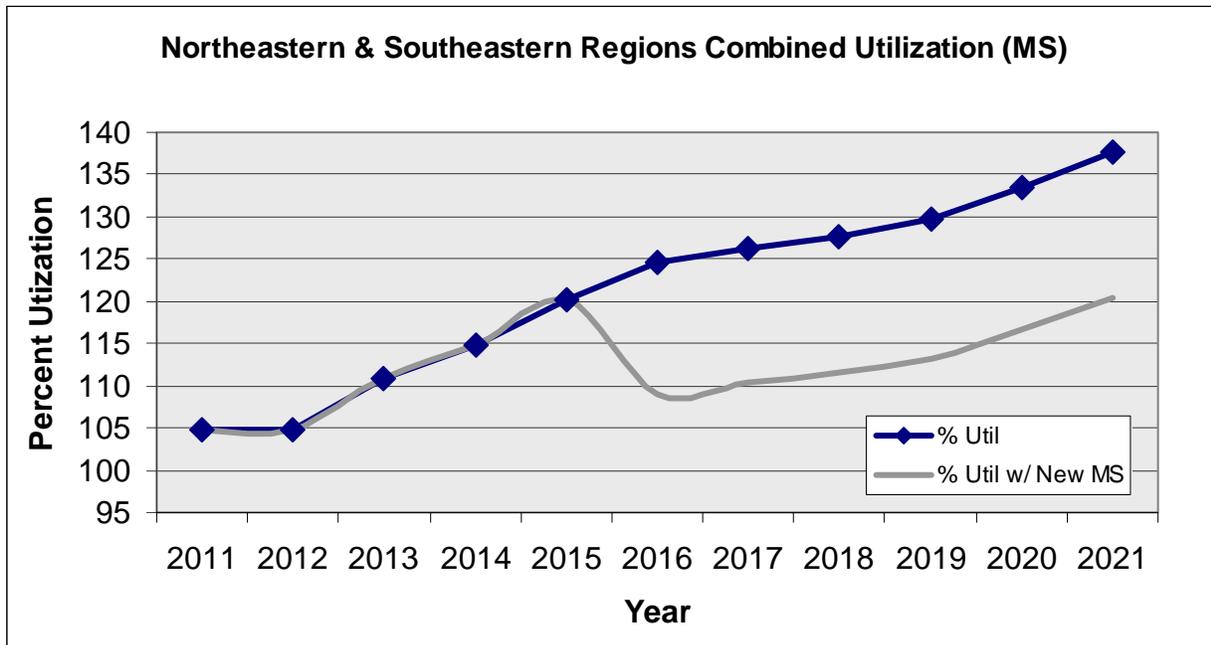
West Friendship ES has consistently shown declining enrollment in recent projections. West Friendship ES operates with a septic system outside the sewer service area and could eventually be subject to more stringent requirements which may require expensive upgrades. In previous studies, an alternative approach to SBR or MBR upgrades examined the possibility of closing West Friendship ES and using existing capacity in the short term. This plan presents a strategy which uses West Friendship ES capacity as long as possible to hold Turf Valley growth. Eventually a new school is likely in proximity to the Turf Valley development and within the sewer service area. Staff seeks confirmation from the Board on this change in strategy for West Friendship ES because Policy 6070 Discontinuation of School Use requires a process which is estimated to take twenty-five months to execute following initial recommendation for closure.

B. Middle School Section

At the countywide level, middle school capacity utilization reaches 110 percent in 2018. While it is possible to balance all schools countywide, the challenge has been that the

capacity and enrollment growth do not share the same geography. The Columbia West Region exceeds 110 percent capacity utilization by 2014 and the Northern Region exceeds 110 percent by 2015. Columbia Town Center approval is taken into account in this projection. The Northeastern and Southeastern Regions combined exceed 110 percent capacity utilization in 2013. The Western Region is within acceptable levels but there are specific schools exceeding policy targets. The Columbia East Region has surplus capacity.

Figure 8. Northeastern & Southeastern Regions Combined Utilization (MS)



Sites should be secured in east and at least one new school should be considered in the long-range capital plan.

Figure 8 shows the need for a middle school to serve the Northeastern and Southeastern Regions, which continue to climb above 110 percent utilization after the year 2012. The two regions are combined in this graphic because most of the need is focused in the Route 1 Corridor. It is likely that a facility built in that corridor can relieve both regions. The later years of the projection seem to indicate the need for more capacity within the long-range plan and should be monitored in future planning analysis. For now the projection certainly supports acquisition or development of school site options in the Route 1 Corridor through agreements with other agencies or developers.

The general search area for a new middle school to aid the Northeastern and Southeastern Regions is East of I-95, South of MD-100, and North of MD 32. Staff has incorporated a 662 seat facility into the plan with a schedule to open in 2015. While there are many uncertainties, it is clear that existing capacity and redistricting alone cannot accommodate anticipated enrollment growth and a site should be secured.

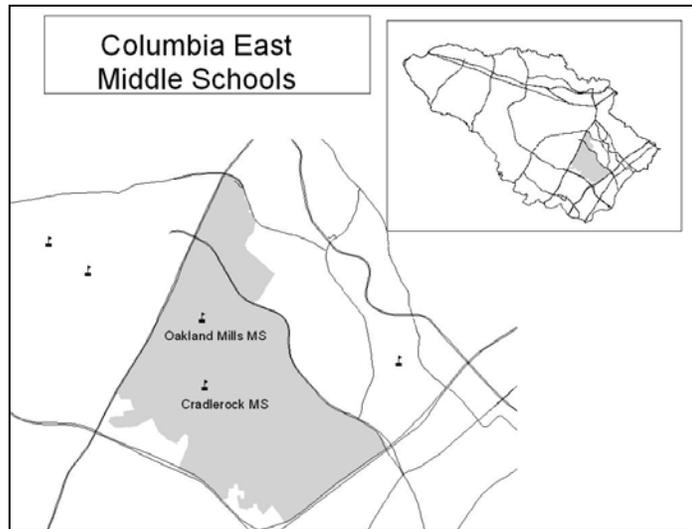
Columbia East Region⁸

Need:

Some capacity exists in this region.

Strategy:

Monitor long-term needs.



Both Cradlerock Upper School (Grades 6–8) and Oakland Mills MS have available capacity until 2016 when Oakland Mills MS exceeds 110 percent utilization. Oakland Mills MS and Cradlerock Upper School (Grades 6–8) are geographically positioned to provide some relief to schools in the Northeastern Region. The enrollment of Northeastern Region schools like Bonnie Branch MS, Elkridge Landing MS, and Mayfield Woods MS continues to increase throughout the projection well above any available capacity in Columbia East. So, redistricting from the Northeast to Columbia East is not a viable permanent solution.

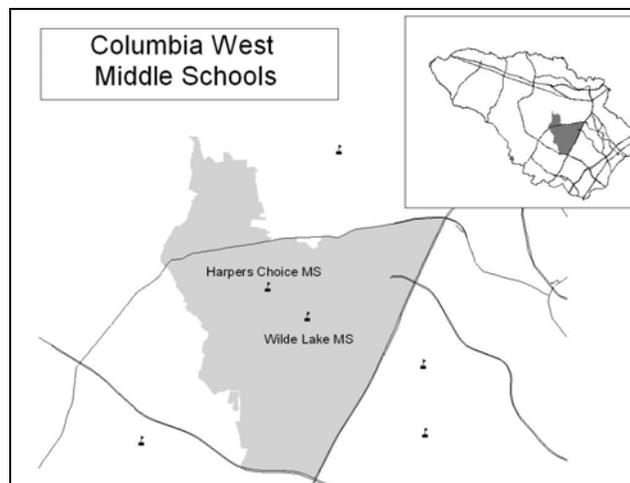
Columbia West Region

Need:

Enrollment does not exceed 110% of regional capacity until 2014.

Strategy:

Lead Columbia Town Center options study. Utilize redistricting to manage capacity needs until a new Western MS is required late in the projection.



⁸ This region includes Cradlerock Upper School, referencing the upper level of what has been a K-8 school. The K-8 arrangement is ending and Cradlerock Upper School has been renamed Lake Elkhorn MS for the upcoming school year. Projections have always been separated by level.

The Columbia West Region does not begin to show capacity utilization above 110 percent until 2014 and the condition continues for the rest of the projection. Wilde Lake MS begins to need relief starting in 2013, and an addition is planned as part of the renovation of Wilde Lake MS, which is scheduled to begin in 2015. It is possible that some relief can also be provided by redistricting to Clarksville MS for which the projection indicates a declining enrollment trend.

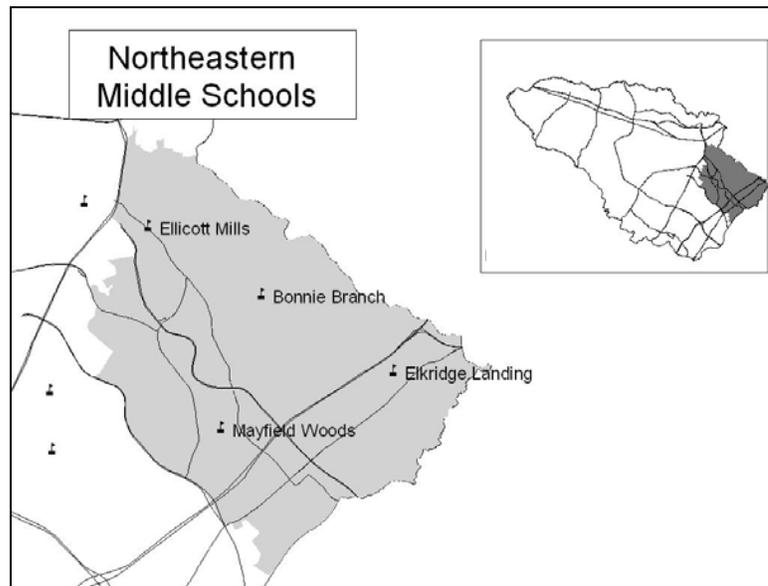
Northeastern Region

Need:

Significant enrollment growth is projected. Available capacity in this region as well as adjacent regions is not sufficient to absorb long term projected enrollment growth.

Strategy:

Long-term growth trends in this region can only be accommodated by the opening of a new school, which is currently scheduled to be constructed and ready to open in 2015, primarily to accommodate enrollment growth at all four schools in the region.



Ellicott Mills MS will exceed 110 percent capacity utilization in 2012. All of the other schools in the region exceed 110 percent utilization in 2013. While there is available capacity in the Columbia East Region, using it does not appear to be a viable permanent solution. The temporary solution is to utilize relocatable classrooms. The long term need for this region is over 500 seats for the region. Staff is seeking a site for a middle school that can serve remaining capacity needs in the Northeastern and Southeastern Regions. When the needs of the Southeastern Region are also considered, the need for a Route 1 Corridor middle school in the vicinity of the intersection of Route 1 and MD 175 is clear.

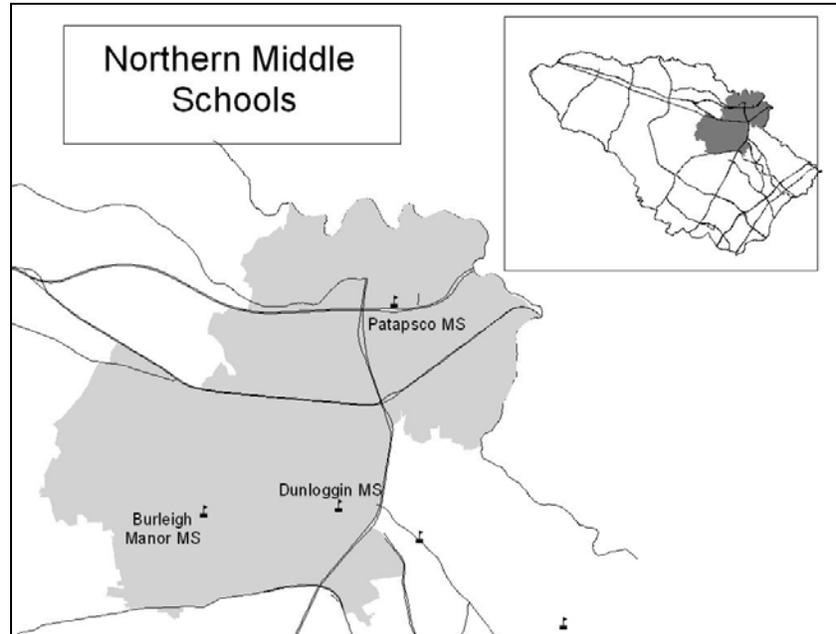
Northern Region

Need:

Enrollment does not exceed 110% of regional capacity until 2015.

Strategy:

Monitor long term needs.



In the years beyond 2014, the Northern Region is projected to be above the 110 percent capacity utilization guideline, with between 200-300 seats needed in the region through 2020. When continued growth in the adjacent Northeast Region is factored in with the need in this region, the land bank middle school site on Marriottsville Road will probably be needed to serve as a middle school in the future.

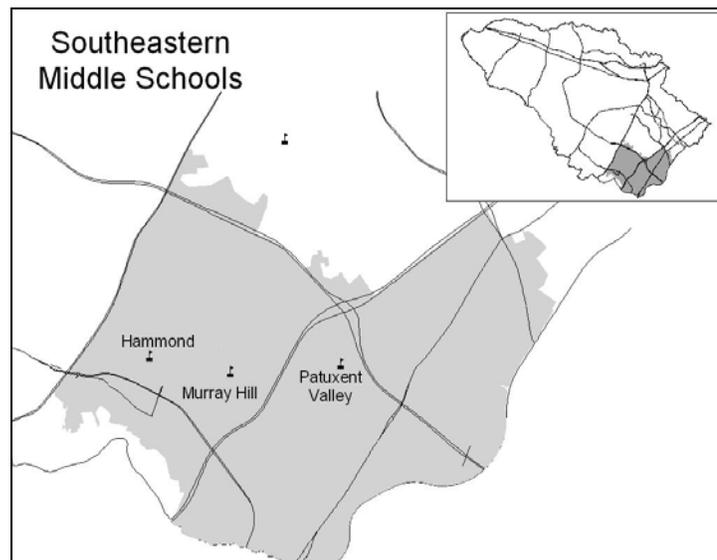
Southeastern Region

Need:

Significant enrollment growth is projected. Available capacity in this region, as well as adjacent regions, is not sufficient to absorb long term projected enrollment growth.

Strategy:

Long-term growth trends in this region can only be accommodated by the opening of a new school, which is currently scheduled to be constructed and ready to open in 2015, primarily to accommodate enrollment growth at Murray Hill MS and Patuxent Valley MS.



By 2012 Murray Hill MS exceeds 110 percent utilization. Patuxent Valley MS exceeds 110 percent capacity utilization in 2015. The region exceeds 110 percent utilization in

2015 continues to rise for the foreseeable future. Marginal interim capacity exists at Hammond MS but that school will exceed 110 percent utilization by 2019. As in the Northeastern Region, new development on Route 1 is affecting these projections. As was discussed in the section for the Northeastern Region, staff recommends a long term capacity option of a new school designed to serve the Northeastern and/or Southeastern Regions. This would address most of the need expected in the region through the end of this decade. Projected needs beyond this time period will be monitored.

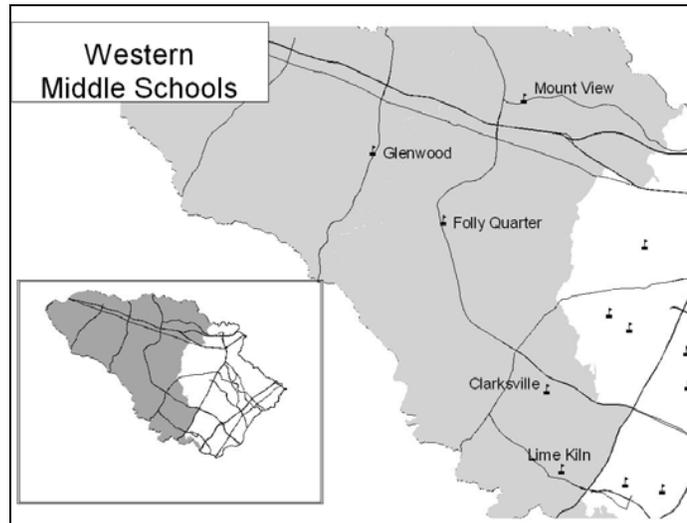
Western Region

Need:

Mount View MS exceeds 110% capacity utilization in 2016.

Strategy:

Monitor long term needs.



Capacity utilization in the region remains within targets throughout the projection. Mount View MS does exceed 110 percent capacity utilization in 2016 and will require relief. This was discussed at length with the 2009 Attendance Area Committee and a number of redistricting plans involving Folly Quarter MS were considered. Some argued that the growth at Mount View MS was not a strong enough trend to warrant action. Others argued that if change wasn't made soon it will be more difficult later. Staff recommends monitoring this trend to see where redistricting at both the elementary and middle levels can resolve capacity and feed issues. This document has evaluated a 2015 elementary redistricting that would provide relief to Manor Woods ES. A similar plan could be evaluated at the middle school level. The use of the Marriottsville Road site for a new Western MS will ultimately serve to relieve Mount View MS as well as the Northern and Columbia West Regions.

C. High School Section

Countywide high school capacity utilization meets policy targets until 2022. While the capacity exists to balance all schools countywide, the challenge has been that the capacity and enrollment growth do not share the same geography. The Northeastern Region, comprised of Howard HS and Long Reach HS, exceeds 110 percent capacity utilization by 2015. This is followed by Centennial HS and Hammond HS, schools with adjoining attending areas, in 2016 and 2018, respectively. The Western Region includes Atholton HS and Reservoir HS which exceed 110 percent capacity utilization by 2017 and 2018, respectively. Wilde Lake HS and Mt Hebron HS of the Columbia West and Northern Regions also exceed 110 percent capacity utilization by 2018. Capacity does exist within

the Western Region to relieve Reservoir HS.

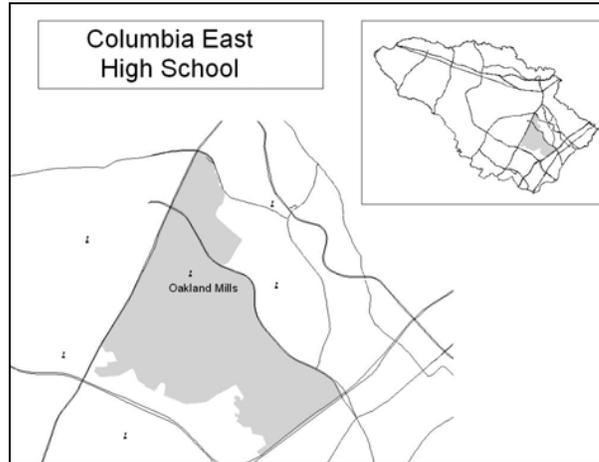
Columbia East Region

Need:

Some capacity exists in this region.

Strategy:

Consider using capacity to help absorb Route 1 Corridor growth.



The Columbia East Region high school is Oakland Mills HS. Capacity exists at this school until 2030. Capacity may be utilized to relieve the Northeastern Region, which includes Long Reach HS and Howard HS. Redistricting plans shown in this document for 2016 extend the Oakland Mills HS attendance area east to take on part of the Route 1 Corridor. The resulting attendance area would be more elongated but high schools are regional facilities, by nature. It should be noted that four more enrollment projections and feasibility studies come before a decision is likely on this redistricting. Long-term planning discussions are necessary but at this time the outcome is far from certain.

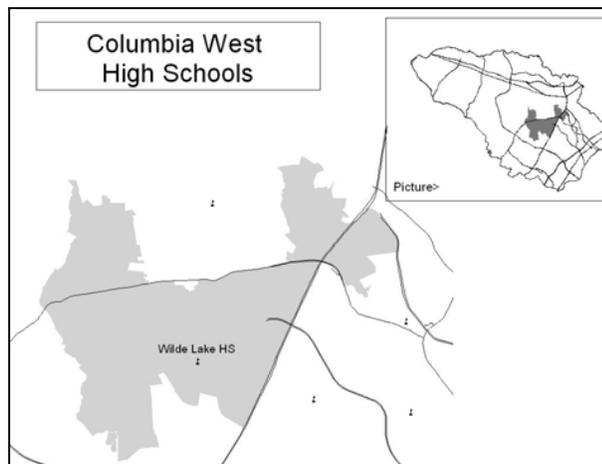
Columbia West Region

Need:

Capacity utilization is below 110% for Wilde Lake HS until 2018, the one school in this region.

Strategy:

Monitor Columbia Town Center Proposal. Only redistrict into this region if absolutely necessary.



The Columbia West Region high school is Wilde Lake HS. The projection for this school remains between 90 –110 percent utilization until 2018. With only a few classrooms of remaining capacity, plans to redistrict students into Wilde Lake HS should be avoided unless absolutely necessary. This projection models the effect of the Columbia Town Center proposal and adequate capacity exists to accommodate growth at Wilde Lake HS until 2018.

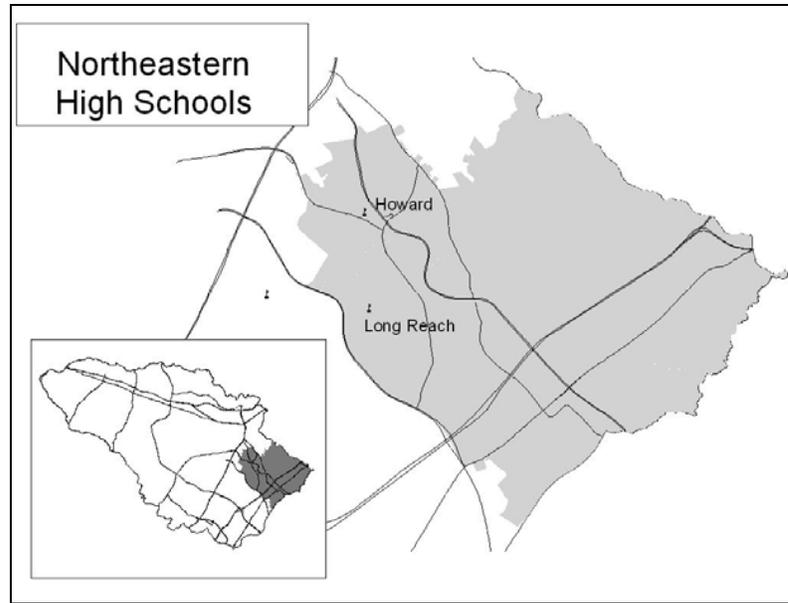
Northeastern Region

Need:

Significant enrollment growth is projected. Available capacity in this region is not sufficient to absorb long-term projected enrollment growth.

Strategy:

Move JROTC program from Howard HS in August 2013. Plan redistricting with Long Reach HS and Oakland Mills HS for 2016. Evaluate capital planning options of additions and banking a future school site.



Howard HS and Long Reach HS serve the Northeastern Region. Howard is exceeding 110 percent utilization. In 2015 the region will exceed 110 percent capacity utilization and the trend is to steadily worsen through the projection, exceeding 120 percent by 2017.

Howard HS contends with crowding and hosts a regional program, the Junior Reserve Officer Training Corps (JROTC). Another JROTC program is nearby at Oakland Mills HS. Marriott's Ridge HS was designed to host a JROTC but does not have a program. If the program were moved from Howard HS to Marriott's Ridge HS, the three regional programs would be accessible to a wider geography and enrollment levels could be maintained at current levels through 2014.

Redistricting between Howard HS, Long Reach HS, and Oakland Mills HS can provide some improved capacity utilization. Oakland Mills HS represents the best interim option for capacity relief; however, it can only provide about 150 seats. Additional redistricting to balance the remaining needs requires difficult choices to use the available capacity at Marriott's Ridge HS. It should be noted that four more enrollment projections and feasibility studies come before a decision is likely on this redistricting. Long-term planning discussions are necessary but at this time the outcome is far from certain.

In the long-term (after 2020), this projection indicates that approximately 800 seats are needed in the Northeast region. For this reason it is recommended that the land bank include a site large enough for a high school.

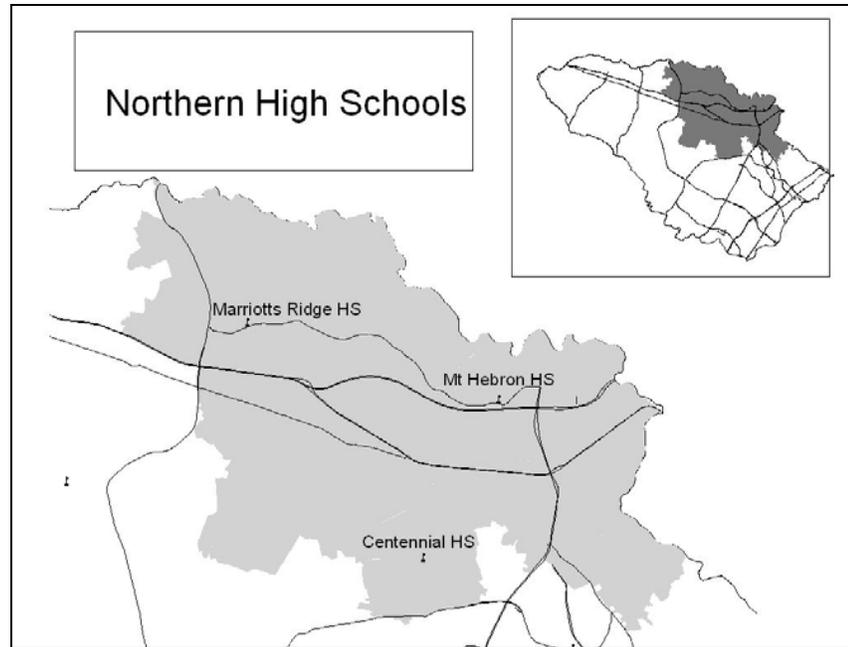
Northern Region

Need:

Capacity needs in the region are being addressed with the expansion of Mt. Hebron HS.

Strategy:

Monitor long-term needs.



The Northern Region has balanced capacity utilization for most of the projection. Centennial HS will need to be monitored given the projected utilization above 110 percent after 2017. A recommendation to move the JROTC program from Howard HS to Marriotts Ridge HS should be pursued.

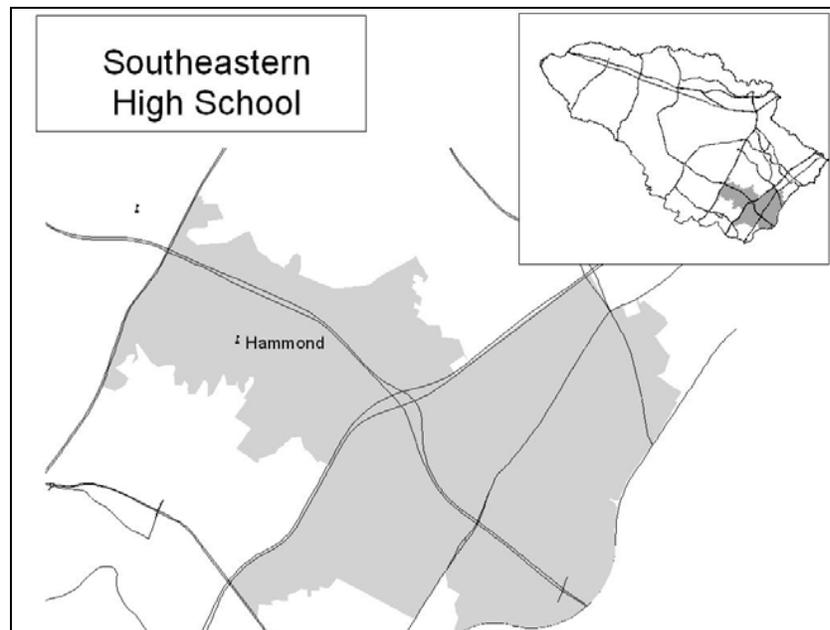
Southeastern Region

Need:

Capacity is adequate through 2018.

Strategy:

Monitor long-term needs.



The Southeastern Region exceeds 110 percent capacity utilization in 2018 and steadily increases later in the projection. For now the existing facility is matched to projected growth within most of the long-range planning period but future projections should be monitored.

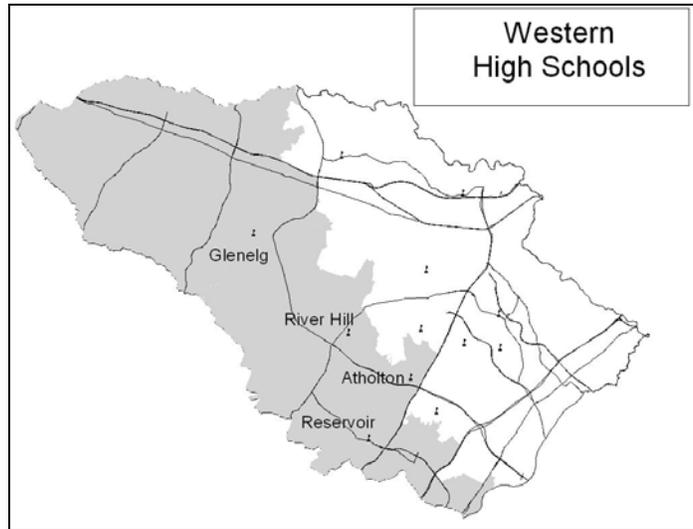
Western Region

Need:

Relief is needed at Reservoir HS after 2017.

Strategy:

Monitor long-term needs.



The Western Region does not exceed 110 percent capacity utilization, and no redistricting or major capital planning appears to be necessary for the next decade. Atholton HS and Reservoir HS should be monitored because this projection indicates they will exceed 110 percent utilization by 2017 and 2018, respectively.

V. Specific Recommendations for Phased Redistricting

This report breaks redistricting into phases for 2012, 2013, 2015, and 2016. This approach is designed to take advantage of timing for new capacity already underway and allow time to space out new capacity needs. The 2012 redistricting recommendations should not be combined with the 2013 recommendations because Gorman Crossing ES needs relief and delays to the new elementary school are possible.

A. 2012 – Elementary School Redistricting

Southeastern elementary redistricting requires a cascade of movement to access capacity in the west at schools including Dayton Oaks ES, Fulton ES, and Pointers Run ES. This redistricting will also take advantage of construction of a four classroom addition which is now completed at Hammond ES.

Table 3. 2012 Elementary School Redistricting			
Sending	Receiving	Polygons	# Students
Atholton ES	Hammond ES	17,1017	99
Atholton ES	Guilford ES	18, 1018	112
Bollman Bridge ES	Guilford ES	1027	26
Forest Ridge ES	Bollman Bridge ES	4047	80
Fulton ES	Dayton Oaks ES	119, 194, 1119, 1194	94
Fulton ES	Pointers Run ES	114, 117, 122, 125, 126 296, 1114 1115, 1117, 1125, 1296, 2114, 2115, 3115	246
Gorman Crossing ES	Fulton ES	7, 1007	104
Guilford ES	Atholton ES	15, 16, 1016	108
Guilford ES	Hammond ES	1015	36
Hammond ES	Fulton ES	8, 221, 1008, 1221, 1227, 2221	199
Laurel Woods ES	Forest Ridge ES	1, 1001	53
		Total	1157

B. 2013 – New Elementary School Capacity – Elementary School Redistricting

This redistricting is designed to create a new attending area for the New ES #41. This is based upon the assumption that New ES #41 will be built by 2013. At this writing significant progress has been made in preparation to obtain a site, completing an educational specification, and preparing for design. The school will be built in accordance with the recently approved elementary educational specification of 600 seats plus a pre-kindergarten programs capacity of 80. Redistricting options to alleviate overcrowding at Veterans ES are also shown in Table 4.

Table 4. 2013 Elementary School Redistricting			
Sending	Receiving	Polygons	# Students
Bellows Spring ES	New ES #41	33, 35, 1033, 1035, 2035, 3035, 4035	163
Bellows Spring ES	Rockburn ES	76, 83, 1076, 1083	195
Bellows Spring ES	Ilchester ES	84	48
Deep Run ES	Bellows Spring ES	80, 1080	165
Deep Run ES	Waterloo ES	1079	39
Elkridge ES	New ES #41	36, 1036	157
Jeffers Hill ES	Waterloo ES	71	66
Rockburn ES	Elkridge ES	1037	43
Rockburn ES	Ilchester ES	91	42
St Johns Lane ES	Waverly ES	160, 162, 1160, 1162	107
Talbott Springs ES	Stevens Forest ES	59, 1059, 2059, 3059	119
Veterans ES	Hollifield Station ES	105, 1105	56
Veterans ES	St Johns Lane ES	106, 1106	155
Waterloo ES	Jeffers Hill ES	1073, 1075	79
Waterloo ES	New ES #41	266, 1266	179
		Total	1613

C. 2015 - Elementary School Redistricting

This redistricting is designed to relieve Manor Woods ES and position West Friendship ES to serve as a Turf Valley holding school. The plan utilizes available Western Region capacity at Triadelphia Ridge ES and Bushy Park ES. Ultimately a new school built in accordance with the elementary educational specification of 600 seats is needed and likely to be built in Turf Valley.

Table 5. 2015 Elementary School Redistricting			
Sending	Receiving	Polygons	# Students
Manor Woods ES	Triadelphia Ridge ES	178, 179, 1178, 1179	67
Manor Woods ES	Waverly ES	164, 167, 1164	139
Manor Woods ES	West Friendship ES	304, 305, 1304, 1305	109
West Friendship ES	Bushy Park ES	224, 229, 231, 232, 1229, 1231, 2229	68
		Total	383

D. 2015 – New Middle School Capacity – Middle School Redistricting

This redistricting is designed to make a new attending area for the New MS #42 MS. The school would provide relief to Mayfield Woods MS and Patuxent Valley MS. In turn these schools can provide relief to Elkridge Landing MS and Murray Hill MS. These conditions will be monitored in annual projections before a final recommendation is made in 2014. Comprehensive redistricting balances capacity throughout the system and addresses changes made in 2013 at the elementary level to remove many small feeds. A net reduction of five small feeds with three others improved is accomplished. In 2020, five years after this plan would take effect; eight schools would be over 110 percent, where eleven would have been over 110 percent with no changes.

Table 6. 2015 Middle School Redistricting			
Sending	Receiving	Polygons	# Students
Bonnie Branch MS	Elkridge Landing MS	83, 1083, 1091, 2091, 3091	85
Bonnie Branch MS	Cradlerock MS	261, 1261	16
Dunloggin MS	Patapsco MS	105, 106, 1105, 1106, 1308, 2308	179
Elkridge Landing MS	New MS #20	36, 37, 1036, 1037, 1043, 2037, 2043	263
Ellicott Mills MS	Dunloggin MS	103, 217, 1103	78
Ellicott Mills MS	Oakland Mills MS	65, 1065, 2065	45
Glenwood MS	Folly Quarter MS	212, 213	50
Hammond MS	Lime Kiln MS	8, 221, 1008, 1221, 1227, 2221	129
Lime Kiln MS	Clarksville MS	125, 126, 127, 296, 1125, 1296	97
Mayfield Woods MS	New MS #20	33, 35, 266, 1033, 1035, 1082, 1266, 2035, 3035, 4035	159
Mayfield Woods MS	Bonnie Branch MS	70, 1070, 2070	40
Mount View MS	Folly Quarter MS	170, 178, 179, 1170, 1178, 1179, 2170	96
Mount View MS	Glenwood MS	224, 229, 231, 232, 1229, 1231, 2229	52
Murray Hill MS	Patuxent Valley MS	1, 46, 116, 260, 267, 272, 1001, 1046, 1116, 1260, 1272, 2046, 3046	209
Oakland Mills MS	Hammond MS	56, 1056, 2056, 3056	57
Patapsco MS	Mount View MS	160, 161, 162, 1160, 1161, 1162, 2161	150
Patuxent Valley MS	Cradlerock MS	18, 1018, 1048, 2048	65
Patuxent Valley MS	Hammond MS	17, 1017	47
Patuxent Valley MS	New MS #20	26, 30, 32, 48, 1026, 1027, 1030, 1032, 2030, 3048	171
		Total	1988

E. 2016 – High School

Redistricting between Howard HS, Long Reach HS, and Oakland Mills HS is recommended as an interim for capacity relief. Other more comprehensive redistricting plans may be considered. It should be noted that four more enrollment projections and feasibility studies come before a decision is likely on this redistricting. Long-term planning discussions are necessary but at this time the outcome is far from certain.

Table 7. 2016 High School Redistricting			
Sending	Receiving	Polygons	# Students
Hammond HS	Atholton HS	273	1
Howard HS	Long Reach HS	38, 39, 42, 124, 277, 300, 1038, 1124, 1300, 2038	271
Howard HS	Oakland Mills HS	261, 1261	22
Long Reach HS	Oakland Mills HS	33, 35, 266, 1033, 1035, 1266, 2035, 3035, 4035	179
		Total	473

VI. Evaluation

A. Scoring Methodology

This study evaluates the recommendation for 2012 redistricting using the current projection. The supplement for this document includes an evaluation from the perspectives of changes proposed for 2012, 2013, after the elementary and middle school redistricting is completed in 2015, and after high school redistricting is completed in 2016. The evaluation of the plan is based upon the considerations listed in Policy 6010 School Attendance Areas. This policy is published on the HCPSS website.⁹ Scorecards comparing the plan at each level (elementary, middle, and high) help show how the plan fares in light of the criteria for consideration set by Policy 6010 and are included in the Supplement to the 2011 Feasibility Study. These include explanations and other tabulations of the effects of the 2011 proposal and the aggregate plan. Should additional plans be proposed, they can be evaluated in the same manner.

Plans are also evaluated under two capacity utilization measures. The first is the 115 percent capacity utilization standard for the Adequate Public Facilities Ordinance (APFO) school test. The second is the 90 percent to 110 percent capacity utilization target in Policy 6010 School Attendance Areas. Impacts of the suggested strategy in this feasibility study are illustrated in a pre- and post-measures approach which is attached to this document.

B. 2012 – Elementary School Redistricting

The proposed plan results in the students receiving Free and Reduced Meals Services (FARMS) and the Maryland School Assessments (MSA) score distribution staying about the same among all schools at the elementary level. The plan makes a negligible change to the consecutive years under the 110 percent utilization criterion; however the number of schools projected to have improved utilization in 2012 and 2022 is increased.

Given the scope of redistricting that is proposed by this plan, the average proximity to schools is not markedly changed. This would come at some modest increase in transportation cost based upon a preliminary evaluation by Pupil Transportation Staff. A number of factors including bell times, multi-level bus assignments, and fuel costs will factor into the actual cost and are difficult to determine at this time.

The plan results in a moderate number of students approximately 5 percent of elementary enrollment, being moved. By way of comparison, the last comprehensive elementary redistricting occurred in 2007 to open Veterans ES and involved the movement of approximately 1,185 students. A recent local benchmark to consider for redistricting a single level can be found in Harford County Public School System. Harford County Public School System just approved elementary redistricting for the 2011–2012 school year. Approximately 1,900 elementary students, representing 11 percent of the Harford County Public School System elementary population, will transfer to new schools.

The plan eliminates one of five existing islands (non-contiguous attending areas) at the elementary level. The reason to avoid islands is that contiguous attendance areas improve the sense of community and may expand walking areas.

⁹ <http://www.hcpss.org/board/policies/6010.pdf>

This plan does not propose to move any students more than once at the elementary level in a five year period. Plans should avoid moving students more than once within five years at the elementary level. The summary of all plans discussed in this document is included in the supplement and also indicates no movement of the same areas within the five year period is proposed.

The plan reduces small feeds from elementary to middle school which is a clear strength. No “double small feeds” (geography where the feed is below 15 percent at both levels) are created by this plan. The plan seeks to access available capacity in the west and this effort has reduced the average number of schools with utilization below 90 percent from 2012-2023. Growth is projected to continue in the east, so it is not surprising that this plan does not reduce the average number of schools over 110 percent utilization from 2012-2023. The capital planning and subsequent redistricting proposed in this document go a long way towards improving this measure as is indicated in the aggregate evaluation included in the supplement.

The most significant strength of this plan is that it improves the balance of capacity utilization and provides relief to areas that will not specifically be improved by the future opening of a new elementary school. Making use of existing capacity is an appealing option as we face tight capital budgets in the future.

Table 8. 2012 Plan Assessment

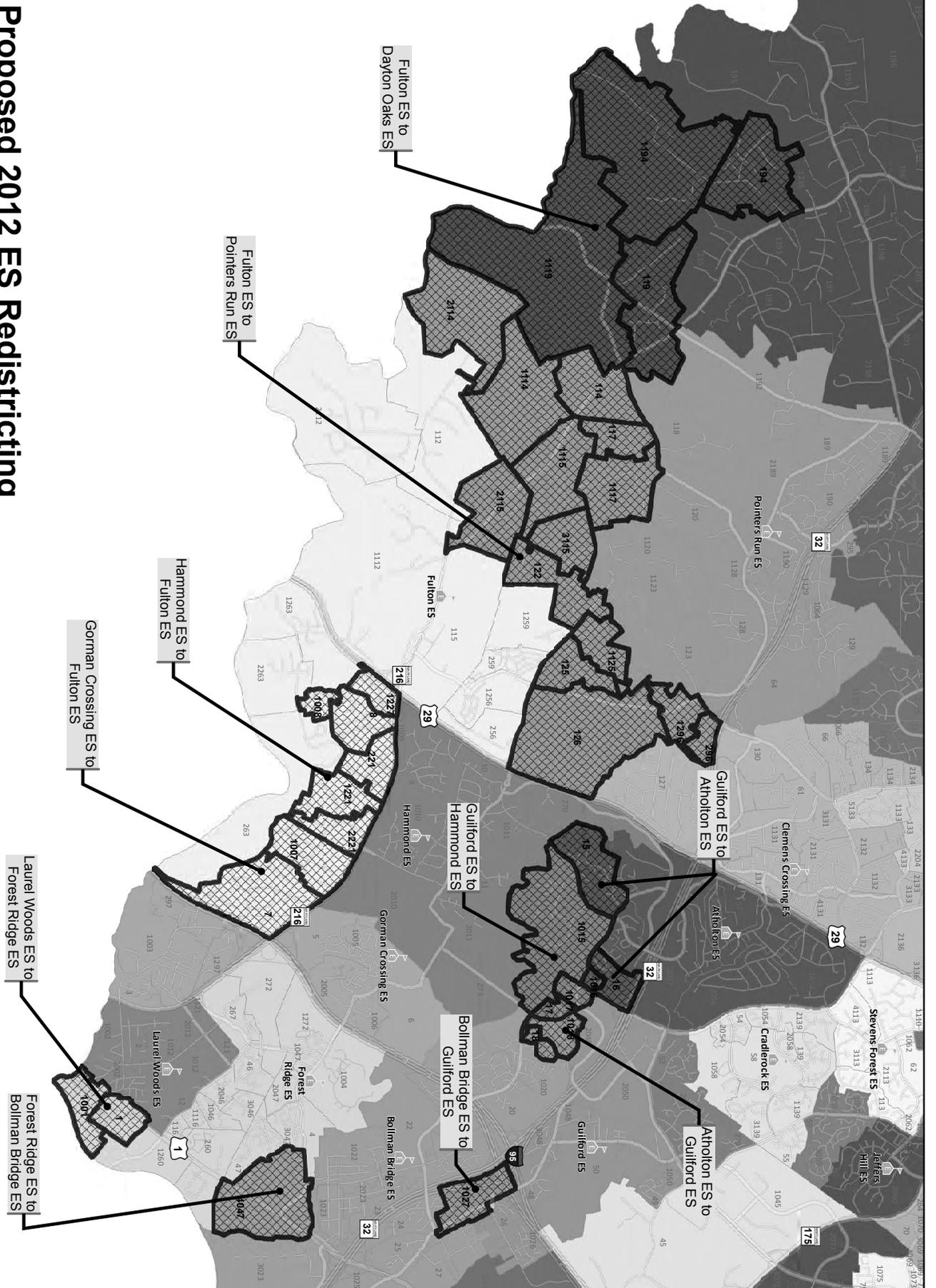
Elementary School Summary		Current	Aggregate Plan	Assessment Criteria
Balance FARM %	(ES Average = 18%)	18.4%	18.6%	Standard Deviation reduced by 25% or more = Strength; increased by 25% or more = Weakness; otherwise Negligible
	StdDev	15.95	15.94	
			NEGLIGIBLE	
Balance MSA Reading Pass Rate	(ES Average = 92%)	91.7%	91.6%	Standard Deviation reduced by 25% or more = Strength; increased by 25% or more = Weakness; otherwise Negligible
	StdDev	5.94	5.90	
			NEGLIGIBLE	
Balance MSA Math Pass Rate	(ES Average = 93%)	92.5%	92.4%	Standard Deviation reduced by 25% or more = Strength; increased by 25% or more = Weakness; otherwise Negligible
	StdDev	5.73	5.72	
			NEGLIGIBLE	
Consecutive Years Under 110%	# of Schools Strengthened	NA	4	Mean increased by 1.0 or more = Strength; reduced by 1.0 or more = Weakness; otherwise Negligible
	# of Schools Weakened	NA	4	
	Mean	7.9	7.7	
			NEGLIGIBLE	
Balanced 2012 Utilization	# of Schools Strengthened	NA	7	Standard Deviation reduced by 25% or more = Strength; increased by 25% or more = Weakness; otherwise Negligible
	# of Schools Weakened	NA	2	
	StdDev	17.39	15.13	
			NEGLIGIBLE	
Balanced 2022 Utilization	# of Schools Strengthened	NA	7	Standard Deviation reduced by 25% or more = Strength; increased by 25% or more = Weakness; otherwise Negligible
	# of Schools Weakened	NA	3	
	StdDev	37.69	34.44	
			NEGLIGIBLE	
Proximity to School	# of Schools Strengthened	NA	5	Mean reduced by 100 or more = Strength; increased by 100 or more = Weakness; otherwise Negligible
	# of Schools Weakened	NA	5	
	Mean	5654	5688	
			NEGLIGIBLE	
Non-Contiguous Attendance Areas	Number of "Islands"	5	4	"After" count lower than "Before" = Strength; "After" higher = Weakness; otherwise Negligible
			STRENGTH	
Transportation Costs	(ES Avg Rating = 0.00) (pos=savings; neg=cost)	NA	-0.10	Mean increased = Strength; mean reduced = Weakness; otherwise Negligible
			WEAKNESS	
Students Moved	Number	NA	1157	% of enrollment greater than 10% = High Movement, 5% to 10% = Moderate Movement, less than 5% = Low Movement
	% of Enrollment	NA	5.1%	
			MODERATE MOVEMENT	
Students moved too soon after last move	Number	NA	0	% of enrollment greater than 3% = High Movement, greater than 0% to 3% = Moderate Movement, 0% = No Movement
	% of Enrollment	NA	0.0%	
			NO MOVEMENT	
Small ES-to-MS Feeds (under 15%)	# of Small Feeds	20	18	"After" count lower than "Before" = Strength; "After" higher = Weakness; otherwise Negligible
			STRENGTH	
Double Small Feeds	# of Double Small Feeds	3	3	"After" count lower than "Before" = Strength; "After" higher = Weakness; otherwise Negligible
			NEGLIGIBLE	
Low Utilization (Under 90%) 2012-2023	Per-school Average Years	3.7	3.6	Mean reduced by 0.1 or more = Strength; increased by 0.1 or more = Weakness; otherwise Negligible
			STRENGTH	
High Utilization (Over 110%) 2012-2023	Per-school Average Years	4.1	4.2	Mean reduced by 0.1 or more = Strength; increased by 0.1 or more = Weakness; otherwise Negligible
			NEGLIGIBLE	

VII. Maps

On the following pages the staff-proposed plans are mapped. It should be noted that none of these maps represent approved plans. Should any redistricting be approved by the Board of Education in November 2011, it would take effect in August 2012 with any applicable phasing. Plans for future years, such as those recommended in this document, would also require Board of Education approval in the fall of the year before they are to take effect. By that time conditions may change and a different plan may be the better option. Long-term plans are presented in an effort to have a transparent planning process and to provide context for the capital budgeting process.

Proposed 2012 ES Redistricting

SE Region

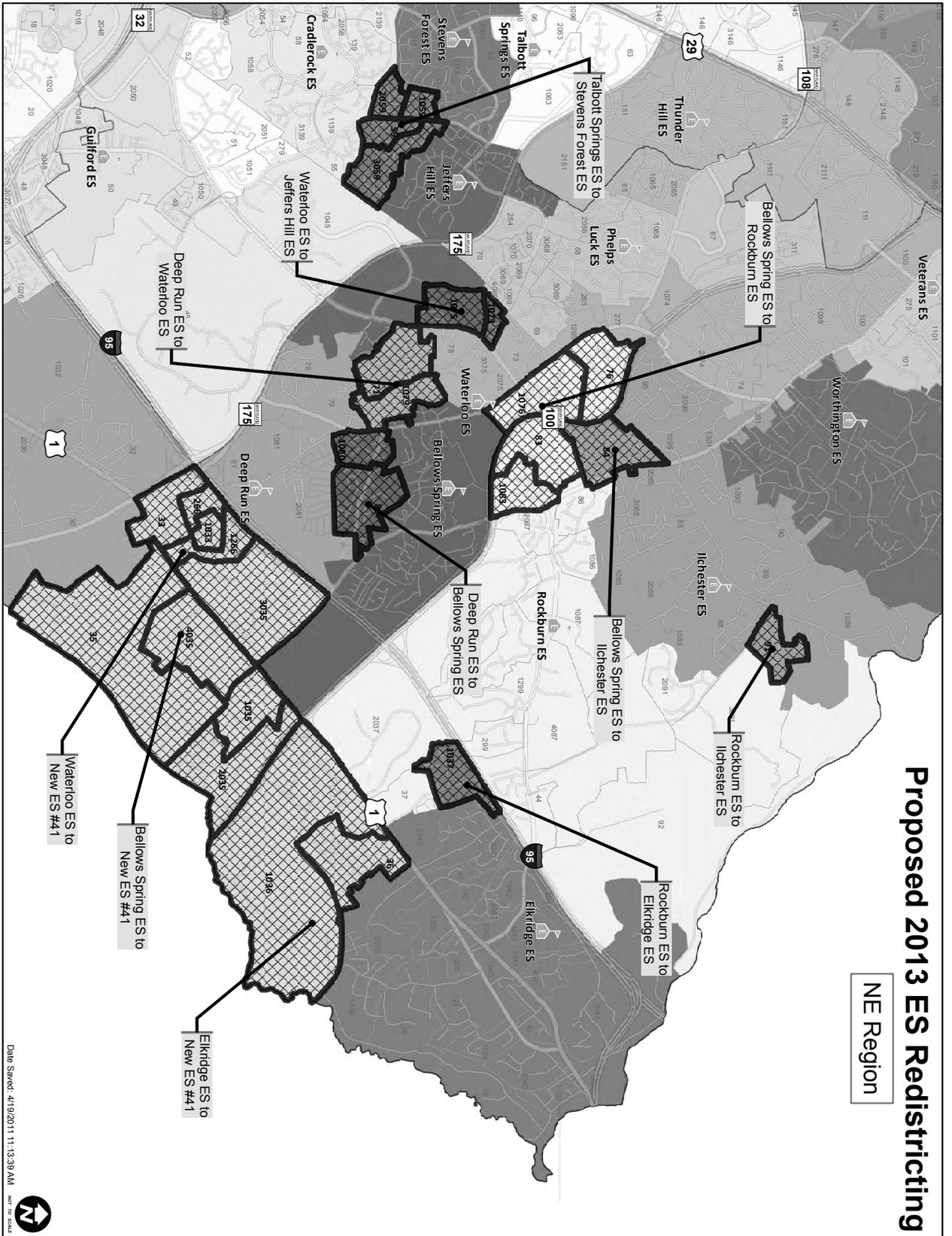


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Proposed 2013 ES Redistricting

NE Region

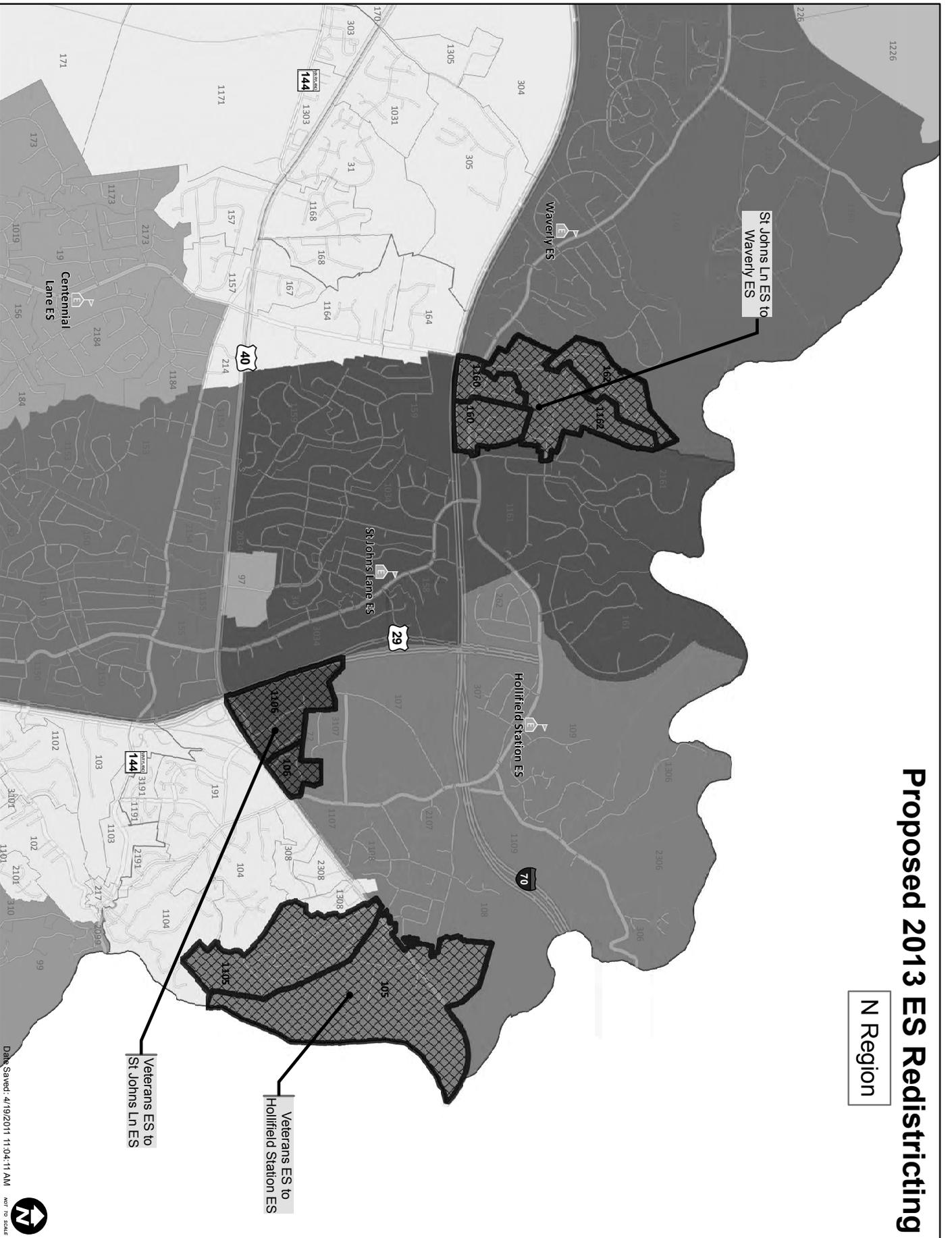


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Proposed 2013 ES Redistricting

N Region

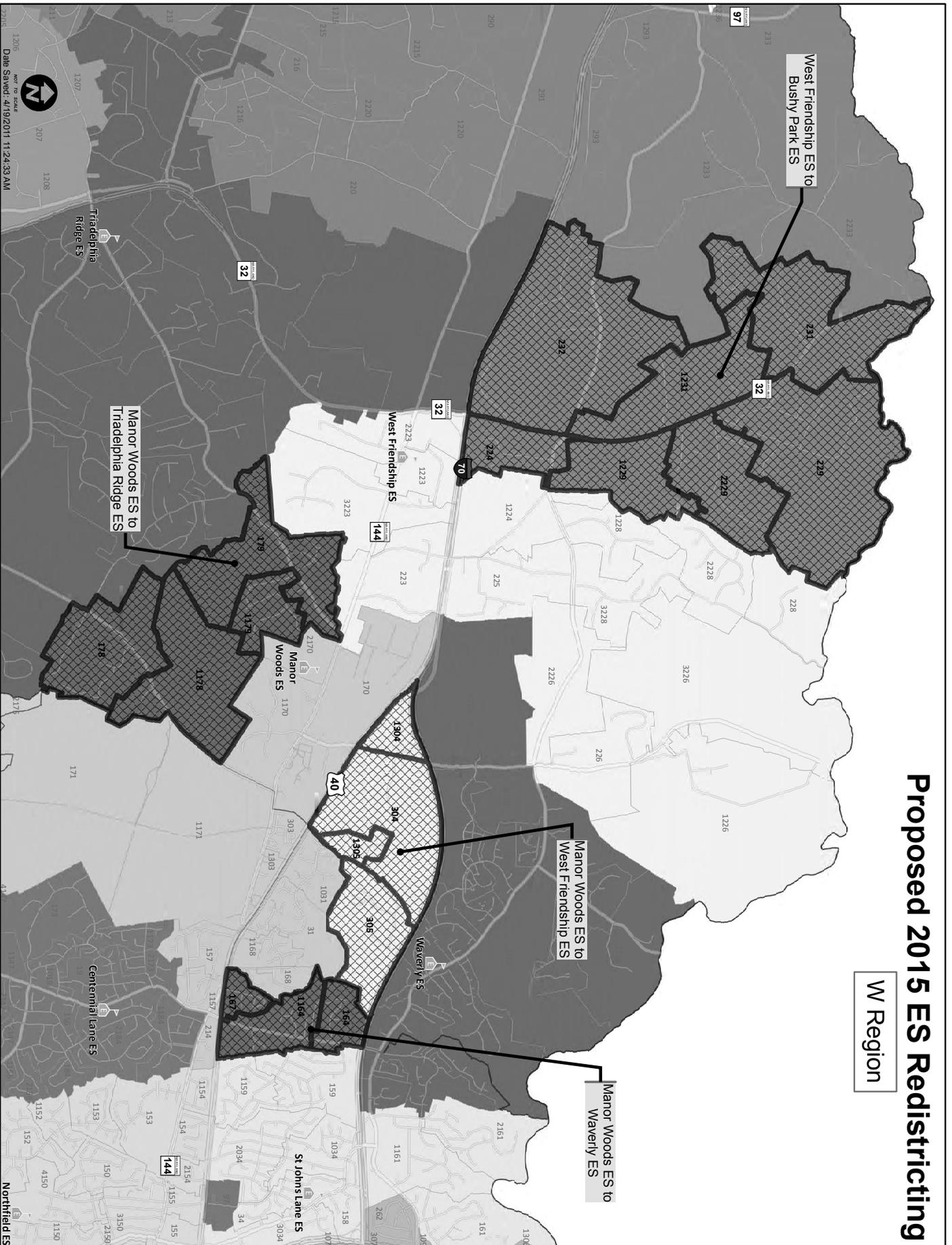


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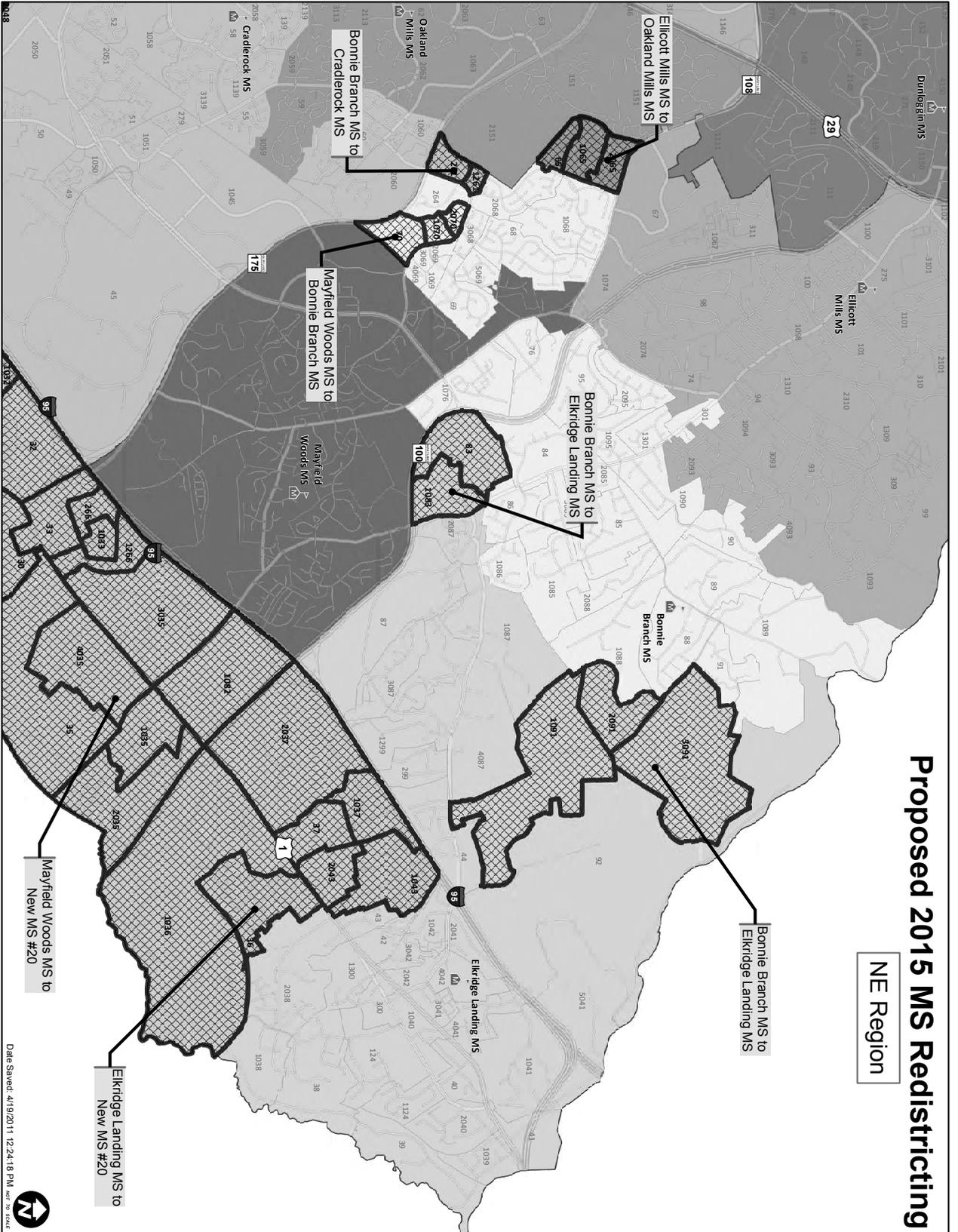
Proposed 2015 ES Redistricting

W Region



Proposed 2015 MS Redistricting

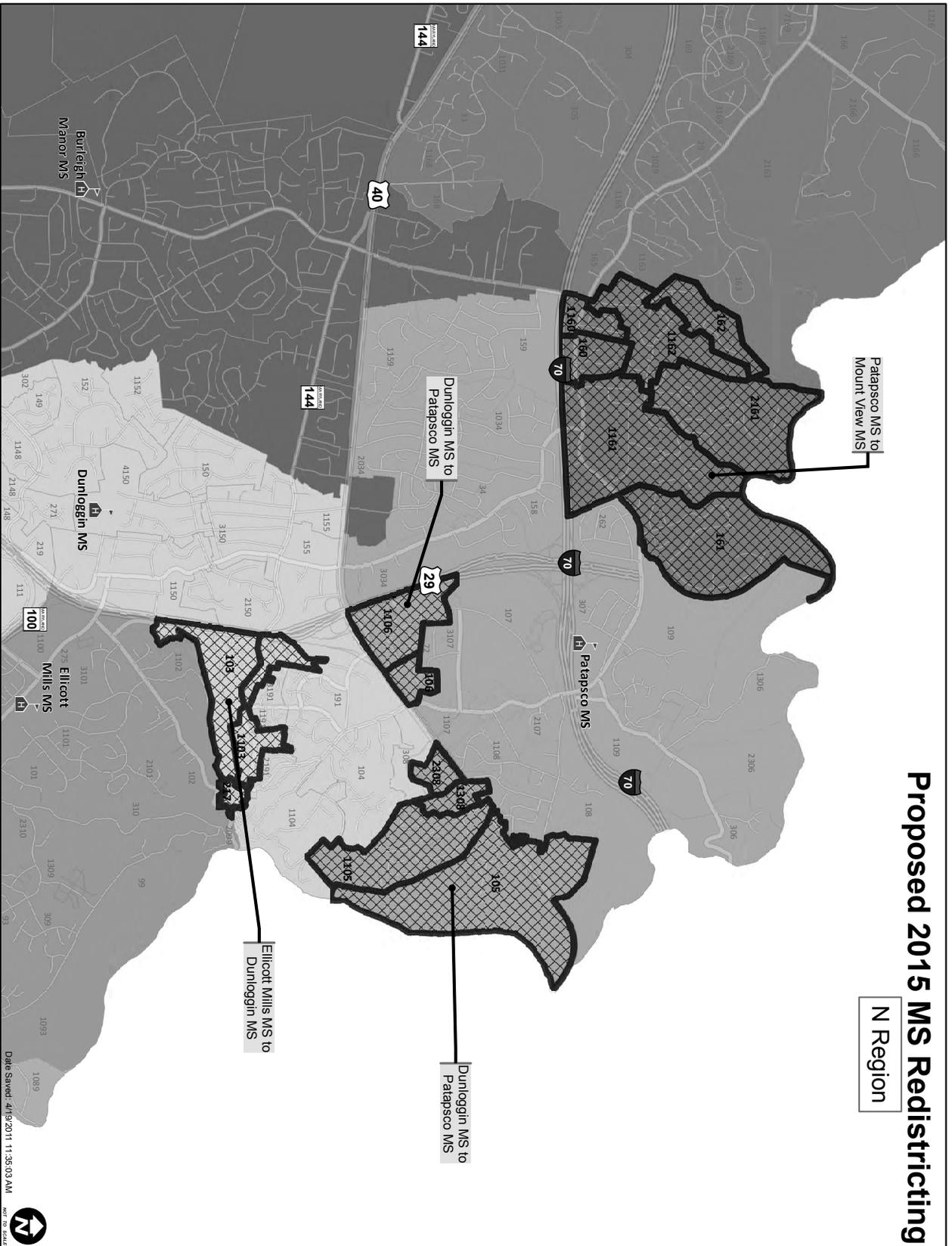
NE Region

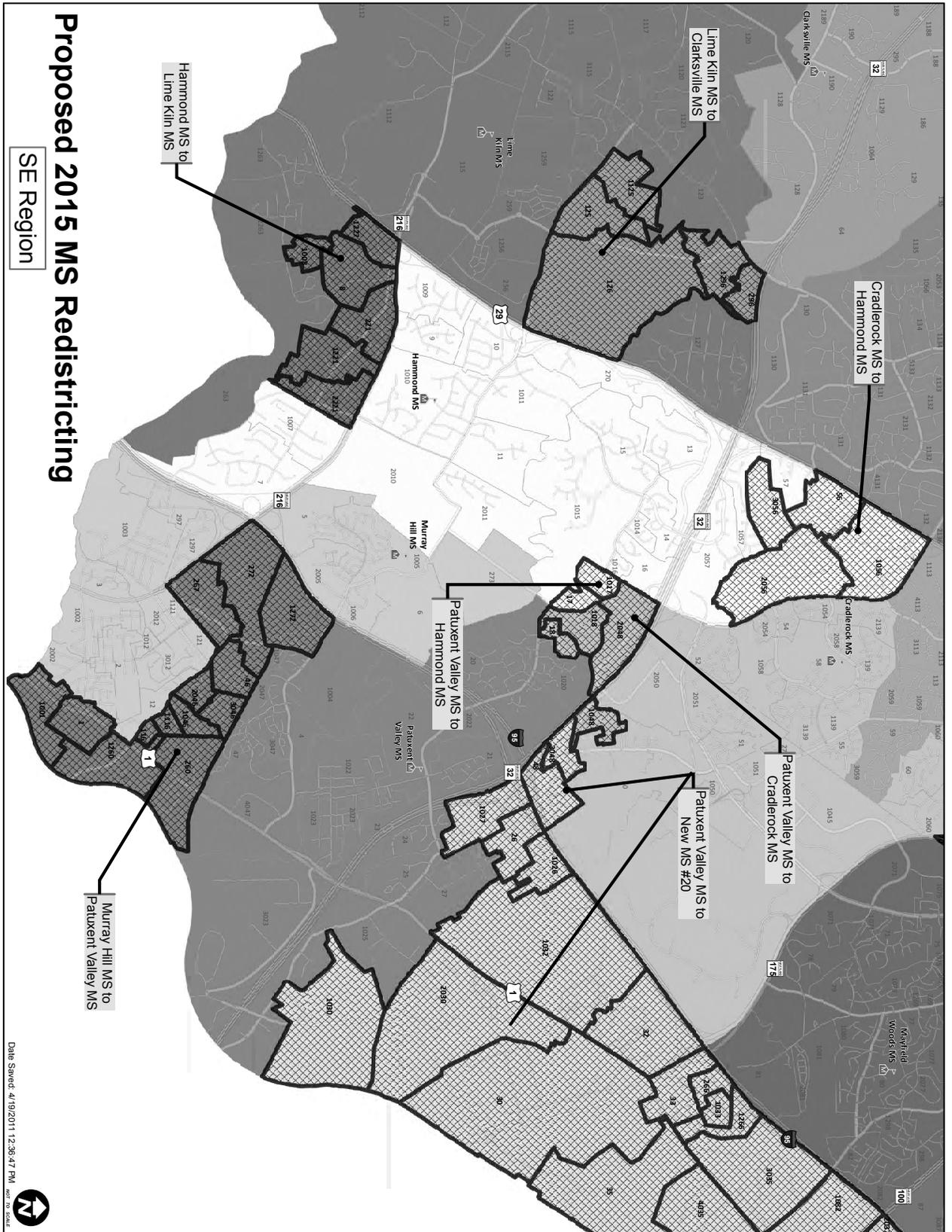


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Proposed 2015 MS Redistricting

N Region





Pre-Measures

Capacity Utilization Rates with Board of Education's Approved FY 2012 Capital Budget Projects - Not Test for APFO
 Capacity Utilization Rates with Board of Education's FY 2012 approved capacities, and no redistricting.
 Chart reflects May 2011 Projections. Board of Education's FY 2012 approved capacities, and no redistricting.

ELEMENTARY SCHOOLS - Data for Demonstrative Purposes Only

Region	School	Capacity										2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23					
		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021												2022	2023			
Columbia - East	Chadlerock ES	487	487	487	487	461	501	102.9	516	106.0	538	110.5	552	113.3	580	119.1	593	121.6	593	121.8	614	126.1	631	129.6	645	132.4	
	Jeffers Hill ES	421	421	421	421	373	366	86.6	366	86.9	372	88.4	368	87.4	357	84.8	387	92.6	387	93.1	354	84.1	355	84.3	363	86.2	
	Phelps Luck ES	A 540	640	640	640	643	603	119.1	C 638	99.7	643	100.5	664	103.8	664	103.8	664	103.8	664	103.8	657	102.7	665	103.9	678	105.9	
	Stevens Forest ES	A 333	433	433	433	321	317	96.4	C 317	73.2	302	69.7	305	70.4	318	73.4	318	73.4	315	72.7	313	72.3	308	71.1	319	73.7	
	Talbot Springs ES	A 443	443	443	443	581	609	137.5	C 609	137.5	C 590	133.2	C 582	131.4	C 582	131.4	C 572	126.1	C 581	131.2	C 573	126.3	C 579	130.7	C 590	133.2	
	Thunder Hill ES	A 463	468	468	468	409	418	87.4	C 418	89.3	430	91.9	448	95.7	446	95.3	453	96.8	454	97.0	454	97.0	460	98.3	472	100.9	
	Region Totals	2692	2892	2892	2892	2788	2788	103.6	2849	98.5	2853	98.7	2905	100.4	2904	100.4	2948	101.9	2943	101.8	2960	102.4	3036	105.0	3101	107.2	
	Columbia - West	Bryant Woods ES	355	355	355	355	333	334	94.1	343	96.6	343	96.6	341	96.1	356	100.3	356	100.3	356	100.3	364	102.5	364	102.5	364	102.5
		Clemens Crossing ES	522	522	522	522	476	472	90.4	443	84.9	441	84.5	441	84.5	433	83.0	423	82.6	429	82.2	428	82.0	448	85.8	455	87.9
		Longfellow ES	418	418	418	418	399	395	95.5	394	94.3	403	96.4	398	95.2	389	93.1	387	92.6	396	94.7	396	94.7	394	94.3	396	94.7
Running Brook ES		405	405	405	405	443	461	113.8	485	119.8	C 510	125.9	C 529	130.6	C 554	136.8	C 582	143.7	C 612	151.1	C 612	151.1	C 642	158.5	C 672	165.9	
Swarthfield ES		528	528	528	528	586	617	116.9	C 622	117.8	C 632	119.7	C 632	119.7	C 635	120.3	C 634	120.1	C 646	122.3	C 641	121.4	C 647	122.5	C 659	124.8	
Region Totals		2228	2228	2228	2228	2237	2278	100.4	2278	102.2	2296	103.1	2322	104.2	2342	105.1	2354	105.7	2408	108.1	2441	109.6	2495	112.0	2550	114.5	
Northeastern		Bellows Spring ES	762	762	762	762	873	114.6	920	120.7	968	127.0	1031	135.3	1090	143.0	1180	154.9	1270	166.7	1345	176.5	1419	188.2	1476	193.7	
		Deep Run ES	601	601	601	601	656	109.2	735	122.3	808	134.4	857	142.6	870	144.8	905	150.6	904	150.4	875	145.6	869	144.6	882	146.8	
		Elkridge ES	779	779	779	779	899	115.4	920	118.1	946	121.4	966	124.0	1001	128.5	1036	133.0	1054	138.3	1079	138.5	1075	138.0	1069	137.2	
		Ilchester ES	617	617	617	617	601	97.4	599	97.1	569	92.2	532	86.2	527	85.4	507	82.2	512	83.0	509	82.5	541	87.7	563	91.2	
	New Northeastern ES	0	600	600	600	0	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600		
	Rockburn ES	667	667	667	667	661	92.4	640	96.0	617	92.5	599	89.8	572	85.8	561	84.1	574	86.1	575	86.2	585	87.7	590	88.5		
	Veterans ES	788	788	788	788	980	124.1	990	126.6	1015	128.8	1029	130.6	1006	127.7	1043	132.4	1065	134.2	1075	136.4	1100	139.6	1110	140.9		
	Waterloo ES	594	594	594	594	594	784	118.5	704	118.5	709	118.1	703	118.4	698	117.5	710	119.5	721	121.2	720	121.2	721	121.4	726	122.2	
	Washington ES	516	516	516	516	516	497	96.3	518	100.4	541	104.8	539	104.5	533	103.3	526	101.9	510	98.8	499	96.7	498	96.5	490	95.0	
	Region Totals	5324	5924	5924	5924	5871	6026	110.3	6026	107.7	6173	104.2	6256	105.6	6297	106.3	6468	109.2	6610	111.6	6677	112.7	6808	114.9	6906	116.6	
Northern	Centennial Lane ES	628	628	628	628	681	108.4	670	106.7	658	104.8	646	102.9	658	104.8	659	104.9	651	103.7	669	106.5	671	106.8	686	109.2		
	Hollfield Station ES	688	688	688	688	688	99.6	672	97.7	690	100.3	674	98.0	666	96.8	658	95.6	662	96.2	668	97.1	661	96.1	668	97.1		
	Menor Woods ES	647	647	647	647	663	102.5	693	107.1	708	109.4	809	125.0	C 894	138.2	C 1014	156.7	C 1136	176.6	C 1234	190.7	C 1318	203.7	C 1361	210.4		
	Northfield ES	672	672	672	672	601	89.4	628	93.5	611	90.9	588	87.5	581	86.5	572	85.1	579	86.2	575	85.6	609	90.6	632	94.0		
	St. Johns Lane ES	A 597	597	597	597	572	95.8	579	97.0	564	94.5	553	92.6	558	93.5	567	95.0	581	97.3	594	99.5	581	97.3	594	99.5		
	Waverly ES	675	675	675	675	545	80.7	545	80.7	525	77.8	531	78.7	524	76.6	530	78.4	522	76.4	526	76.7	547	80.6	562	82.5		
	Region Totals	3907	3907	3907	3907	3747	95.9	3787	96.9	3756	96.1	3801	97.3	3881	96.9	4000	99.8	4115	102.7	4227	105.5	4387	109.5	4503	112.4		
	Southeastern	Arlington ES	387	387	387	387	477	123.3	497	128.4	521	134.6	524	136.4	524	136.4	524	136.4	524	136.4	524	136.4	524	136.4	524	136.4	
		Bolman Bridge ES	A 663	663	663	663	544	82.1	578	87.2	582	87.8	591	89.1	612	92.3	636	95.9	665	100.3	680	102.6	705	106.3	723	109.0	
		Forest Ridge ES	626	626	626	626	738	117.9	C 739	118.1	C 717	114.5	720	111.3	697	108.9	688	108.9	682	108.9	675	107.8	684	109.3	683	109.1	
Gorman Crossing ES		A 540	540	540	540	645	119.4	C 719	133.1	C 790	110.8	832	124.8	C 890	124.8	C 936	131.3	C 967	138.6	C 970	138.6	C 966	138.5	C 974	138.6		
Gulford ES		462	462	462	462	482	104.3	487	105.4	491	106.3	491	106.3	492	106.3	494	106.9	506	109.3	496	107.4	497	107.6	494	106.9		
Hammond ES		597	597	597	597	536	89.8	548	91.8	558	93.5	584	97.8	626	104.9	663	111.1	700	117.3	751	125.8	775	129.8	786	131.7		
Laurel Woods ES		540	540	540	540	634	117.4	C 666	123.3	C 702	130.0	C 755	139.8	C 773	143.1	C 849	157.2	C 904	167.4	C 961	178.0	C 961	178.0	C 995	184.3		
Region Totals		3815	3815	3815	3815	4056	106.3	4234	111.0	4361	109.4	4497	112.8	4637	116.3	4836	121.3	5001	126.4	5120	128.4	5205	130.5	5271	132.2		
Western		Busy Park ES	788	788	788	788	554	70.3	528	67.0	484	61.4	454	57.6	438	55.6	427	54.2	435	55.2	431	54.7	446	56.6	449	57.0	
		Clarksville ES	634	634	634	634	490	77.3	449	70.8	380	59.9	337	53.2	309	48.7	283	44.6	264	41.6	270	42.6	287	45.3	286	45.1	
	Dayton Oaks ES	788	788	788	788	462	58.6	458	58.1	434	55.1	424	53.8	419	53.2	407	51.6	399	50.6	388	49.2	401	50.9	402	51.0		
	Fulton ES	772	772	772	772	646	83.7	687	89.0	699	90.5	734	95.1	769	99.6	796	103.1	807	104.5	809	104.8	819	106.1	774	100.3		
	Lisbon ES	553	553	553	553	456	82.5	470	85.0	487	88.1	491	88.8	518	93.7	552	99.8	563	99.5	563	99.5	576	104.2	585	105.8		
	Pointers Run ES	776	776	776	776	776	88.4	493	63.5	463	59.7	424	54.6	405	52.2	395	50.9	407	52.4	407	52.4	406	52.3	409	52.7		
	Triadelphia Ridge ES	544	544	544	544	414	68.4	397	73.0	398	73.2	403	74.1	415	76.3	426	78.3	447	82.0	456	83.8	445	83.6	443	81.4		
	West Friendship ES	396	396	396	396	264	66.7	248	62.6	231	58.3	217	54.8	207	52.3	208	52.5	208	52.5	201	50.8	203	51.3				

Pre-Measures

HIGH SCHOOLS - Data for Demonstrative Purposes Only
 Capacity Utilization Rates with Board of Education's Approved FY 2012 Capital Budget Projects - Not Test for APFO
 Chart reflects May 2011 Projections, Board of Education's FY 2012 approved capacities, and no redistricting.

	Capacity		2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21		2021-22		2022-23	
	2012	2013	2013	% Util.	2014	% Util.	2015	% Util.	2016	% Util.	2017	% Util.	2018	% Util.	2019	% Util.	2020	% Util.	2021	% Util.	2022	% Util.	2023	% Util.
Columbia - East	1400	1400	1400	100.0	1400	100.0	1400	100.0	1400	100.0	1400	100.0	1400	100.0	1400	100.0	1400	100.0	1400	100.0	1400	100.0	1400	100.0
Oakland Mills HS	1400	1400	1400	100.0	1400	100.0	1400	100.0	1400	100.0	1400	100.0	1400	100.0	1400	100.0	1400	100.0	1400	100.0	1400	100.0	1400	100.0
Columbia - West	1424	1424	1424	100.0	1424	100.0	1424	100.0	1424	100.0	1424	100.0	1424	100.0	1424	100.0	1424	100.0	1424	100.0	1424	100.0	1424	100.0
Willie Lake HS	1424	1424	1424	100.0	1424	100.0	1424	100.0	1424	100.0	1424	100.0	1424	100.0	1424	100.0	1424	100.0	1424	100.0	1424	100.0	1424	100.0
Northeastern	1420	1420	1420	100.0	1420	100.0	1420	100.0	1420	100.0	1420	100.0	1420	100.0	1420	100.0	1420	100.0	1420	100.0	1420	100.0	1420	100.0
Howard HS	1420	1420	1420	100.0	1420	100.0	1420	100.0	1420	100.0	1420	100.0	1420	100.0	1420	100.0	1420	100.0	1420	100.0	1420	100.0	1420	100.0
Long Reach HS	1488	1488	1488	100.0	1488	100.0	1488	100.0	1488	100.0	1488	100.0	1488	100.0	1488	100.0	1488	100.0	1488	100.0	1488	100.0	1488	100.0
Region HS Totals	2908	2908	2908	100.0	2908	100.0	2908	100.0	2908	100.0	2908	100.0	2908	100.0	2908	100.0	2908	100.0	2908	100.0	2908	100.0	2908	100.0
Northern	1360	1360	1360	100.0	1360	100.0	1360	100.0	1360	100.0	1360	100.0	1360	100.0	1360	100.0	1360	100.0	1360	100.0	1360	100.0	1360	100.0
Centennial HS	1360	1360	1360	100.0	1360	100.0	1360	100.0	1360	100.0	1360	100.0	1360	100.0	1360	100.0	1360	100.0	1360	100.0	1360	100.0	1360	100.0
Marietta Ridge HS	1615	1615	1615	100.0	1615	100.0	1615	100.0	1615	100.0	1615	100.0	1615	100.0	1615	100.0	1615	100.0	1615	100.0	1615	100.0	1615	100.0
Mt Hebron HS	1280	1400	1400	100.0	1488	116.3	1456	104.0	1453	103.8	1425	101.8	1489	106.4	1509	107.8	1567	111.9	1654	118.1	1643	117.4	1676	119.7
Region HS Totals	4255	4375	4375	98.6	4080	93.3	4049	92.5	4090	93.5	4216	96.4	4377	100.0	4518	103.3	4667	106.7	4700	107.4	4736	108.3	4759	108.8
Southeastern	1220	1220	1220	100.0	1220	100.0	1220	100.0	1220	100.0	1220	100.0	1220	100.0	1220	100.0	1220	100.0	1220	100.0	1220	100.0	1220	100.0
Hammond HS	1220	1220	1220	100.0	1220	100.0	1220	100.0	1220	100.0	1220	100.0	1220	100.0	1220	100.0	1220	100.0	1220	100.0	1220	100.0	1220	100.0
Western	1360	1360	1360	100.0	1360	100.0	1360	100.0	1360	100.0	1360	100.0	1360	100.0	1360	100.0	1360	100.0	1360	100.0	1360	100.0	1360	100.0
Atholton HS	1360	1360	1360	100.0	1360	100.0	1360	100.0	1360	100.0	1360	100.0	1360	100.0	1360	100.0	1360	100.0	1360	100.0	1360	100.0	1360	100.0
Glennig HS	1420	1420	1420	100.0	1271	89.5	1263	88.9	1252	88.2	1235	87.0	1183	83.3	1187	83.6	1209	85.1	1193	84.0	1171	82.5	1157	81.5
Reservoir HS	1551	1551	1551	100.0	1504	97.0	1491	96.1	1510	97.4	1561	100.6	1578	101.7	1627	104.9	1719	110.8	1794	115.7	1854	119.5	1907	123.0
River Hill HS	1488	1488	1488	100.0	1399	94.0	1340	90.1	1312	88.2	1277	85.8	1233	82.9	1228	82.5	1191	80.0	1180	79.3	1132	78.1	1072	72.0
Region HS Totals	5819	5819	5819	97.1	5653	97.1	5552	95.4	5543	95.3	5558	95.5	5474	94.1	5552	95.4	5702	98.0	5724	98.4	5754	98.9	5731	98.5
Countrywide Totals	17026	17146	17146	98.3	16729	98.3	16389	95.6	16501	96.2	16669	97.2	16928	98.7	17533	102.3	18040	105.2	18542	108.1	18882	109.0	18777	109.5

Post-Measures
 Aggregate Plan
 Chart reflects May 2011 Projections, Board of Education's FY 2013 Requested capacities, and restructuring as listed in June 2011 Feasibility Study.
MIDDLE SCHOOLS - Data for Demonstrative Purposes Only
 Capacity Utilization Rates with Proposed FY 2013 Capital Budget Projects - Not Test for APFO

	2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21		2021-22		2022-23			
	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013		
Columbia - East	Capacity																							
Cladwell MS	584	584	584	584	463	79.3	471	80.7	455	77.9	547	93.7	579	99.1	586	100.3	609	104.3	624	106.8	639	109.4	636	108.9
Cakland Mills MS	506	506	506	506	423	83.6	471	93.1	522	103.2	540	106.7	547	108.1	534	105.5	554	109.5	568	112.3	563	111.3	547	108.1
Region MS Totals	1090	1090	1090	1090	886	81.3	942	86.4	977	89.6	1087	99.7	1126	103.3	1120	102.8	1163	106.7	1192	109.4	1202	110.3	1183	108.5
Columbia - West																								
Harpers Choice MS	506	506	506	506	504	99.6	522	103.2	550	108.7	573	113.2	609	120.4	621	122.7	621	122.7	616	121.7	609	120.4	615	121.5
Wide Lake MS	A 506	506	506	506	538	106.3	569	112.5	592	117.0	620	122.5	611	92.3	629	95.0	626	94.6	647	97.7	640	96.7	657	99.2
Region MS Totals	1012	1012	1012	1012	1042	103.0	1091	107.8	1142	112.8	1193	117.9	1220	104.5	1250	107.0	1247	106.8	1263	108.1	1249	106.9	1272	108.9
Northeastern																								
Bonnie Branch MS	662	662	662	662	704	106.3	755	114.0	732	110.6	694	104.8	694	104.8	707	106.8	690	104.2	690	104.2	666	100.6	666	100.6
Elkridge Landing MS	662	662	662	662	719	108.6	791	119.5	879	132.8	716	108.2	711	107.4	691	104.4	668	100.9	657	99.2	651	98.3	673	101.7
Ellicott Mills MS	662	662	662	662	734	110.9	784	118.4	770	116.3	689	104.1	718	108.5	734	110.9	734	110.9	746	109.4	770	112.9	811	118.9
Mayfield Woods MS	682	682	682	682	735	107.8	790	115.8	797	116.9	684	97.4	709	104.0	723	106.0	746	109.4	770	112.9	811	118.9	839	123.0
New Northeast MS	NS	0	0	0	608	91.8	619	93.5	608	91.8	619	93.5	608	91.8	619	93.5	608	91.8	619	93.5	608	91.8	619	93.5
Region MS Totals	2668	2668	2668	2668	2892	108.4	3120	116.9	3178	119.1	2763	83.0	3440	103.3	3474	104.3	3470	104.2	3490	104.8	3549	106.6	3636	109.2
Northern																								
Burleigh Manor MS	662	662	662	662	656	99.1	690	104.2	737	111.3	742	112.1	756	114.2	736	111.2	740	111.8	757	114.4	776	117.2	795	120.1
Dunloquin MS	526	526	526	526	563	107.0	565	107.4	582	110.6	523	99.4	561	106.7	567	107.8	567	107.8	560	106.5	554	105.3	561	106.7
Palapasco MS	662	662	662	662	579	87.5	629	95.0	632	95.5	716	108.2	710	107.3	731	110.4	718	108.5	713	107.7	666	105.1	685	105.0
Region MS Totals	1850	1850	1850	1850	1798	97.2	1884	101.8	1951	105.5	1981	107.1	2027	109.6	2034	109.9	2025	109.5	2030	109.7	2026	109.5	2051	110.9
Southeastern																								
Hammond MS	584	584	584	584	504	86.3	538	92.1	563	96.4	565	96.7	576	98.6	591	101.2	610	104.5	652	111.6	684	117.1	718	122.9
Murray Hill MS	662	662	662	662	736	111.2	728	110.0	797	120.4	622	94.0	692	104.5	720	108.8	758	114.5	770	116.3	823	124.3	865	130.7
Paluxent Valley MS	662	662	662	662	662	100.0	683	103.2	717	108.3	683	103.2	713	107.7	700	105.7	704	106.3	716	108.2	734	110.9	751	113.4
Region MS Totals	1908	1908	1908	1908	1902	99.7	1949	102.1	2077	108.9	1870	98.0	1981	103.8	2011	105.4	2072	108.6	2138	112.1	2241	117.5	2334	122.3
Western																								
Clarksville MS	662	662	662	662	628	94.9	598	90.3	607	91.7	654	98.8	628	94.9	566	85.5	513	77.5	462	69.8	417	63.0	394	59.5
Folly Quarter MS	662	662	662	662	549	82.9	524	79.2	519	78.4	687	103.8	678	102.4	685	103.5	677	102.3	665	100.5	634	95.8	638	96.4
Glenwood MS	584	584	584	584	552	94.5	570	97.6	580	99.3	589	100.9	579	99.1	548	93.8	528	90.4	528	90.4	534	91.4	545	93.3
Lime Kihl MS	701	701	701	701	616	87.9	614	87.6	623	88.9	689	98.3	698	99.6	692	98.7	694	99.0	740	105.6	748	106.7	778	111.0
Mount View MS	662	662	662	662	696	105.1	688	103.9	721	108.9	720	108.8	752	113.6	743	112.2	759	114.7	757	114.4	770	116.3	800	120.8
Region MS Totals	3271	3271	3271	3271	3041	93.0	2994	91.5	3050	93.2	3339	102.1	3335	102.0	3234	98.9	3171	96.9	3152	96.4	3103	94.9	3155	96.5
Countywide Totals	11799	11799	11799	11799	11561	98.0	11980	101.5	12375	104.9	12233	98.2	13129	104.1	13123	104.0	13148	104.2	13265	105.1	13370	106.0	13631	108.0

*A: Includes additions as reflected in FY 2013 CIP for grades 6-8
 *NS: New School proposed in FY 2013 Capital Budget with completion date of 2015

Post-Measures

Aggregate Plan

Chart reflects May 2011 Projections, Board of Education's FY 2013 Requested capacities, and redistricting as listed in June 2011 Feasibility Study.

Capacity Utilization Rates with Proposed FY 2013 Capital Budget Projects - Not Test for APFO

HIGH SCHOOLS - Data for Demonstrative Purposes Only

	Capacity			2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21		2021-22		2022-23		
	2012	2013	2014	2015	Proj % Util.																					
Columbia - East	1400	1400	1400	1400	116.2	83.0	1109	79.2	1144	81.7	1154	82.4	1384	98.9	1484	106.0	1517	108.4	1590	113.6	1609	114.9	1655	118.2	1715	122.5
Oakland Mills HS	1400	1400	1400	1400	116.2	83.0	1109	79.2	1144	81.7	1154	82.4	1384	98.9	1484	106.0	1517	108.4	1590	113.6	1609	114.9	1655	118.2	1715	122.5
Columbia - West	1424	1424	1424	1424	133.1	93.5	1342	94.2	1360	95.5	1400	98.3	1453	102.0	1517	106.5	1571	110.3	1644	115.4	1694	119.0	1690	118.7	1714	120.4
Wild Lake HS	1424	1424	1424	1424	133.1	93.5	1342	94.2	1360	95.5	1400	98.3	1453	102.0	1517	106.5	1571	110.3	1644	115.4	1694	119.0	1690	118.7	1714	120.4
Northeastern	1420	1420	1420	1420	166.1	117.0	1608	113.2	1664	117.2	1728	121.7	1490	104.9	1562	110.0	1598	112.5	1629	114.7	1626	114.5	1609	113.3	1599	112.6
Howard HS	1488	1488	1488	1488	139.4	93.7	1422	95.6	1479	99.4	1492	100.3	1652	111.0	1735	116.6	1781	119.7	1874	125.9	1876	126.1	1905	128.0	1957	131.5
Long Reach HS	2908	2908	2908	2908	305.5	105.1	3030	104.2	3143	108.1	3220	110.7	3142	108.0	3297	113.4	3379	116.2	3503	120.5	3502	120.4	3514	120.8	3556	122.3
Region HS Totals	1280	1280	1400	1400	1488	116.3	1456	113.8	1453	103.8	1425	101.8	1489	106.4	1509	107.8	1567	111.9	1654	118.1	1643	117.4	1676	119.7	1674	119.6
Northern	1360	1360	1360	1360	1468	107.9	1399	102.9	1412	103.8	1449	106.5	1490	109.6	1573	115.7	1624	119.4	1670	122.8	1697	124.8	1712	125.9	1718	126.3
Centennial HS	1615	1615	1615	1615	1240	76.8	1225	75.9	1184	73.3	1216	75.3	1237	76.6	1295	80.2	1327	82.2	1343	83.2	1360	84.2	1348	83.5	1367	84.6
Marriotts Ridge HS	1280	1280	1400	1400	1488	116.3	1456	113.8	1453	103.8	1425	101.8	1489	106.4	1509	107.8	1567	111.9	1654	118.1	1643	117.4	1676	119.7	1674	119.6
Mt. Hebron HS	4255	4255	4375	4375	4196	98.6	4080	95.9	4049	92.5	4090	93.5	4216	96.4	4377	100.0	4518	103.3	4667	106.7	4700	107.4	4736	108.3	4759	108.8
Region HS Totals	4255	4255	4375	4375	4196	98.6	4080	95.9	4049	92.5	4090	93.5	4216	96.4	4377	100.0	4518	103.3	4667	106.7	4700	107.4	4736	108.3	4759	108.8
Southeastern	1220	1220	1220	1220	1332	109.2	1276	104.6	1262	103.4	1247	102.2	1257	103.0	1303	106.8	1349	110.6	1408	115.4	1415	116.0	1441	118.1	1509	123.7
Hammond HS	1220	1220	1220	1220	1332	109.2	1276	104.6	1262	103.4	1247	102.2	1257	103.0	1303	106.8	1349	110.6	1408	115.4	1415	116.0	1441	118.1	1509	123.7
Western	1360	1360	1360	1360	1479	108.8	1458	107.2	1469	108.0	1485	109.2	1482	109.0	1513	111.3	1550	114.0	1552	114.1	1557	114.5	1545	113.6	1543	113.5
Albion HS	1420	1420	1420	1420	1271	89.5	1263	88.9	1252	88.2	1235	87.0	1183	83.3	1187	83.6	1209	85.1	1193	84.0	1171	82.5	1157	81.5	1145	81.5
Glenside HS	1551	1551	1551	1551	1504	97.0	1491	96.1	1510	97.4	1561	100.6	1578	101.7	1627	104.9	1719	110.8	1794	115.7	1854	119.5	1907	123.0	1980	127.7
Reservoir HS	1488	1488	1488	1488	1399	94.0	1340	90.1	1312	88.2	1277	85.8	1233	82.9	1228	82.5	1228	82.5	1191	80.0	1180	79.3	1132	76.1	1072	72.0
River Hill HS	5819	5819	5819	5819	5653	97.1	5552	95.4	5543	95.3	5558	95.5	5476	94.1	5555	95.5	5706	98.1	5730	98.5	5762	99.0	5741	98.7	5713	98.2
Region HS Totals	17026	17026	17146	17146	16729	98.3	16389	96.3	16501	96.2	16669	97.2	16928	98.7	17533	102.3	18040	105.2	18542	108.1	18682	109.0	18777	109.5	18966	110.6