



2020-2024

County Growth Policy

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Introduction

Montgomery County continues to be a county in transition. Long-guided by the vision established in the 1964 General Plan, *On Wedges and Corridors*, the county has strong single-family neighborhoods, connected corridor communities, vital urban centers and protected natural resources. Development in the county is largely, though not entirely, characterized by infill and redevelopment in our urban core and along our transit corridors. Some communities, however, are still experiencing the type of greenfield development that led to the adoption of the county’s Adequate Public Facilities Ordinance in 1973. It is evident that a one-size-fits-all approach to growth management is not sufficient in a transforming county as diverse as Montgomery County. Instead, the county needs a flexible policy that adapts to changing growth contexts to ensure it can remain effective for years to come.

Likewise, the county is faced with many growth-related challenges. Since 2010, the county’s population has grown less than 1 percent annually. Although this is slower than in the past, the county continues to add 8,770 people per year. The county’s demographics are diversifying; increasingly immigration is driving population growth. Incomes are also growing, though not evenly for all populations. Regional housing goals call for Montgomery County to add 41,000 new housing units, affordable and attainable to all income levels, by 2030. The next four years will also be marked by the new challenge of maintaining and growing the local and regional economy within the constraints of the global COVID-19 pandemic.

It is within this framework that Montgomery Planning strives to draft a new growth policy that is sensitive to different growth contexts and their different impacts on the county’s infrastructure. We also have to support other policy priorities, such as the county’s housing targets as well as the General Plan update underway, with its focus on community equity, economic health and environmental resilience. The 2016-2020 Subdivision Staging Policy helped to move the county in that direction. Through a data-driven, stakeholder-informed effort, this update to the policy ventures to complete that transition by asking one simple question:

How can this policy help ensure the adequacy of public infrastructure, to accommodate growth in the amounts, forms and locations desired?

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Chapter 1 Overview

What is the Subdivision Staging Policy?

The Subdivision Staging Policy – one of the many ways that Montgomery Planning helps to preserve the excellent quality of life we enjoy in Montgomery County – is based on the idea that we must have sufficient infrastructure to support growth. Every four years, planners update the Subdivision Staging Policy (SSP) to ensure the best available tools are used to test whether infrastructure like schools, transportation, water and sewer services can support future growth. These policy tools are the guidelines for the administration of the county’s Adequate Public Facilities Ordinance (APFO).

Although commonly referred to as a separate ordinance, the APFO is actually part of Montgomery County’s subdivision regulations found in Chapter 50 of the County Code. Section 4.3.J.2.: “The [Planning] Board may only approve a preliminary plan [of subdivision] when it finds that public facilities will be adequate to support and service the subdivision.” How, exactly, the Planning Board defines and measures adequacy is the focus of the Subdivision Staging Policy.

Chapter 33A of the County Code requires the County Council to adopt an updated SSP by November 15 of the second year of a Council term.

The Subdivision Staging Policy, Master Plans and the Capital Improvements Program

The SSP focuses on matching the timing and pace of development with the availability of public services and facilities. It has significant bearing on the regulatory review process for development applications. The county’s General Plan, as amended by approved and adopted master, sector and functional plans, determines the amount, pattern, location and type of development within the county. The master-planning process is aspirational, creating a long-term vision for our communities. The SSP has a more focused, shorter term view. Its purpose is to evaluate individual proposals for development, determining if the county’s public infrastructure, such as its transportation network and school facilities, can accommodate the demands of additional development.

County master plans identify where growth is appropriate and at what levels or densities this growth should occur. They provide a vision for the future of the county—from the very conceptual level with the General Plan, to much more detailed recommendations with small area plans. For each master plan, Montgomery Planning conducts a high-level analysis of the infrastructure needed to accommodate the master plan’s vision. This analysis is different from the SSP, although it may result in recommended capital improvements to be implemented by either the county government or the private sector.

The Capital Improvements Program (CIP) is the vehicle through which the county increases the capacity of its public facilities to support existing development and future growth. The SSP determines how much additional growth can be supported by existing facilities and those included in the CIP. It can also help prioritize which additional public facilities should be funded in a future CIP.

A County Council resolution will establish the policy tools recommended in this report. The resolution will describe the facility standards that must be met for public infrastructure to be considered adequate. Along with additional recommended changes to the county’s tax code, the SSP resolution can also prescribe methods for generating revenue to ensure the adequacy of the county’s infrastructure to accommodate growth in the amounts, forms and locations desired, as established in the county’s General Plan and master plans. A proposed draft of the resolution appears in Appendix L along with draft amendments to the County Code in Appendices M, N and O.

Summary of Proposed Updates to the Subdivision Staging Policy

This update to the Subdivision Staging Policy focuses heavily on the schools element of the policy. Along with community stakeholders and a new external advisory team, Montgomery Planning evaluated the applicability of every aspect of the existing policy using various growth, land use and enrollment metrics to understand the county's current growth context. The recommendations reflect significant changes in administering the policy for schools infrastructure, including:

- Creating School Impact Areas to reflect the different growth contexts existing in different parts of the county and their impacts on school enrollment.
- Eliminating automatic residential development moratoria for most parts of the county.
- Establishing utilization thresholds to require detailed schools analysis and Planning Board review of applications in areas without automatic residential development moratoria.
- Requiring premium payments for residential development projects served by overcrowded schools in areas without automatic residential development moratoria.
- Revising the de minimis thresholds allowing the approval of applications for small residential development projects in areas under moratoria.
- Retesting school adequacy in review of requests to extend the validity period (the timeframe in which the developer must begin development) of a development approval.
- Setting a limit on the length of time an adequate public facilities decision may remain valid.
- Adjusting impact taxes to be more context sensitive, to encourage investment in desired growth areas, and to better complement important policy priorities related to housing, economic development and resource preservation.
- Updating the student generation rates used to calculate impact taxes and estimate enrollment impacts to make them more context sensitive.
- Updating the calculation of the recordation tax on home sales to make it more progressive and to generate more funding for school construction and affordable housing initiatives.

Substantial changes to the transportation element of the SSP in the 2016 update recognized the limitations of a one-size-fits-all approach and created a structure that was increasingly context sensitive. This 2020 update has more narrowly focused on making small adjustments to the current transportation policy, such as:

- Updating the review of local area transportation conditions to include safety standards.
- Prioritizing travel safety over other transportation impact study mitigation strategies.
- Eliminating review of local area motor vehicle adequacy conditions in areas near Metro stations (red policy areas).
- Increasing the congestion adequacy standard for signalized intersections on transit corridor roadways.
- Introducing a policy area transportation adequacy performance metric to ensure a master plan's consistency with the county's long-range planning goals and objectives.

Chapter 2 Growth Status and Trends

How Montgomery County responds to change will define its future. The two fundamental features of our change are **diversifying demographics** and a shifting **pattern of development**. Once dominated by greenfield development that created single-family housing for nuclear families, the county's growth pattern has shifted to infill development where multifamily housing and non-family households define residential communities. The Subdivision Staging Policy aims to ensure public infrastructure supports our changing communities.

Our demographics and development patterns shape our infrastructure needs. Continued increases in younger populations, along with a growing senior population, create new infrastructure needs and social services demands. Travel, mostly still in single-occupancy vehicles, taxes our roadways and makes it difficult for others to enjoy active modes of transportation, such as bicycling and walking. Older development, built before stormwater controls, degrades our natural environment. The abundance of existing single-family housing and the limited availability of developable greenfields (previously undeveloped land) further challenge our approach to new housing.

Our infrastructure needs reveal opportunities to creatively refine our approach to growth and provide new choices in housing and transportation for all members of the community. A diverse community requires a mix of housing that is attainable for different income levels and household sizes. This housing must be made accessible to jobs and other amenities through timely public infrastructure.

A Transforming Montgomery County

Montgomery County has evolved from a rapidly growing bedroom community providing housing and workers for the region in the 1980s to a county characterized by slower but sustained growth, major employment centers, active urban areas, stable single-family neighborhoods and beautiful rural landscapes. With over one million residents, Montgomery County has entered a mature phase of development with a slower pace of growth, typical of a populous and developed county with limited developable land. While the county's population growth rate is expected to decline even further over the next 30 years, the population is still forecasted to grow from just over one million people in 2015, to 1.2 million by 2045, an increase of over 200,000 people. These additional 200,000 people will require housing, services and the support of public infrastructure.

Demographic trends in the number of people moving in and out of the county, the natural increase in population (births exceeding deaths) and the inevitable aging of county residents determine the make-up of the county's population. Economic forces also shape demographic trends, notably the previous decade's Great Recession and now, the yet-to-be-determined effects of a global health pandemic. Such events alter not only the pace of demographic change, but its character as well.

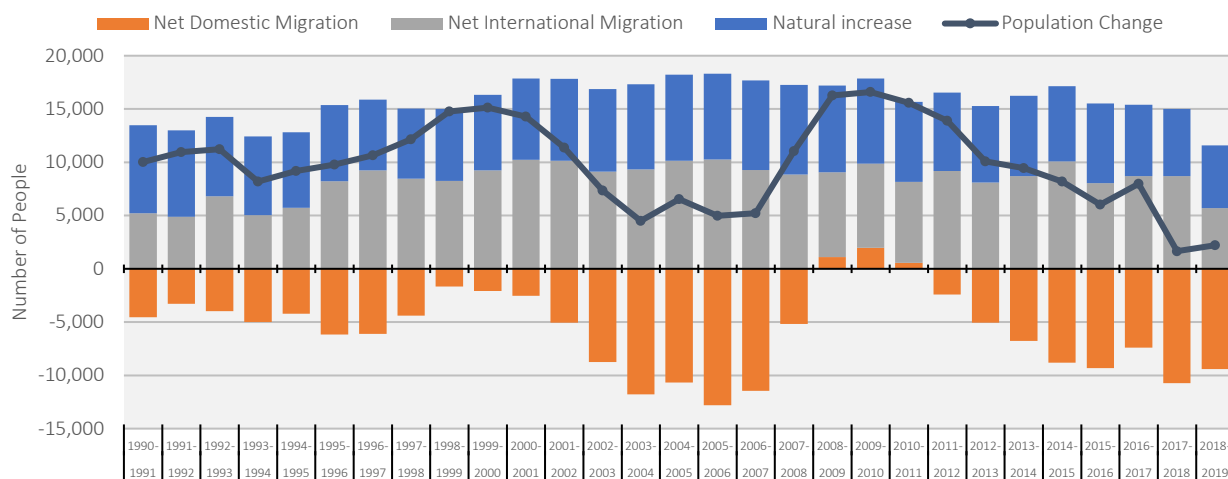
Domestic Migration and Foreign Immigration

Residents moving into Montgomery County from abroad contribute significantly to the county's growth and cultural diversity, averaging 8,240 immigrants per year since 2008. The increase in foreign immigration during this period offset the average net loss of 5,110 residents who relocated domestically, either within the region or elsewhere in the United States. Typically, steady inflows of international migration counter the fluctuating domestic migration patterns, which reflect the strength of the economy and variation in housing prices. Domestic out-migration usually occurs during strong national and regional economies when there are more job and housing upgrade opportunities outside of the county.

Conversely, positive net in-migration has occurred during national economic declines, when the greater Washington, D.C. region offered better opportunities relative to other domestic locations.

In contrast, 2019 marked a precipitous decline in international migration into the county to the lowest level since 1993, following significant recent changes in national immigration policy. An estimated 5,700 immigrants moved into the county during 2018, a drop of 34 percent from the previous year (Figure 1). The duration of foreign immigration shortfalls due to economic uncertainty and stringent immigration policies is unknown, but it is likely that Montgomery County will attract international immigrants at previous levels due to the draw of the county’s existing large foreign-born resident base, recovered economic opportunities, and welcoming social and political environment.

Figure 1: Population Growth by Component Change, 1990-2019.



Source: Population Estimates Program, U.S. Census Bureau.

Steady levels of foreign immigration to Montgomery County over the past 30 years grew the base of foreign-born residents: from 141,166 people in 1990 to 332,198 in 2018. With about one-third of the county’s population foreign-born in 2018, Montgomery County had the highest concentration of foreign residents in the Washington, D.C. region and its percentage ranked fourteenth among counties nationwide. The origins of the county’s foreign-born residents are widely diverse, with 36 percent arriving from Latin America, most commonly from El Salvador, and 36 percent from Asia, typically from India or China.

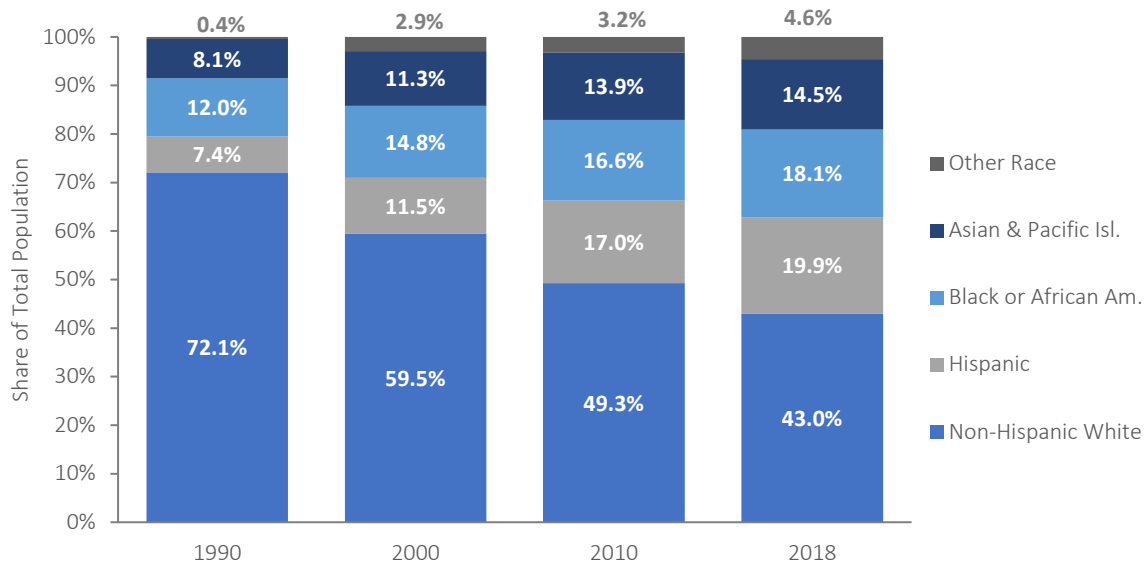
Natural Increase in Population

Another major component of population growth and change is natural increase, or the number of births minus deaths. Births are typically more than double the number of deaths in Montgomery County. Notably, the contribution of natural increase to the county’s population growth lessened since the Great Recession of 2008, as deaths steadily increased while births declined. After peaking in 2007, the number of births in the county had dropped 11 percent to 12,373 in 2018, the lowest point since 1998. At the same time, deaths increased by 13 percent to 6,167 in 2018. Natural increase, registering 6,206 people in 2018, reached its lowest point since the mid-1980s.

Mirroring the nation, Montgomery County, women in the millennial generation are delaying marriage and child-rearing, resulting in a decline in birthrates among women ages 25 to 34, starting in 2007. That

follows a period of climbing rates for this age group since the mid-1990s. The current countywide birth rate of 11.8 births per 1,000 people steadily declined from the peak of 13.9 in 2007 and is approaching the lowest rates since the 1970s recession. According to Montgomery Planning projections, the number of births in the county is expected to slightly decline or plateau in the short term before gradually increasing as fewer young women postpone motherhood and the forecasted number of women of child-bearing age increases over the next 10 years.

Figure 2. Population by Race and Hispanic Origin, 1990 to 2018.



Source: 1990-2010 U.S. Census, 2018 American Community Survey, 1-year estimates, U.S. Census Bureau.

Racial Diversity

In addition to contributing to the population’s growth, births change the racial and ethnic composition of Montgomery County. The combined percentages of Hispanic, African American and Asian births in the county rose from 40 percent in 1990 to 66 percent of all births in 2018. During this period of increasingly diverse people migrating into the county from other places in the nation and abroad, the county’s population of people of color (any group other than non-Hispanic white) increased from 28 percent in 1990 to 57 percent in 2018 (Figure 2).

Continued growth in the number of people of color living in the county is expected, assuming sustained migration patterns and birthrates. In 2010, people of color comprised the majority of Montgomery County’s population for the first time. By 2045, the Maryland Department of Planning predicts 73 percent of the county’s population will be people of color. In contrast, people of color will not comprise the majority of the U.S. population until 2045, according to projections by the United States Census Bureau – 35 years after Montgomery County crossed this landmark.

Aging Population

The large, aging cohort of baby boomers (those born between 1946 and 1964) has remained an enduring change agent locally and nationally, with this group now straddling prime wage-earning years and retirement. About 22 percent of the county’s population were boomers in 2018, about the same percentage as millennial residents (21 percent), born between 1981 and 1996. The millennial generation,

ages 24 to 39 years old in 2020, are poised to replace the boomers as influencers in employment, housing and society.

The leading edge of the boomer generation turned 65 in 2011 and by 2030, all boomers will be age 65 and older. Age projections by the Maryland Department of Planning anticipate the county's 65-plus population increasing from 163,645 residents in 2018 to 249,900 people in 2040, a 53 percent increase. The share of the population aged 65 and older increases from 16 percent in 2018 to 21 percent in 2040, when the diminishing cohort of boomers will be frail elderly, ages 76 to 94 years old.

Boomer housing decisions and their increasing likelihood of death have the potential to transform the county's housing market. Of the 128,580 households in 2018 headed by householders between 55 to 74 years old, 81 percent were homeowners. In 2018, 4 out of 9 households in the county were headed by a baby boomer. A significant number of houses may enter the resale market if and when boomers choose to downsize or relocate in retirement, or if they die. Alternatively, if a significant number of baby boomer households age in place or delay moving out, either by choice or financial necessity, those actions may result in depressed housing turnover in the county, stalling traditional "housing ladder" opportunities for young families with school-aged children to move into the area.

Household Income

Montgomery County remains one of the wealthiest counties in the nation, despite its median income not fully recovering from the Great Recession of 2008. The median household income of \$108,188 in 2018 remains three percent below (-\$3,304) its peak in 2007 after adjusting for inflation. Although slow to recover, the county's 2018 median income is 30 percent above Maryland's median of \$83,242, and 75 percent above the national median of \$61,937. Montgomery County, ranked 16th nationally, is one of the five counties in the Washington, D.C. area rounding out the top 20 list for median household income across the nation.

Despite the wealthy reputation of Montgomery County, tens of thousands of county households report low incomes. In 2018, one out of six households reported incomes less than \$40,000. Median income varies by race and Hispanic origin in Montgomery County. In 2018, non-Hispanic white households had the highest median income among the groups, at \$131,533, which is 22 percent above the countywide median, followed by Asian households at \$115,387, 7 percent above the median. The median income of non-Hispanic white households is about 1.6 to 1.7 times larger than that of households headed by African Americans or Hispanics. The median incomes of African American and Hispanic households are not statistically different, at \$80,484 and \$76,805, respectively.

Pace and Pattern of Growth

Montgomery County's growth expectations are formed by the Metropolitan Washington Council of Governments (MWCOC) Round 9.1 Cooperative Forecast, the most recently completed forecast of population, household and employment growth. Over the duration of the forecast period from 2015 through 2045, efficient land use can provide the residential and commercial buildings needed for future residents and workers. While this is a planning goal, the forecast results indicate that it is ambitious in some areas of the county, even where infrastructure would support it. Better land utilization, evident through larger numbers of households and jobs per acre, will be key to accommodating expected growth.

The pace of growth over the 30-year forecast period varies across jurisdictions in the region, with Montgomery County expected to grow its population by 20.5 percent, its number of households by 23.2 percent and its number of jobs by 30.5 percent. These growth rates translate into average annual rates of 0.7 percent population growth per year, 0.8 percent household growth per year and 1 percent job growth

per year. Within Montgomery County, the cities of Gaithersburg and Rockville have higher forecasted growth rates than the county overall, although their additional people, households and jobs are included in the Montgomery County forecast. Table 1 and Table 2 below show the total forecasted growth and the average annual forecasted growth in Montgomery County and both of these internal municipalities, respectively.

Regionwide,¹ over 1.5 million additional residents are forecasted between 2015 and 2045, a 28.5 percent growth rate, with more than half of them living in either DC, Fairfax County or Montgomery County. This regional growth is equivalent to an average of 51,000 additional people per year.

Table 1. Forecasted Growth, 2015-2045.

Jurisdiction	Population Growth		Household Growth		Job Growth	
	Count	Rate	Count	Rate	Count	Rate
Montgomery County	208,100	+20.5%	87,100	+23.2%	158,600	+30.5%
City of Gaithersburg	22,200	+33.0%	8,800	+35.5%	19,300	+41.5%
City of Rockville	29,800	+44.9%	12,900	+48.9%	19,500	+25.3%

Source: Metropolitan Washington Council of Governments.

Table 2. Average Annual Forecasted Growth, 2015-2045.

Jurisdiction	Population Growth		Household Growth		Job Growth	
	Count	Rate	Count	Rate	Count	Rate
Montgomery County	6,937	+0.7%	2,903	+0.8%	5,287	+1.0%
City of Gaithersburg	740	+1.1%	293	+1.2%	643	+1.4%
City of Rockville	993	+1.5%	430	+1.6%	650	+0.8%

Source: Metropolitan Washington Council of Governments.

Forecasted Geographic Growth Pattern

Increasingly, households and jobs are expected to gravitate to “Activity Centers.” Activity Centers are locations across the region with “existing urban centers, traditional towns, and transit hubs.”² A map of the designated Activity Centers in Montgomery County is shown in Figure 3 below.

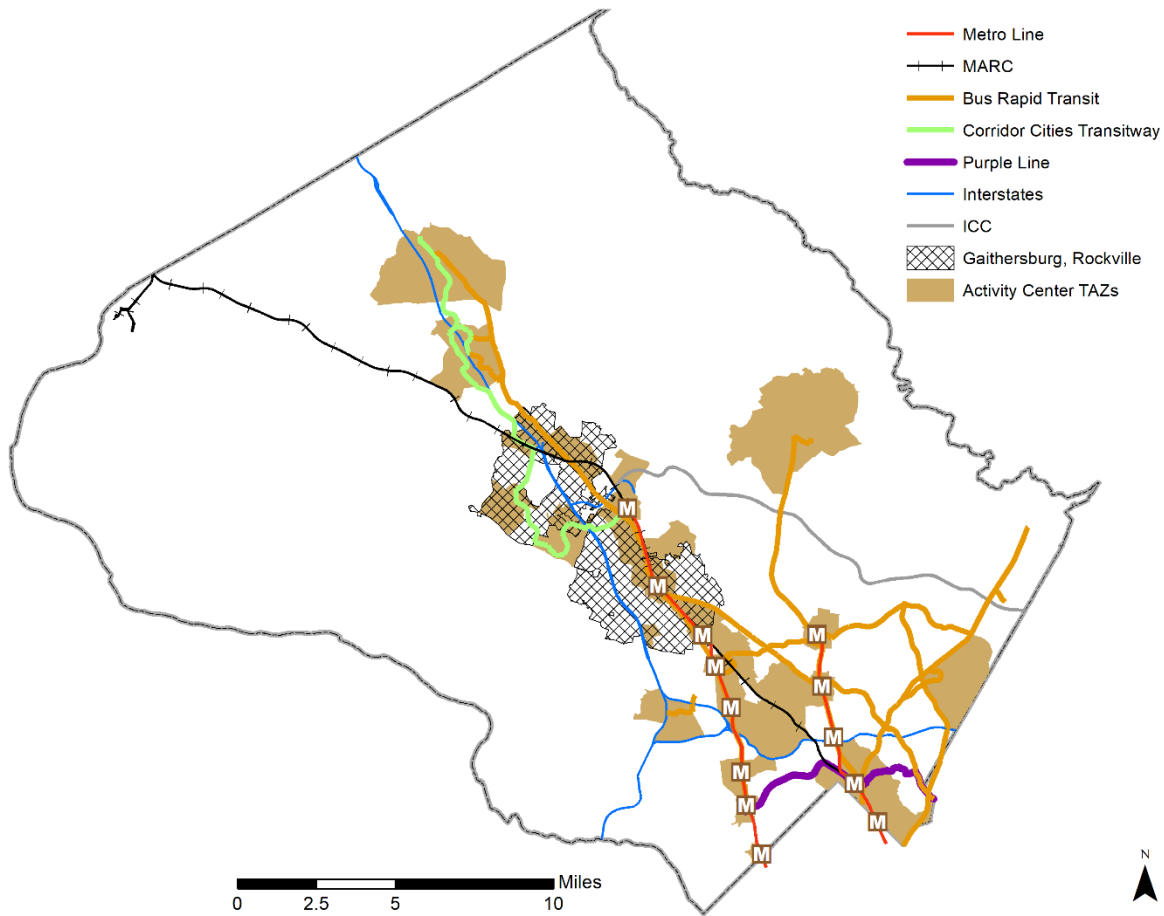
The MWCOG [Region Forward Coalition](#) established a target for the region to capture 50 percent of new households and 75 percent of new commercial square-footage in regional Activity Centers.³ The MWCOG Round 9.1 Forecast results place 64 percent of regionwide household growth and 76 percent of regional job growth over the 30-year forecast period in Activity Centers across the MWCOG member jurisdictions.

¹ The forecast region includes the following jurisdictions outside of Montgomery County: Washington, DC, Arlington County, City of Alexandria, Prince George’s County, Fairfax County, City of Fairfax, City of Falls Church, Loudoun County, Prince William County, City Manassas, City of Manassas Park, Charles County, Frederick County (including Frederick City).

² MWCOG

³ MWCOG

Figure 3: Map of Montgomery County Activity Centers.



Source: Research and Special Projects Division, Montgomery Planning, 2020.

The areas forecasted to attract the majority of both household and job growth in Montgomery County mostly coincide with the county’s Activity Center locations. The MWCOG Round 9.1 Forecast results show 76 percent of the county’s overall household growth and 80 percent of its job growth occurring within the county’s Activity Centers, leading to an overall increase in the shares of county households and jobs located in Activity Centers. As of 2015, just 32 percent of county households were in Activity Centers, but by 2045, 40 percent of households are forecasted to be located in Activity Centers. As of 2015, 58 percent of county jobs were in Activity Centers, but by 2045, 63 percent are forecasted to be in those areas. The table below summarizes this projected trend.

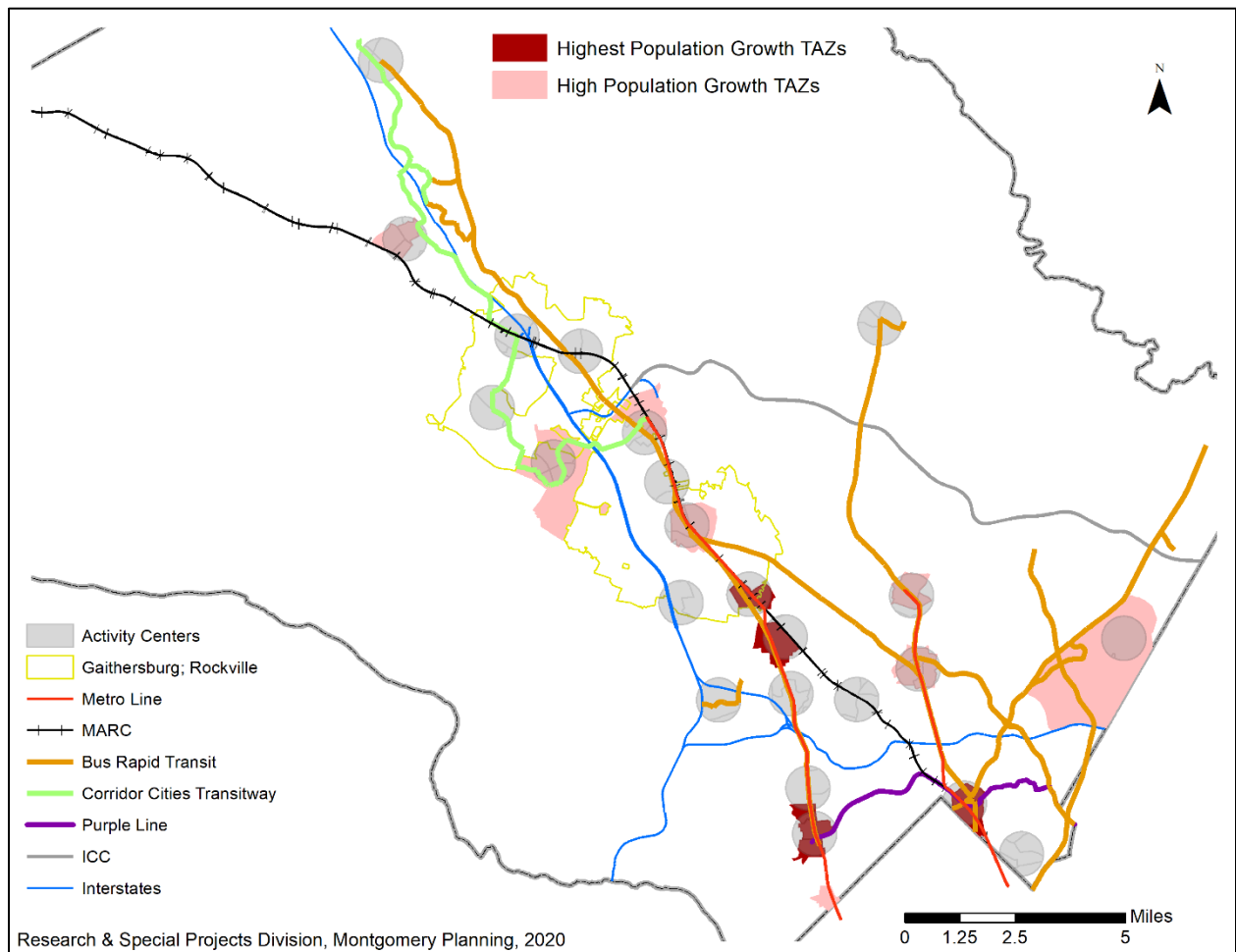
Table 3. Forecasted Shares of Households and Jobs in Activity Centers.

Location	2015 Household Share	2045 Household Share	Household Share Increase	2015 Jobs Share	2045 Jobs Share	Jobs Share Increase
Activity Center	32.0%	40.0%	8.0%	58.0%	63.0%	5.0%
Not Activity Center	68.0%	60.0%	-8.0%	42.0%	37.0%	-5.0%

Source: Metropolitan Washington Council of Governments.

This geographic pattern of expected growth in Activity Centers follows the county’s major transportation and commercial corridors, specifically I-270 and its urbanized or urbanizing central nodes, nearly all of which are in close proximity to major transit facilities. The pattern stems from not only the lack of vacant, developable greenfield land across the county but from master planning that has strategically located capacity for development around current and planned transit. Ten of the county’s 12 identified population growth hotspots overlap with a designated Activity Center, and seven of the eight job growth hotspots overlap with an Activity Center. Both population and job growth hotspots are defined by their relatively high per-acre growth forecasted at the geographic level of a Transportation Analysis Zone (TAZ).⁴ The maps in Figure 4 and Figure 5 show these population and job growth hotspots, respectively.

Figure 4. Population Growth Hotspots.



Source: Research and Special Projects Division, Montgomery Planning, 2020.

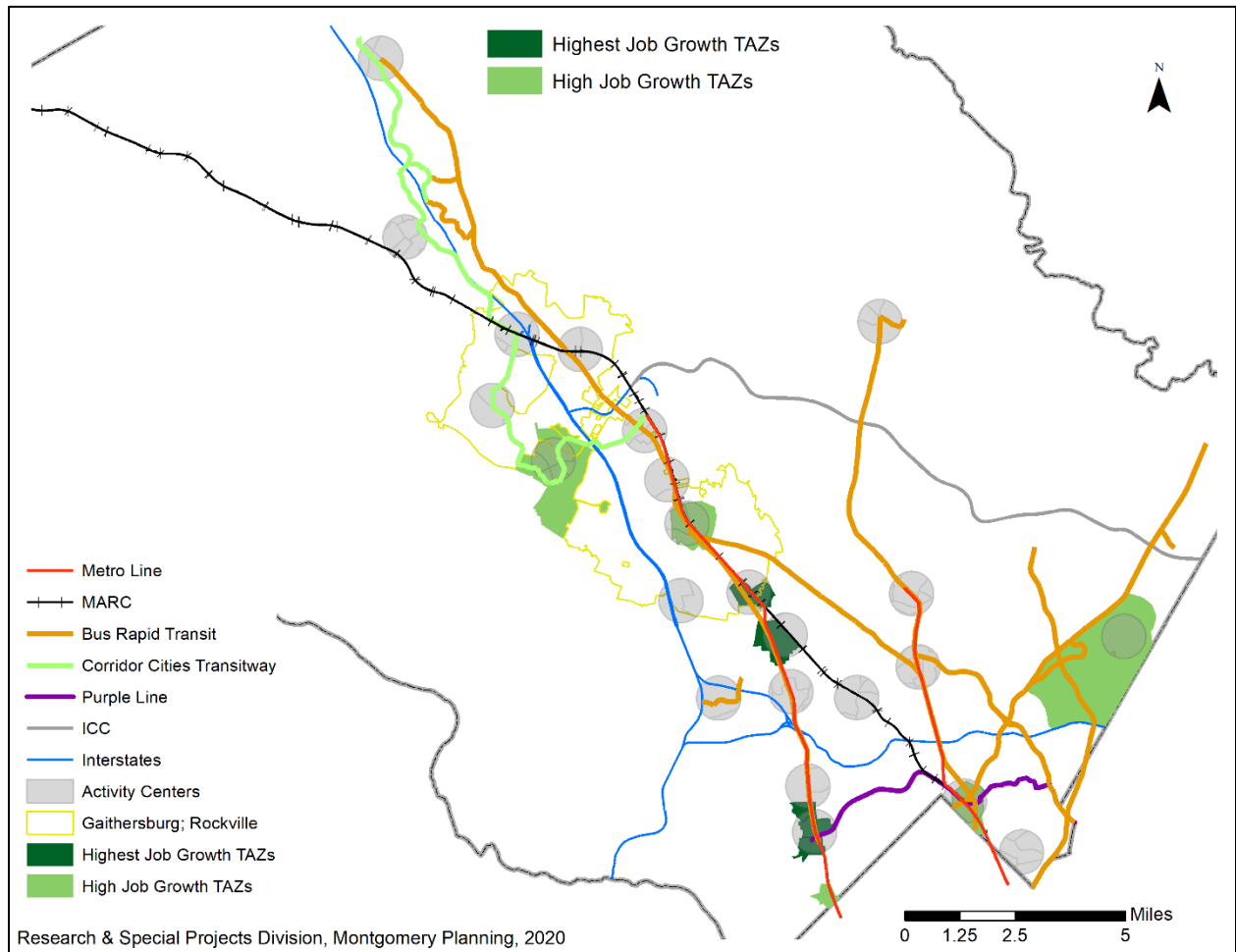
Forecasted Population Growth

While the vast majority of TAZs in the county are forecasted to have growth of fewer than 0.71 persons per acre, relatively high-growth hotspots are those with forecasted population growth above 2.56 persons per acre. The highest-growth population hotspots shown in the map in Figure 4 have forecasted

⁴ The forecast is produced for that level of geography for transportation modeling purposes.

population growth above 18 persons per acre during the 30-year forecast period – a threshold of more than twice the mean, which is just over seven persons per acre (the median is just 1.16 persons per acre). These highest-growth hotspots are around existing high-capacity transit hubs with commercial centers, including the Metro stations in downtown Bethesda, downtown Silver Spring, White Flint and Twinbrook. The other hotspots surround Metro stations at Friendship Heights and in downtown Rockville, the future U.S. Food and Drug Administration (FDA) campus at White Oak, the western Germantown Activity Center and the Activity Center known as the Research and Development Village west of the Shady Grove Metro station.

Figure 5. Job Growth Hotspots.



Source: Research and Special Projects Division, Montgomery Planning, 2020.

Forecasted Job Growth

High job-growth hotspots include TAZs shown in Figure 5 that have forecasted increases above 3.33 jobs per acre over the 30-year forecast period. The very highest growth TAZs identified include those with forecasted increases above 15.1 jobs per acre. The mean forecasted job growth is 4.18 jobs per acre while the median is just 0.9 per acre. The highest-growth hotspots are again around existing high-capacity transit stations with commercial centers, including the Bethesda, White Flint and Twinbrook Metro stations. The other job growth hotspots are the Silver Spring, Friendship Heights, and Rockville Metro

stations, as well as at the future FDA campus at White Oak, and the Activity Center known as the Research and Development Village west of the Shady Grove Metro station.

The forecasted growth hotspots shown above align with the county’s and the region’s long-term planning goal of concentrating new residential and commercial development within Activity Centers served by transit. This transit-oriented planning policy responds to the lack of vacant, developable land in the county, in addition to environmental and economic objectives. For example, recent master plans such as those completed for the White Flint, Shady Grove and downtown Bethesda areas promote more concentrated development in and around Activity Centers, allowing for more workers and residents per acre. Despite best efforts to plan for efficient development patterns, market forces play a large role in the timing and location of development. As such, the growth forecast does not assume all planned land use will automatically come to fruition or that desired trends will prevail, but instead relies on parameters informed by rigorous data analysis.

Growth Policy Implications

The growth forecast suggests that significant numbers of households and jobs will locate away from Activity Centers and transportation infrastructure even while Activity Centers are forecasted to experience high rates of growth. The following table shows the number of forecasted households and jobs inside and outside Activity Centers by 2045.

Table 4. Forecasted Increases in Households and Jobs Relative to Activity Centers.

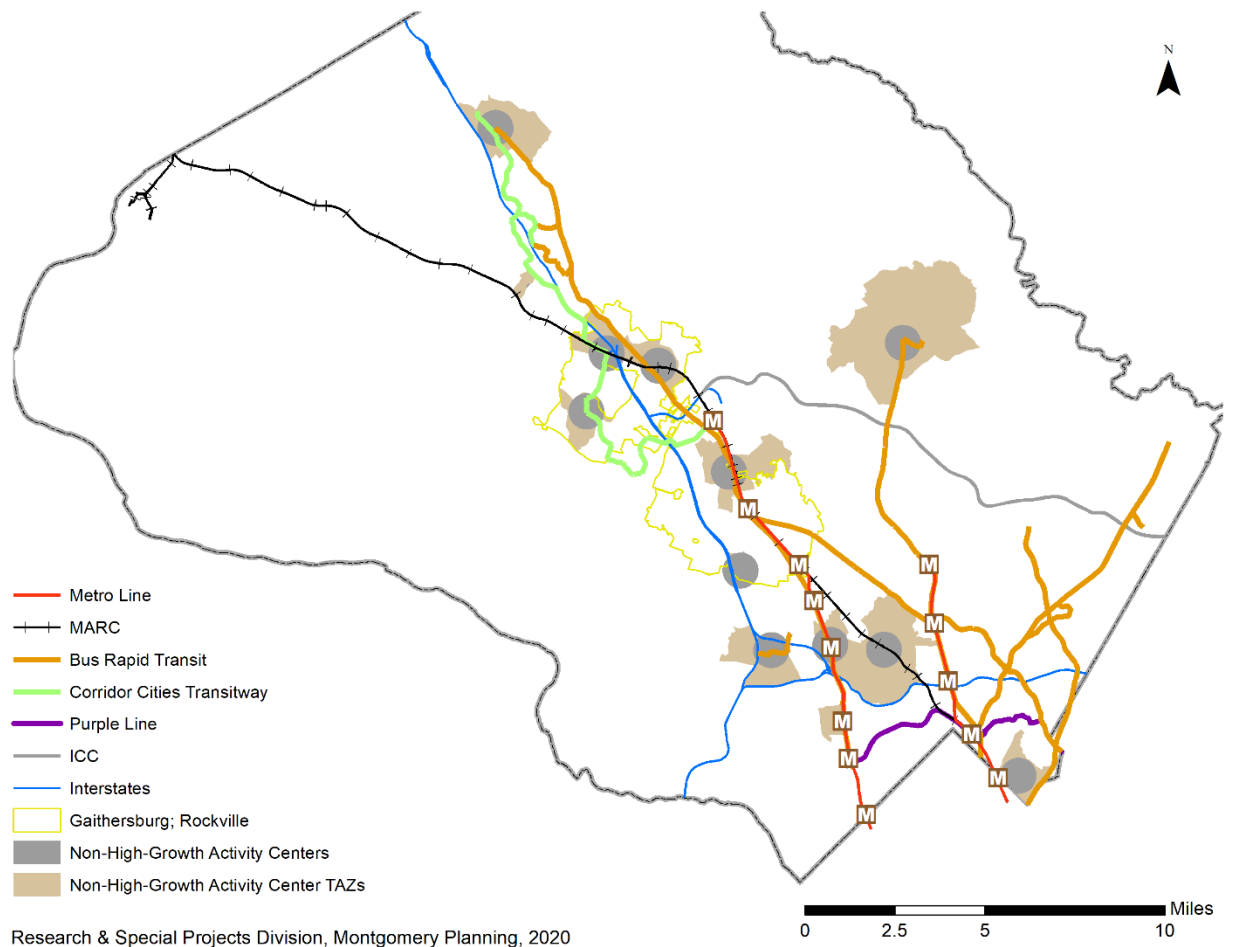
Location	2015 Households	2045 Households	Household Increase	2015 Jobs	2045 Jobs	Jobs Increase
Activity Center	119,936	184,760	+64,824	301,716	427,581	+125,865
Not Activity Center	254,864	277,140	+22,276	218,484	251,119	+32,635

Source: Metropolitan Washington Council of Governments.

Even with 76 percent of the county’s household growth and 80 percent of its job growth forecasted in Activity Centers, tens of thousands of additional households and jobs are forecasted to be away from transit-oriented hubs and town centers. There will still be far more people living and working away from these areas in 30 years, and households away from Activity Centers will still far outnumber those in them.

In addition, certain Activity Centers are not among the forecasted growth hotspots at all, as seen in Figure 6. Most strikingly, two existing Metro station locations are included in this group, owing to their low-density residential surroundings: Takoma Park and Grosvenor. Several town centers are also in this group, but they currently lack high-capacity transit access: Kensington, two Rockville/North Bethesda Activity Centers, multiple City of Gaithersburg Activity Centers, Olney and Clarksburg.

Figure 6. Activity Centers that are not Growth Hotspots.



Source: Research and Special Projects Division, Montgomery Planning, 2020.

Over the course of the next 30 years, efficient use of land will continue to be essential to provide the homes and commercial spaces needed to accommodate county residents and workers. County master planning efforts are oriented toward this reality. Although progress towards more transit-oriented growth is evident from the MWCOG Round 9.1 Forecast, the forecast results also reflect likely constraints to creating more mixed-use communities with higher numbers of households and jobs per acre, even in locations where existing or planned transportation infrastructure present the opportunity for it.

Infrastructure Conditions

Transportation Infrastructure

Periodically, the Planning Department releases a Mobility Assessment Report (MAR) that summarizes the trends, data, and analysis results used to track and measure multi-modal transportation mobility conditions in Montgomery County. The purpose of this report is to provide information to residents and public officials regarding the state of the county's transportation system, showing not only how the system is performing, but also how it is changing and evolving. The increasing availability of transportation system performance information from both internal and external data sources, coupled

with advances in geospatial analytical tools, provides the resources to understand the changing nature of how people are using the county's transportation systems.

The [most recent version of the MAR](#) was released in 2017. This document provides information on an array of topics pertinent to travel in the county, including:

- trends in per capita and total annual vehicle miles traveled;
- measures of vehicular congestion and travel time reliability for different areas of the county;
- metrics related to intersection performance or level of service in different areas of the county;
- identification of the county's most significant intersection bottlenecks;
- concentrations of pedestrian activity;
- measures of bicycle activity and bicycle accessibility; and
- public transportation ridership trends and route coverage.

The next version of the MAR is anticipated to be released in late 2020. This document will build on the transportation system performance information provided in earlier versions of the MAR with a focus on an expanded reporting on observed mobility information pertaining to the major travel corridors within the County.

Public School Facilities

The current SSP defines adequacy for public school facilities from the perspective of facility utilization. Each year, Montgomery Planning receives projected enrollment and capacity data from Montgomery County Public Schools (MCPS) to conduct an Annual Schools Test that determines whether a school or cluster⁵ will have adequate seat capacity five years in the future. The results, once adopted by the Planning Board in June, indicate which school or cluster service areas will be in residential moratorium (a temporary halt to new residential project approvals in a particular area) for the upcoming fiscal year due to insufficient school capacity.

Student Enrollment

MCPS enrollment has been increasing steadily since the mid-1980s, and the growth pattern has been particularly strong since 2008. According to MCPS,⁶ the enrollment growth in recent years can mainly be attributed to high kindergarten capture rates and entry of students from outside the system. A kindergarten capture rate is the ratio between the number of kindergarten students and the number of babies born to county residents five years earlier. This rate has increased since the 2006 school year, likely due to economic factors and the implementation of all-day kindergarten programs. Entry into MCPS through migration has also continued to exceed withdrawals in the past decade, resulting in annual net increases of enrollment.

The county is now experiencing a period of growth at secondary schools due to the large elementary enrollment increases in the past decade. However, the resident birth rates have been on a downward trend since 2014, and MCPS' enrollment forecast projects that the decline in resident births will result in a decline in the kindergarten population, which in turn will slow the growth of the total enrollment as students age from grade to grade.

⁵ A school cluster is defined as a high school and all the middle and elementary schools that feed into that high school.

⁶ Montgomery County Public Schools (2019). *Superintendent's Recommended FY2021 Capital Budget and the FY 2021-2026 Capital Improvements Program*.

Program Capacity

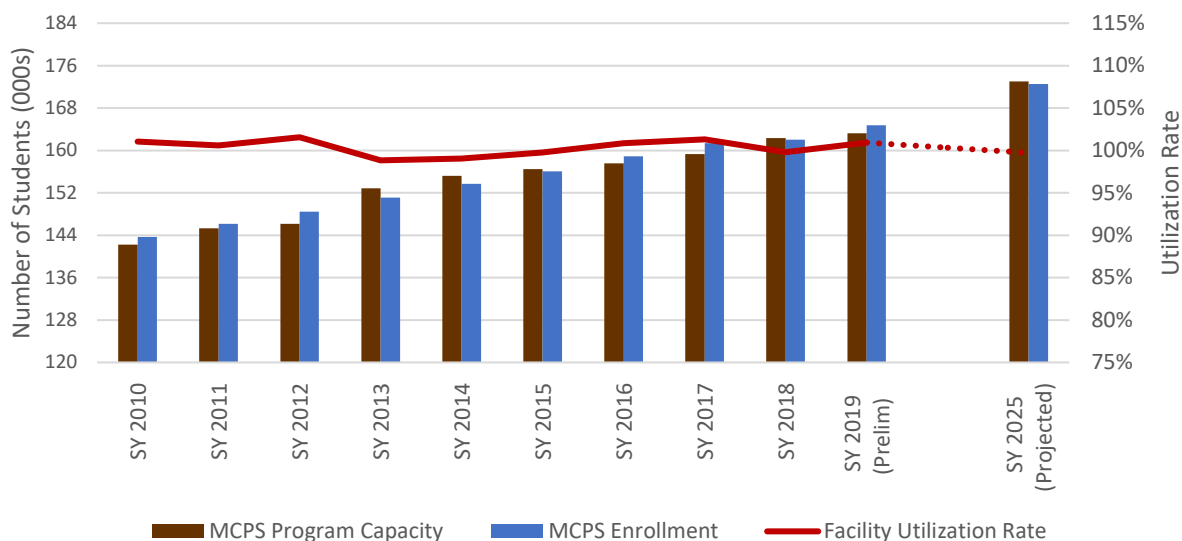
MCPS determines school capacity by the space requirements of educational programs and student-to-classroom ratios, referred to as “program capacity.” This measure of capacity differs from state standards, which are based on square footage and classroom ratios. Several educational program initiatives in the county have necessitated more classroom and support space, including the introduction of full-day kindergarten, expansion of Head Start and pre-kindergarten programs, and the increase of Class Size Reduction schools.⁷

In the 2019-2020 school year, MCPS operated 135 elementary schools, of which 69 are Class Size Reduction schools; 40 middle schools; and 25 high schools. This is an increase of 35 elementary schools, 19 middle schools and 6 high schools since 1983. The newly adopted Capital Improvements Program includes additional school capacity through new school openings, major capital projects and classroom additions at all three school levels over the next six years. However, funding for capital projects has not been sufficient to keep up with enrollment growth, creating a backlog of school capacity projects.

Facility Utilization

Facility utilization measures the program capacity of a school facility in relation to the number of students enrolled in the school. It is calculated by dividing student enrollment by program capacity. Countywide, the utilization rate of all school facilities combined has remained relatively stable. When looking at schools across all levels collectively, as seen in Figure 7, the total program capacity of the county has generally been able to keep up with the increasing enrollment. The collective utilization rate has therefore remained between 98 and 102 percent throughout the past decade.

Figure 7. Countywide School Facility Utilization Trend - All School Levels.



Source: Montgomery County Public Schools, Division of Capital Planning

However, when looking at facilities by each school level, the utilization rates show larger ranges of variability, and patterns that differ between elementary, middle and high school levels. Together, the county’s elementary school facilities had the highest utilization rates in the earlier years of the last

⁷ Class Size Reduction schools include Title I and focus schools, which have the class sizes in kindergarten through grade 2 reduced to address the needs of schools most heavily affected by poverty and English language deficiency.

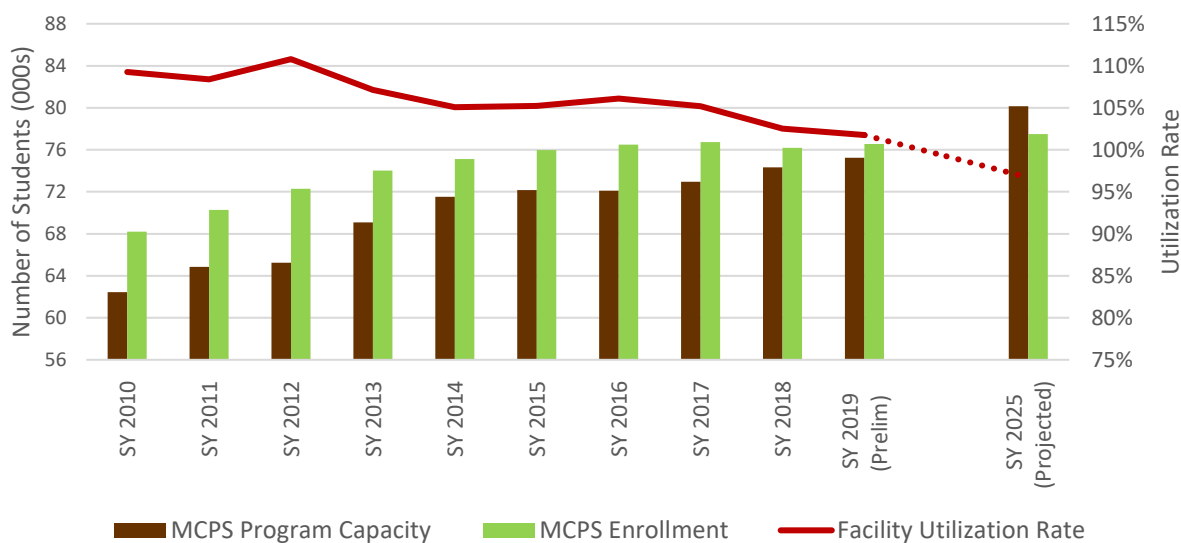
decade but have been on a downward trend since 2012. Middle school facilities collectively have had a growing utilization rate that remained relatively low. The county’s high school facilities have had a utilization rate above 100 percent since 2017 that has been increasing in a slightly delayed but similar pattern as the middle school level utilization rate.

The contrast in utilization rates between facilities becomes more pronounced when looking at schools individually. When considering an efficient utilization range of 80 to 100 percent, and a moderately overutilized range of 100 to 120 percent,⁸ the utilization rates for facilities countywide have stayed within an efficient or moderately overutilized range at each school level. At individual school facilities, utilization rates have varied widely, with some schools operating at high utilization rates beyond 120 percent and some at below 80 percent.

Elementary Schools

In the early 2010s, elementary schools had high utilization rates as a result of the high kindergarten capture rate and strong enrollment growth patterns. Countywide elementary school utilization reached a peak of 110.8 percent in 2012 and has since been decreasing through a steady increase in capacity. If the enrollment growth continues to slow as forecasted, and capacity additions are completed as planned, the countywide elementary school facility utilization rate is projected to be below 100 percent by the 2025 school year (see Figure 8).

Figure 8. Countywide Elementary School Facility Utilization Trend.



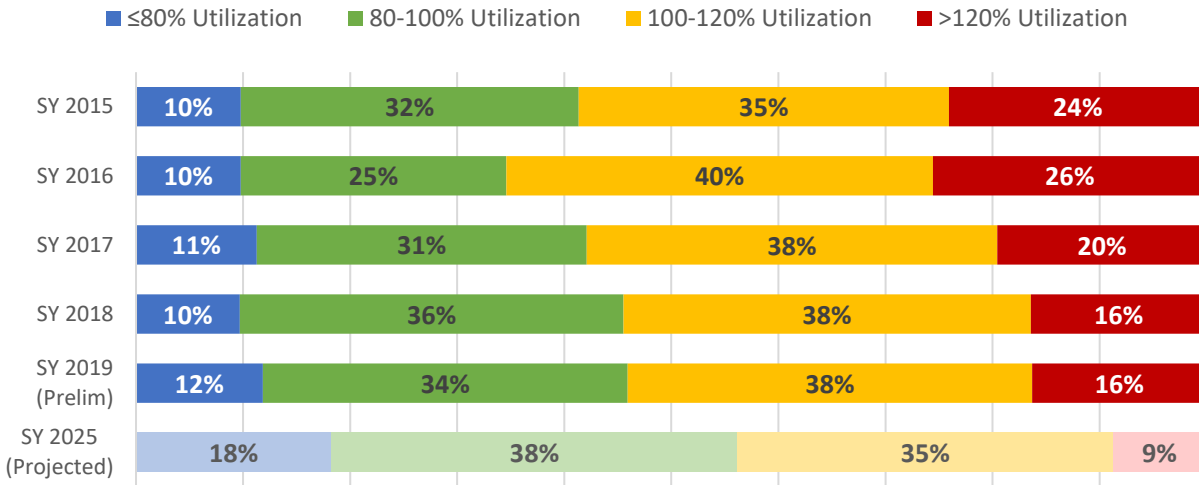
Source: Montgomery County Public Schools, Division of Capital Planning

While the countywide utilization rate of elementary schools has been improving in recent years, there are a considerable number of schools operating at either highly overutilized or underutilized rates. Figure 9 shows a breakdown of the percentage of elementary schools operating at each utilization level. Currently, nearly three quarters of elementary schools are operating within an efficient or moderately overutilized

⁸ MCPS considers a range of 80 to 100 percent of program capacity to be an efficient facility utilization range within which schools should generally operate. The current SSP, on the other hand, considers a projected facility utilization of 120 percent, when combined with a seat deficit that exceeds a certain threshold, to be inadequate for new development in the absence of a capacity solution planned within the timeframe of the Annual School Test.

range, and projections show little change in that share. The percentage of elementary schools operating in highly overutilized facilities, which was around a quarter of all schools in 2015, is declining and projected to be at less than 10 percent in the 2025 school year. The percentage of schools operating at underutilized rates, on the other hand, is projected to increase.

Figure 9. Individual Elementary School Facility Utilization by Range.

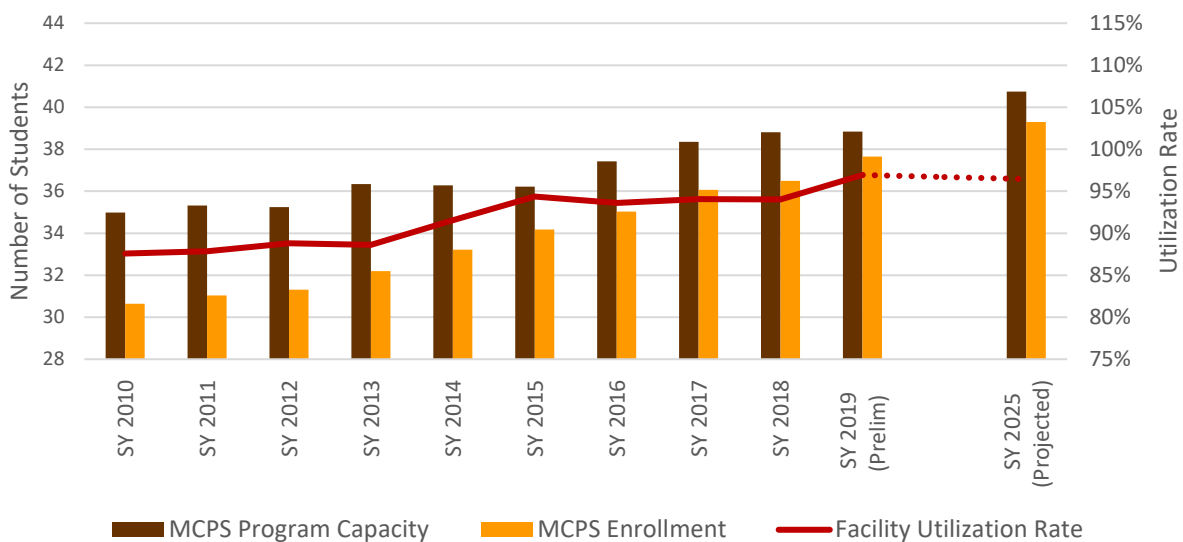


Source: Montgomery County Public Schools, Division of Capital Planning

Middle Schools

As the student population that amplified the elementary school enrollment in the past decade has been progressing from grade to grade, the countywide utilization rate for middle schools has increased. Despite this trend, middle school facilities have the lowest countywide utilization rate of all school levels and the rate is projected to remain within an efficient range through the 2025 school year (see Figure 10).

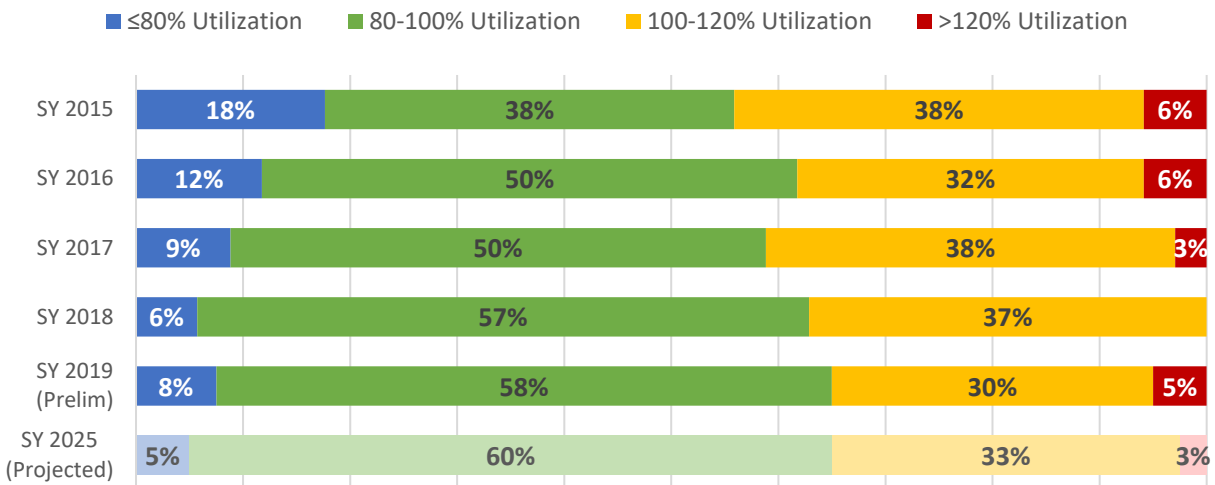
Figure 10. Countywide Middle School Facility Utilization Trend.



Source: Montgomery County Public Schools, Division of Capital Planning

At the middle school level, 88 percent of individual facilities are operating within an efficient or moderately overutilized range. Furthermore, while the countywide middle school utilization rate has seen little to no change since 2015, the percentage of schools operating at an efficient utilization level has continued to increase. In the 2025 school year, 93 percent of middle schools are expected to be within the efficient or moderately overutilized ranges (see Figure 11).

Figure 11. Individual Middle School Facility Utilization by Range.



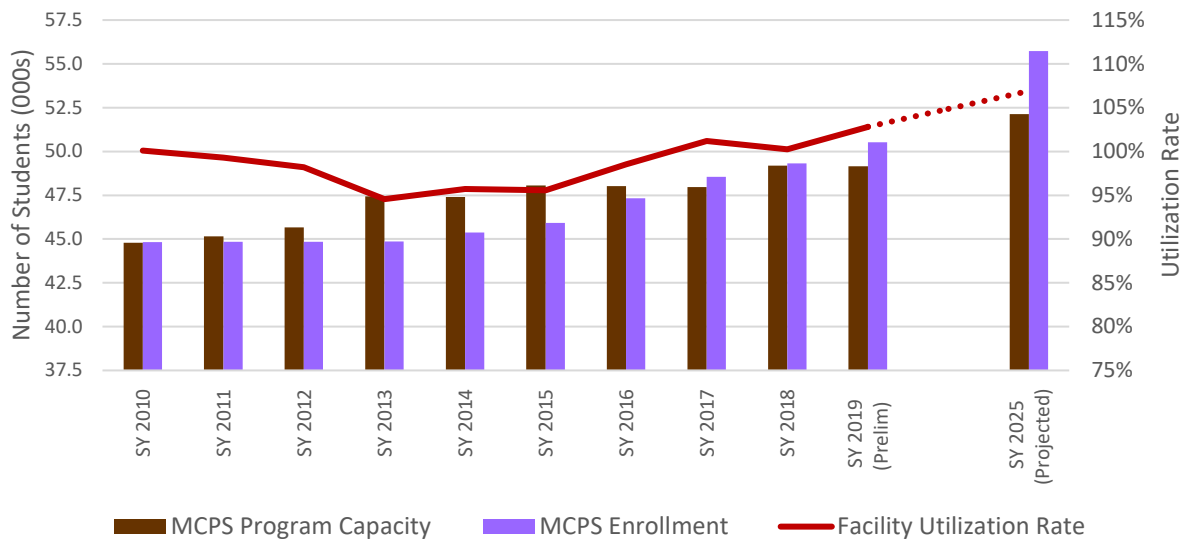
Source: Montgomery County Public Schools, Division of Capital Planning

High Schools

The countywide high school utilization rate has been on the rise since 2013, reflecting the impact of the surge in elementary student enrollment growth in the 2000s. Several approved capacity solutions are scheduled to be completed within the current capital budget period, but because of delays to a few crucial projects,⁹ the high school utilization rate is projected to increase further by the 2025 school year (see Figure 12).

⁹ While the capacity increase between SY 2019 and SY 2025 includes the capacity solutions planned for Damascus, John F. Kennedy, Poolesville, Seneca Valley, and Walt Whitman high schools, it does not reflect the addition at Northwood high school nor the reopening of Crown and Charles W. Woodward high schools.

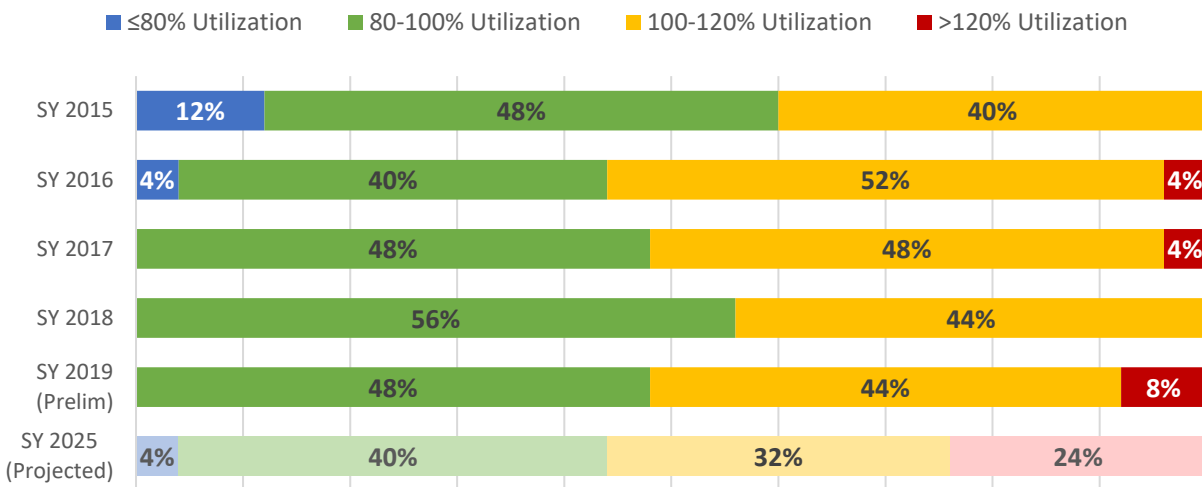
Figure 12. Countywide High School Facility Utilization Trend.



Source: Montgomery County Public Schools, Division of Capital Planning

Individually, high schools are the most likely to have efficient or moderately overutilized rates. In 2018, all high schools were within this range, with the majority being efficiently utilized. However, 8 percent of high schools were highly overutilized in 2019, and that percentage is expected to increase to 24 percent by the 2025 school year (see Figure 13).

Figure 13. Individual High School Facility Utilization by Range.



Source: Montgomery County Public Schools, Division of Capital Planning

Water and Sewer Infrastructure

Montgomery County plans and coordinates for water supply and wastewater disposal services through the *Ten-Year Comprehensive Water Supply and Sewerage Systems Plan* (Water and Sewer Plan), which ensures that existing and future water supply and wastewater disposal needs are coordinated in a manner that:

- is timely and cost-effective
- is well integrated with land use planning efforts
- protects the health, safety and welfare of residents, businesses and institutions
- protects the quality of the environmental resources of the county, the state and the Chesapeake Bay region
- helps to improve the quality of the environmental resources of the county, state and region

The Water and Sewer Plan is a functional master plan prepared by the Montgomery County Department of Environmental Protection and adopted by the County Council. The plan, which was last updated in 2018, has a ten-year planning horizon for providing water and sewer services throughout Montgomery County. As such, it provides an important link between the county's land use and development planning and the actual construction of the water supply and sewerage systems needed to implement that planning effort.

The Water and Sewer Plan establishes policies that support the goals and objectives of the county's current General Plan and its related local area sector and master plans. These policies emphasize:

- the use of public water and sewerage systems along higher-density urban and suburban development areas
- the use of individual, on-site wells, and septic systems throughout lower-density suburban, rural and agricultural areas

The plan's policies are implemented in part by assigning [water and sewer service area categories](#) for all properties within the county. The service area categories:

- designate whether properties are intended to be developed using (and are eligible for) public or private water and sewer service
- provide staging elements or a sequence for planning and providing public water and sewer service

The Water and Sewer Plan provides projections for the future needs of water and sewerage systems, projections which result from land use planning studies, demographic projections, legal mandates and policy requirements. It addresses these needs using a variety of approaches, such as:

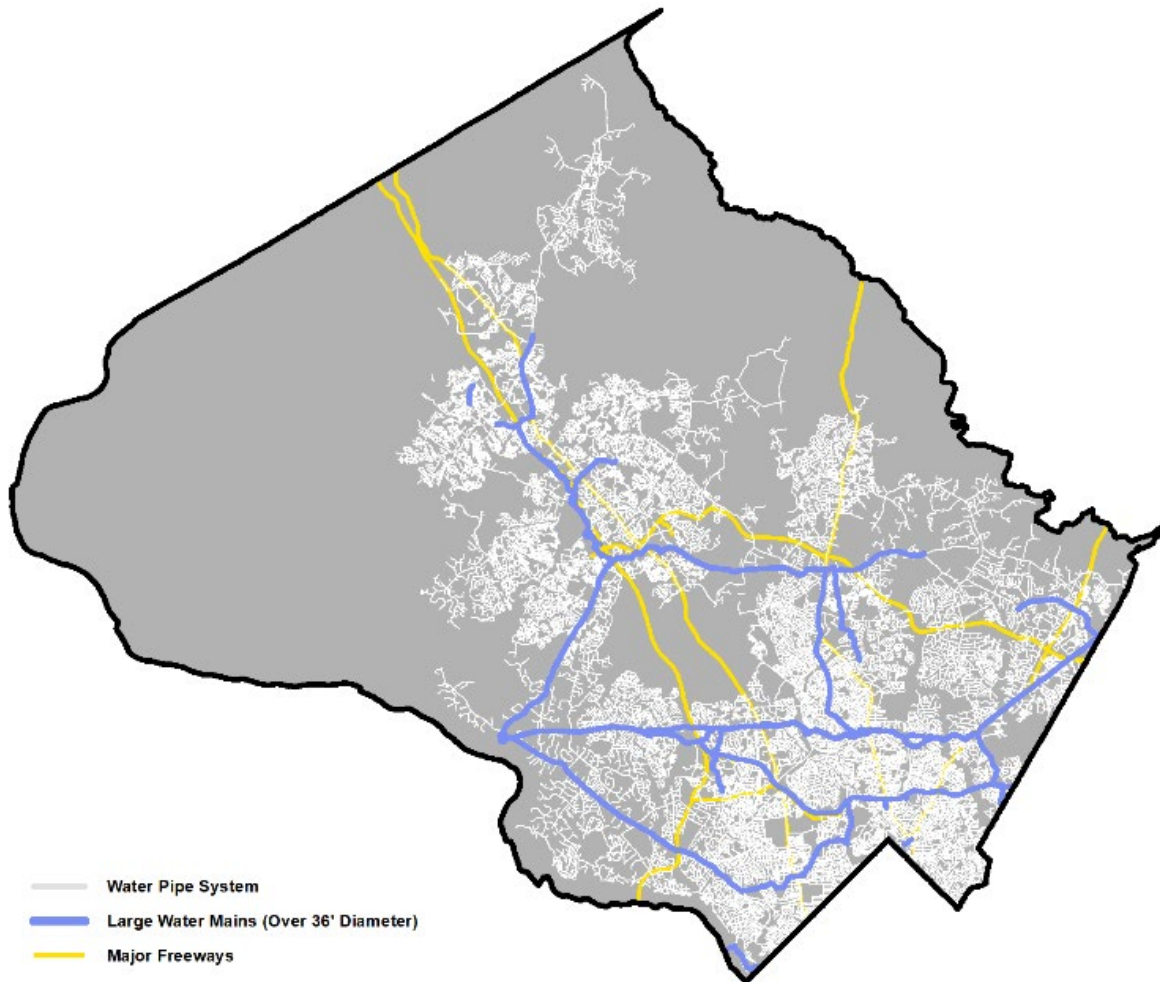
- new, expanded or replacement water and sewer facilities, such as transmission mains, pumping stations, storage tanks or treatment plants
- expansion of existing water or sewerage systems, or the use of alternative systems, to address communities experiencing public health problems from failing wells or septic systems
- new or updated programs and service policies that address issues like changes in sanitary service technology, support for new development concepts, and protection from undesired sanitary system expansion or on-site system use

The Washington Suburban Sanitary Commission (WSSC) delivers drinking water from the Potomac and Patuxent Rivers to consumers in Montgomery County. Filtration plants, a series of pumping facilities, transmission mains, and elevated storage facilities deliver potable water (safe to drink) by gravity. Once this water is used, the sewerage system collects and conveys it to treatment plants within the county, but primarily to the Blue Plains Treatment Facility in the District of Columbia. The system provides for fire suppression and a potable water supply, and treatment of wastewater before it is discharged into our rivers and the Chesapeake Bay. The county's water distribution and sewerage collection system is aging,

and maintenance and replacement of this infrastructure is vital for continued adequate public water and sewer service for existing and future development. More than 88 miles of these pipes extend through Montgomery County. Figure 14 and Figure 15 show the county's water pipe and sewer pipe infrastructure, respectively.

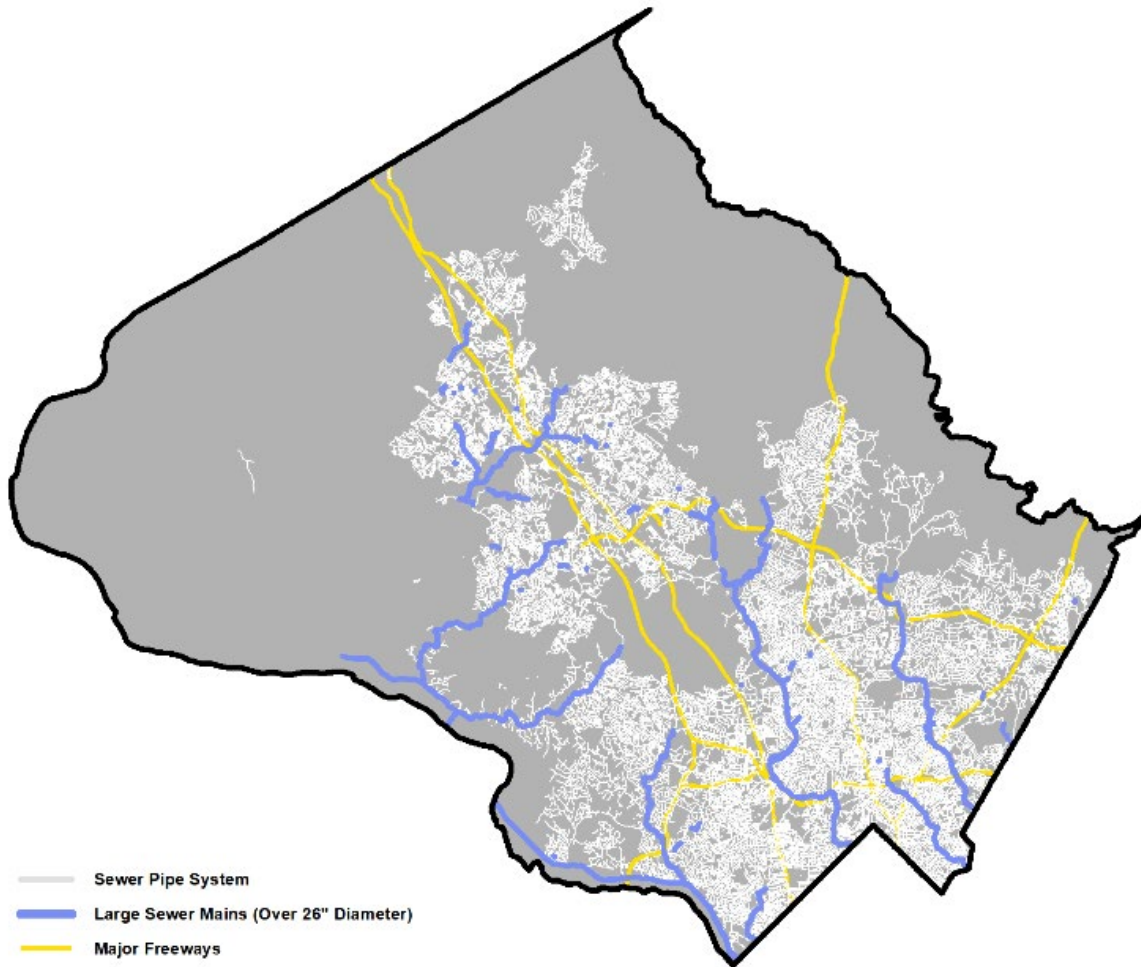
Accommodating the county's future growth through redevelopment within existing urban areas presents excellent opportunities for improving and funding water supply and wastewater treatment infrastructure without having to extend water and sewer service beyond the current service area. Redevelopment and infill add water and sewerage services charge-based revenue and users to the existing infrastructure, allowing more funds to be used for system repairs and replacement. If the existing infrastructure in these centers is insufficient to handle the projected increase in development, major improvements may also be part of the redevelopment process.

Figure 14. Water Pipe Infrastructure.



Source: Montgomery Planning, 2020.

Figure 15. Sewer Pipe Infrastructure.



Source: Montgomery Planning, 2020.

Parks Infrastructure

With the scarcity of developable land and the increase in density in urban areas, park planning in area master plans has become more critical to creating livable and healthy communities. The recent trend in real estate development in these areas is to replace lower-density residential development or commercial development with higher-density residential and mixed-use buildings where economically feasible and allowed by zoning. The significant increase in density makes parks and open spaces the “outdoor living rooms” for many of these new communities. Without space for large private backyards, public parks and trails play an increasingly important role in improving public health and promoting social interaction and social equity. Access to urban parks is a critical element of achieving one of the primary county goals: promote community welfare and quality of life.

Cultures and climates differ all over the world, but people are the same. They'll gather in public if you give them a good place for it.

—Jan Gehl, Architect and Urban Designer

A growing population creates increased demand for parks and open space, while also increasing demand for other uses, such as housing. This competition for limited urban land results in a shortage of space to meet the park needs of the expanding urban population. With the increased competition for land, a mix of uses and an integration of infrastructure should occur within the same site. Integrating parks and recreation areas with other services can reduce costs by providing local amenities within walking distance, reducing impervious surfaces and recharging groundwater supply, and removing pollutants from water. Sustainability requires integration of efforts and preventive measures to avoid wasting resources. A level of coordination among different county agencies, including alignment of objectives, development schedules, and dedicated funds will be required.

The heightened focus on parks in our most populated areas resulted in many urban park recommendations in area master plans. In 2018, the Maryland-National Capital Park and Planning Commission approved and adopted the [Energized Public Spaces Functional Master Plan \(EPS Plan\)](#), developed by Montgomery Parks. This plan maps the score of walkable access to recreational and open space amenities and helps prioritize public space needs more equitably countywide. The goal is to provide a balance of public spaces for social gathering, active recreation and contemplative relaxation in the county's densely populated areas. For more information on the methodology and outcomes of this plan—visit Montgomery Parks' [webpage](#) and [interactive storymap](#).

Land acquisition is the greatest challenge for implementing these new urban parks. While we can expect some new urban parkland to be created through the regulatory review process for proposed development, small properties present a challenge in terms of accommodating development and onsite open space. Even with current and newly proposed zoning to encourage the dedication of parkland through the development review process, some new urban parks will need to be directly purchased with public funds. Urban parkland acquisition can be very challenging as property owners often wish to pursue development to maximize their investment rather than sell at the current market value, resulting in very few willing sellers in urban areas. Limited public funding presents further challenges to acquiring land for urban parks since it tends to be more expensive than in less dense areas.

New zoning tools are sometimes used to facilitate the creation of public parkland in urban areas. For instance, the [Bethesda Downtown Sector Plan](#) includes many proposals for new parks. The Bethesda Overlay Zone, created in connection with the sector plan, includes a funding mechanism tied to new development called the Park Impact Payment (PIP) (see page 12 of the [Bethesda Downtown Implementation Guidelines](#)). The PIP, a per-square-foot fee to compensate for uses that add density above mapped zoning requirements, such as assisted living and daycare facilities, supports the acquisition, design and development of new urban parks identified in the sector plan. Additional requirements in the overall zoning code and the Bethesda Overlay Zone support the creation of privately-owned public spaces through density transfer, open space requirements, and other tools. The creation of similar tools for funding parks acquisitions should be explored in upcoming master plans to create opportunities for new urban development.

In addition to acquiring new parkland, Montgomery Parks must address the capacity of our existing facilities to serve a growing population. Along with sector and master plans, the *EPS plan* and specific park studies, the [Parks, Recreation, and Open Space Plan \(PROS\)](#), which is updated every five years, uses data to identify parks and recreation needs and proposes service delivery strategies.

Natural Resource Conditions

Environmental Resources

Climate change is a challenge that must be addressed to secure a healthy and sustainable future for the county. The negative impacts of increasing greenhouse gas emissions and resulting climate change are diverse and far-reaching affecting human, pet, wildlife, and plant health, heat waves, built and natural habitats and ecosystems, storm frequency and intensities, flooding, stormwater runoff and stream erosion, air and water pollution, rising temperatures, urban heat island effects, and droughts. Climate change-related economic impacts are also on the rise due to increased energy costs; infrastructure failure and damage; impacts to outdoor labor, recreation, tourism and food production; and loss of ecosystem services and the value they embody. Disadvantaged communities are disproportionately affected, and all indicators point to this trend continuing. Unless addressed, climate change threatens to undermine the attainment of all other goals and objectives.

Montgomery County is an integral part of the Washington, D.C. metropolitan area and its decisions affect the overall health and sustainability of the region. Meeting and maintaining environmental standards remain ongoing challenges, especially in light of continued growth and accelerating climate change. This is true for water and air quality standards.

As the county continues to develop, environmental health, sustainability and equity are becoming increasingly important factors in deciding how we grow. Currently, environmental issues associated with growth and development are handled through existing planning and regulatory processes. With continued growth, however, clean water and air will continue to increase in importance as vital components of achieving overall sustainability.

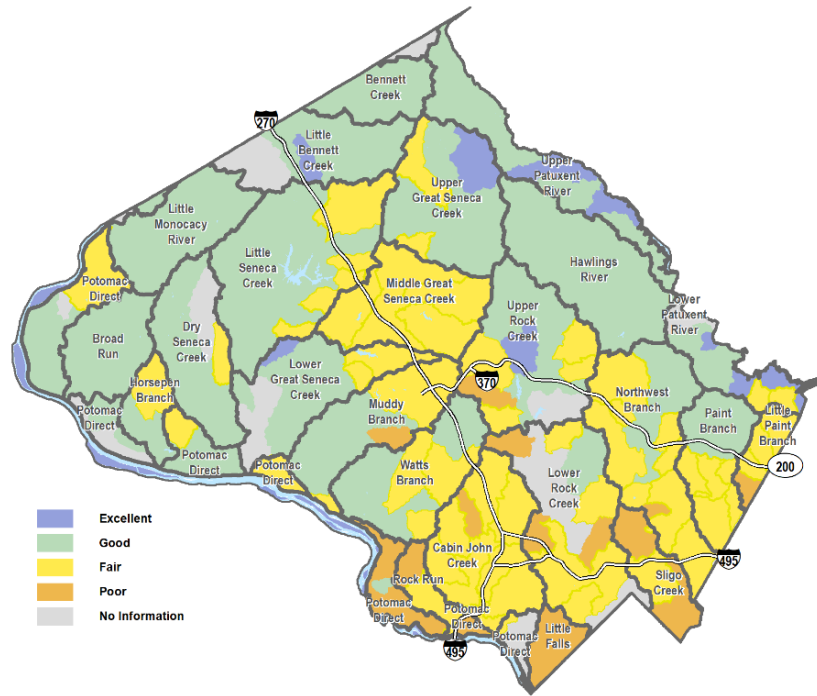
As a result, Montgomery Planning's master plan updates and development review efforts pursue ways to optimize the environmental values that redevelopment and infill development can provide, such as reduced impervious cover and runoff, and increased shading and cooling. The updated General Plan will be an important resource to guide those processes in the future to ensure future development can contribute to environmental sustainability.

Water Quality

The steady decline of stream conditions and water quality in the county are due, in part, to decreased natural vegetated land cover, which provides natural water filtration and pollutant removal, as well as increased impervious surfaces and associated stormwater runoff. A general pattern of declining stream health, as measured by stream biological and habitat indicators, follows the county's pattern of development (see Figure 16). The worst conditions are in areas developed before strict requirements were in place to reduce pollution and runoff.

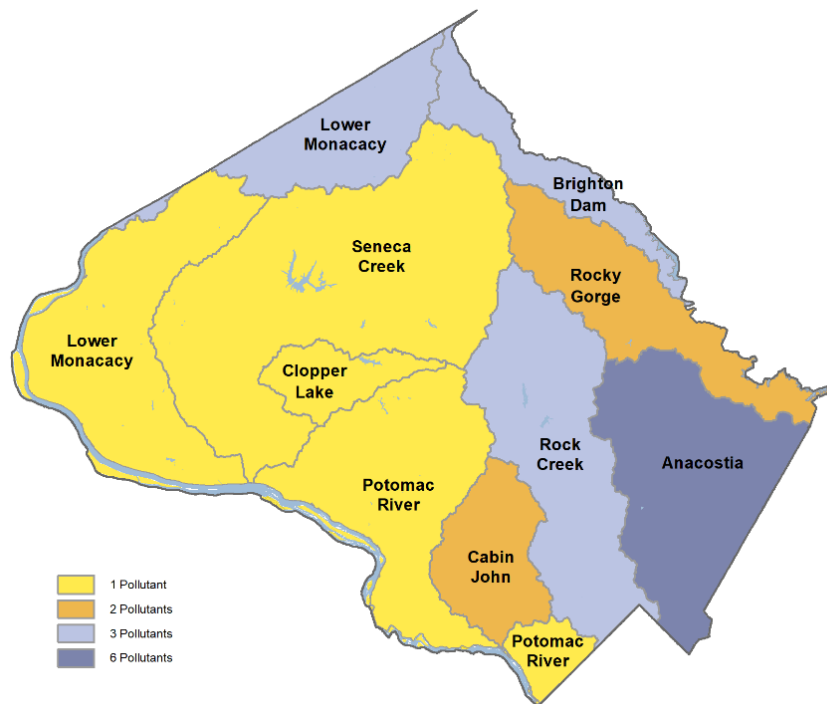
Degraded water quality, as measured by levels of chemical and other pollutants, led to new state and federal regulations to improve degraded streams to meet water quality standards. These requirements are known as Total Maximum Daily Loads—the maximum amount of a pollutant that a water body can receive and still meet water quality standards. Figure 17 shows the number of pollutants that need to be reduced under approved Total Maximum Daily Loads within the major watersheds of the county.

Figure 16. Stream Conditions, 2011-2015.



Source: Montgomery Planning, 2020.

Figure 17. Restricted Pollutants by Watershed, 2018.



Source: Montgomery Planning, 2020.

Jurisdictions throughout the Chesapeake Bay watershed need to make significant commitments and investments to reduce pollutants to meet Total Maximum Daily Load requirements and continue to meet them while the population and employment bases continue to grow.

The federal government regulates storm drains and the pollutants they discharge to waterbodies in local jurisdictions through the Municipal Separate Storm Sewer System (MS4) permit process. The permit conditions apply to the county's urbanized areas draining through county-maintained stormwater conveyances and require the county to develop and maintain watershed and stormwater management programs and plans to meet the permit conditions. Implementing and updating master plans, stormwater management, development review, and natural area protection, enhancement and restoration efforts are guided by the results of the Montgomery County Department of Environmental Protection (DEP) and Montgomery Parks' monitoring and analyses and MS4 Permit, watershed and Total Maximum Daily Loads implementation plans. Finding ways to mitigate, reduce, and adapt to climate change is increasingly vital to the success of these plans and programs, and to improving water quality throughout the county.

To help reduce the costs of meeting Total Maximum Daily Loads and increase the range of implementation options available to local jurisdictions, the state is looking at how pollutant trading and growth offset programs might work to counterbalance increased pollution from new development, especially in greenfield areas. Pollution trading is an approach governmental regulatory agencies and private companies use to reduce pollution by providing economic incentives to reduce net pollutant discharges. After Total Maximum Daily Load limits or "caps" are set, groups that foresee exceeding these caps may purchase credits from groups that have not exceeded their discharge levels. Under growth offset programs, additional pollutants resulting from new development are "offset" by a commensurate reduction of the same pollutants elsewhere in the same watershed. Pollution offsets can exist for any kind of polluting materials if an equal and direct benefit can be established. The county, in turn, is considering how it might use these programs to achieve its pollutant control and growth goals.

Since potential for future greenfield development in the county is limited, expected growth is planned to be accommodated mostly through redevelopment and infill (the development of vacant parcels and redevelopment of underused parcels within areas that are already largely developed). Infill development will allow most of the expected increases in population to occur within developed areas that already have transportation, water and sewer infrastructure. Redevelopment affords the potential for socio-economic enhancements as well as environmental improvements over existing conditions. It offers opportunities to improve stormwater management, tree canopy and other green spaces in older developed areas that are environmentally impaired.

Air Quality

As with water quality, continued growth and climate change negatively affects the county's air quality. Ongoing monitoring tracks the county's and the region's compliance with air quality standards. Both the county and the region have not yet attained ground-level ozone air quality standards.

In 2009, the county adopted a *Climate Protection Plan* that specified a number of goals and recommendations. Achieving these goals is more challenging than expected due to accelerating greenhouse gas levels and the complexity and expense involved in reduction efforts. As a result, it is increasingly important to seek new ways to enhance air quality in growth-related decisions.

In December 2017, Montgomery County declared a climate emergency and accelerated goal to be carbon neutral by 2035. In doing so, the county recognized the increasing threat of climate change and, in responding to it, the opportunity to reimagine and enhance our quality of life. Efforts to reduce, mitigate

and adapt to climate change will not only improve our air and water quality, but also strengthen our economy, enhance our well-being and develop greater resilience.

In July 2019, Montgomery County launched a planning process to develop prioritized actions and strategies to meet the county's greenhouse gas emissions reduction goals. The county intends to finalize a *Climate Action and Resilience Plan* by early 2021 that will provide a roadmap to achieve carbon neutrality and will also include recommendations for adapting to a changing climate.

As with water quality, redevelopment provides opportunities to increase local and regional air quality, through:

- improving transit options,
- decreasing vehicle use,
- increasing walkability and bikeability,
- creating more energy-efficient buildings, and
- incorporating green spaces and green buildings as integral parts of communities.

Forest and Urban Tree Canopy

In both local design and large networks of green spaces, forest and tree canopy are essential elements of quality of place and livability. Trees increase energy efficiency, reduce heat island effect (built up areas that are hotter than nearby rural areas), improve air quality, extend pavement life, enhance pedestrian-vehicular safety, boost real estate values, make retail areas more attractive, absorb water pollution and carbon emissions, and slow stormwater runoff and erosion. Large forested areas provide the additional benefits of ensuring clean and healthy streams and rivers, offering an abundance of recreational opportunities, and maintaining a diversity of natural areas that connect our communities.

While forest and non-forest tree canopy provide critical shading and cooling benefits that help mitigate climate change effects, they are at the same time suffering from those effects and their ability to continue to provide critical benefits is decreasing. This makes it important to both increase forest and non-forest tree canopy, and manage these vital resources to safeguard their health, resilience and adaptability in the face of climate change.

Recent analysis shows forest losses and forest planting have kept the overall forest cover area at around 30 percent of the county's land area. Much of that cover is situated in our parks, along stream valleys, and in rural areas. An additional 20 percent of the county is shaded by non-forest street trees, individual trees and small groves in local parks and on private property. Urban areas, however, continue to experience tree canopy losses and the shading and cooling benefits they provide.

While our combined forest and tree canopy of almost 50 percent is commendable, our urban centers are often a sea of buildings, roads and parking lots with very little tree cover to shade hot pavement, filter air and water, and provide relief to those who live and work in these areas. Redevelopment in traditional centers is an opportunity to improve urban tree canopy, air and water quality, and our quality of life.

Chapter 3 Policy Name Recommendation

County Growth Policy

Montgomery County’s Adequate Public Facilities Ordinance (APFO) can be found in [Chapter 50 of the County Code](#), which pertains to the subdivision of land. Section 4.2 outlines the requirements for Planning Board approval of a preliminary plan of subdivision. Among other things, the Board is required to find that “public facilities will be adequate to support and service the area of the subdivision.” Likewise, Section 4.3 further explains that the Planning Board may only approve a preliminary plan when it finds that public facilities, including schools, will be adequate to support and service the subdivision.

Chapter 33A of the County Code lays out the purpose of the Subdivision Staging Policy (SSP) and its relation to the APFO. The SSP provides guidance to the Planning Board and other county agencies for the administration of the APFO. Essentially, the SSP defines infrastructure adequacy and how it is measured.

But Chapter 33A also states that the SSP is “an instrument that facilities [sic] and coordinates the use of the powers of government to limit or encourage growth and development.” Therefore, the SSP and related laws and regulations are intended to be about more than limiting development or ensuring adequate infrastructure. The policy is expected to help guide the county’s growth to desired areas and desired forms. In this way, the SSP truly is the County Growth Policy.

*Recommendation 3.1: Change the name of the Subdivision Staging Policy to the County Growth Policy.*¹⁰

As the county’s growth context continues to change from greenfield development of new subdivisions to infill and redevelopment of existing sites, and with increased recognition of growth’s role in achieving other policy priorities related to housing, sustainability and the economic health of the county and region, the policy must be about more than staging the development of new subdivisions. It must be a tool that helps ensure growth comes in the form, amount and locations we need and desire, including existing built sites that will be redeveloped for new uses. A change in name will better identify the full scope of this policy and make it more understandable, and perhaps more relevant, for all stakeholders.

¹⁰ Note: from this point forward in this document, we will refer to the updated Subdivision Staging Policy as the County Growth Policy.

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Chapter 4 Schools Element Recommendations

Here are the key objectives of the County Growth Policy¹¹ school elements.

- Shifting the focus of the policy from limiting growth in areas with inadequate school infrastructure, which has had limited effectiveness in addressing school capacity issues, to **ensuring the adequacy of school infrastructure to help achieve desired patterns and types of growth.**
- Being **adaptable to the different growth contexts and desired growth patterns** within the county.
- **Supporting other county policy priorities**, such as attainable housing, economic development, and sustainable growth.

To achieve the policy shift stated above requires an understanding of the county's current growth context and trends as presented in Chapter 2 and several of the appendices to this report. Unlike when the Adequate Public Facilities Ordinance (APFO) was first conceived 50 years ago, new development is generally not the greatest burden on school infrastructure adequacy today. Most of the county is experiencing school enrollment growth due to changing demographics and turnover of existing single-family neighborhoods (that is, families with children buying homes from households without children). Smaller parts of the county with high amounts of development are distinguished by:

- neighborhoods experiencing redevelopment or infill resulting in multifamily units that do not generate many students on a per unit basis, and
- neighborhoods still experiencing greenfield development of new single-family units that attract families with school-age children.

These differences suggest that **the policy cannot take the form of a one-size-fits-all solution but instead must be adaptable to different growth contexts and desired growth patterns.**

Some stakeholders have argued that regardless of the cause of school overcrowding (the primary measure of school infrastructure adequacy), the APFO requires the Planning Board to limit development that imposes any additional burdens on inadequate infrastructure. However, the county can use the County Growth Policy to identify when and where the enrollment burden from new residential development is too great for our schools to bear, and when and where it is not.

This recommended County Growth Policy strikes a balance between multiple county policy priorities, in addition to ensuring the adequacy of our school infrastructure. The policy supports the county's economic growth and helps the county meet future demand for housing attainable to people of all income levels, due to population and job growth, by providing criteria for when and where to allow new residential development. This policy also recognizes that an effective adequate public facilities ordinance cannot allow any and all development to occur without regard to infrastructure adequacy or without requirements to mitigate infrastructure impacts.

¹¹ Note: Consistent with [Recommendation 3.1](#), we will refer to the updated 2020-2024 Subdivision Staging Policy as the County Growth Policy. We will continue to refer to the current policy, last updated in 2016, as the Subdivision Staging Policy, or SSP.

To assist in updating the school elements of the policy, Montgomery Planning formed the Schools Technical Advisory Team (STAT). The STAT was composed of a mix of representatives from community organizations and community members who responded to Montgomery Planning’s call for applicants in September 2019. The STAT group met six times during the first five months of the project, with members serving as links between their communities and Montgomery Planning staff to share knowledge of neighborhoods, diverse perspectives and relevant information. During those meetings, Montgomery Planning prepared data including alternate student generation rates based on neighborhood and parcel attributes that were reviewed with the STAT and used to inform many of the recommendations provided in this update. Graphs highlighting some of these data are provided in Appendix G. Further information about the STAT are included in Appendix J. Additional perspectives pertaining to the schools element of the County Growth Policy and possible ways to address school capacity issues are identified in Appendix F.

School Impact Areas

The current Subdivision Staging Policy (SSP) schools element generally treats all areas of the county the same. There is one set of adequacy standards applied countywide and one set of school impact tax rates based on countywide student generation rates.¹² In some situations, the Planning Board has adopted SSP-related procedures that deviate from a countywide approach. For instance, to estimate the school enrollment impacts of master plans and development applications, Montgomery Planning utilizes regional student generation rates that are based on aggregations of adjacent school clusters. While these regional rates have demonstrated some differences between three regions of the county, some people contend that the regional classifications are arbitrary and less a predictor of a new housing unit’s enrollment impacts than the attributes of the unit (type, size, cost, etc.).

For this update, Montgomery Planning recommends an approach that groups neighborhoods **based on the character of their growth and that growth’s impact on schools**. This is in contrast to the current countywide approach as well as the regional approach that groups neighborhoods based on their assignment to a school cluster and then their proximity to each other. This new context-sensitive approach assembles neighborhoods into School Impact Areas based on the neighborhood’s:

- amount of new and planned housing.
- type of new housing (single-family vs. multifamily); and
- amount of school enrollment growth.

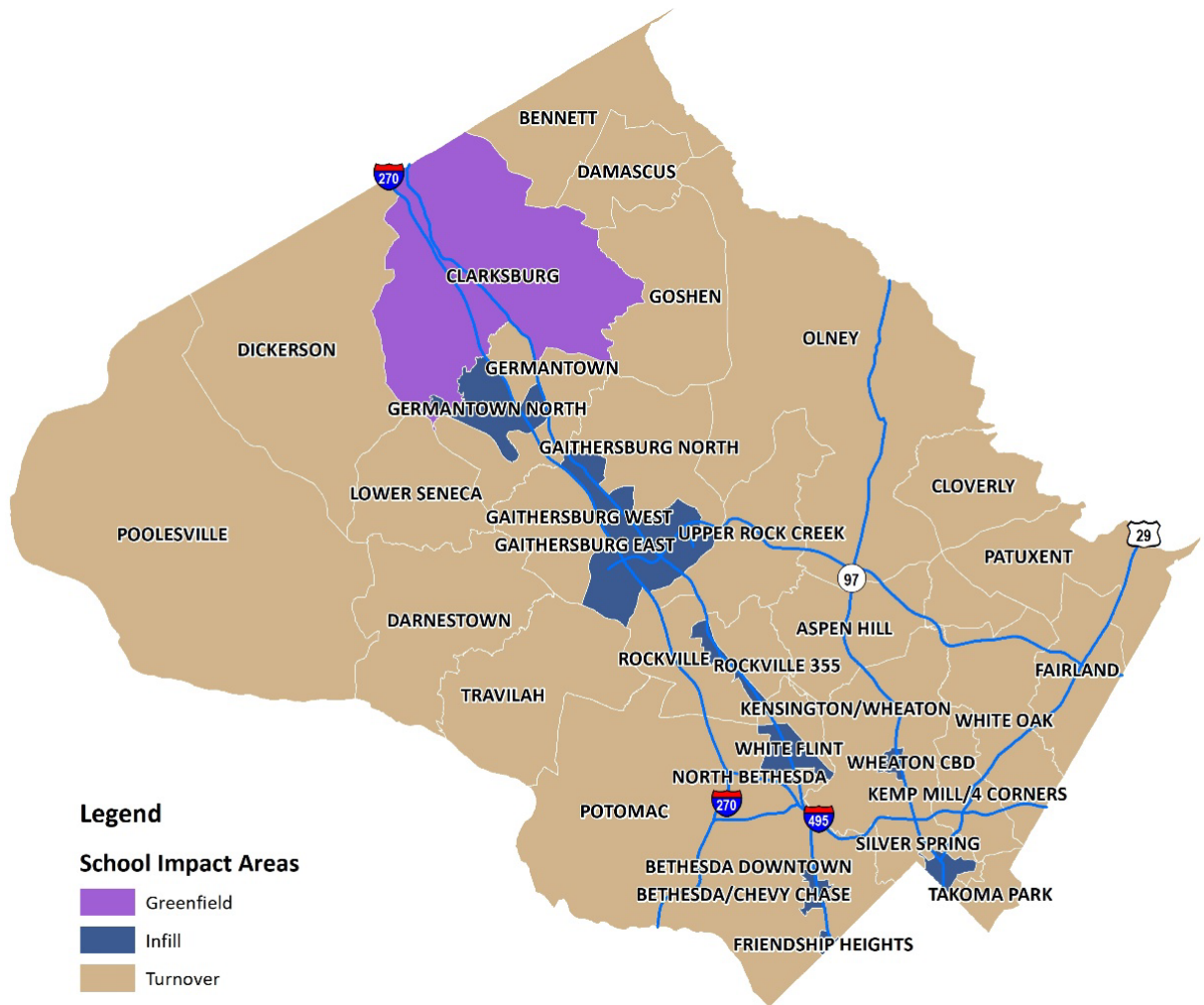
Recommendation 4.1: Classify county neighborhoods into School Impact Areas based on their recent and anticipated growth contexts. Update the classifications with each quadrennial update to the County Growth Policy.

More information on how Montgomery Planning identified School Impact Areas is included in Appendix H. Ultimately, the analysis identified three School Impact Areas:

¹² A student generation rate is the average number of public-school students residing in a single dwelling unit of particular characteristics within a particular geography. In addition to calculating rates by different dwelling type (single-family, multifamily, etc.) and geography (school cluster area, regional, countywide, etc.), Montgomery Planning calculates rates by school level (elementary, middle and high school). For this update, student generation rates were calculated by different neighborhood and dwelling unit characteristics to better understand the drivers of enrollment in the county. A discussion on these rates can be found in Appendix G.

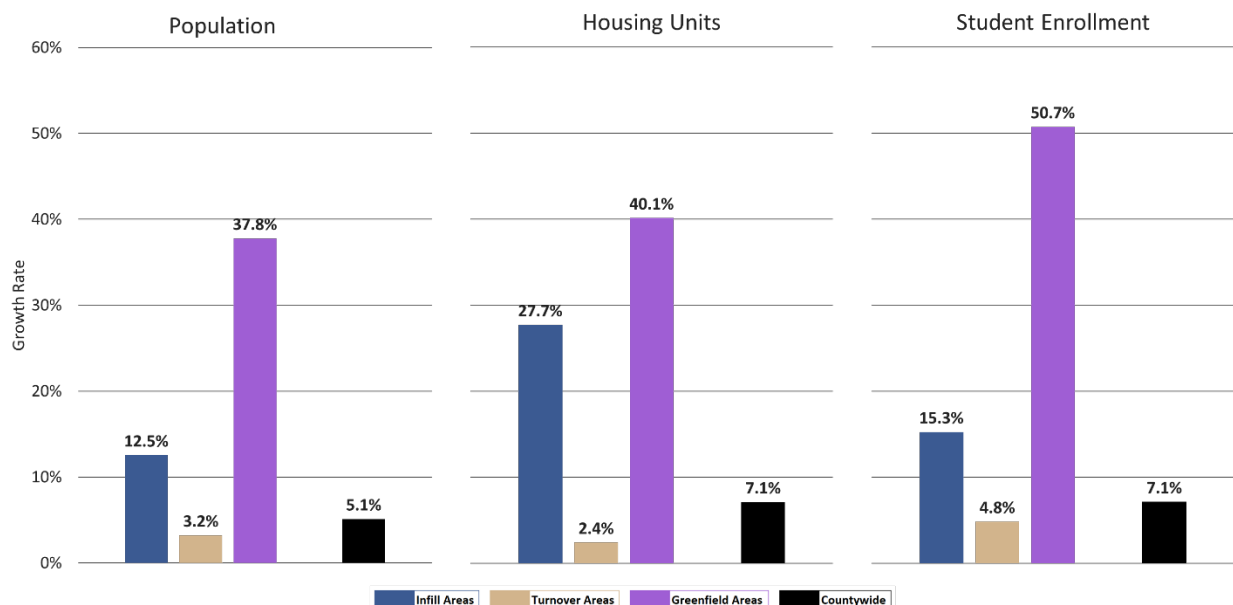
1. **Greenfield Impact Areas.** Areas with high enrollment growth due largely to high housing growth that is predominantly new single-family units.
2. **Turnover Impact Areas.** Areas with low housing growth where enrollment growth is largely due to turnover of existing single-family units.
3. **Infill Impact Areas.** Areas with high housing growth that is predominantly multifamily units, which generates few students on a per unit basis.

Figure 18. Map of Recommended School Impact Areas.



The map in Figure 18 demonstrates the location of the three School Impact Areas. The Greenfield Impact Area makes up 7.2 percent of the county’s land area and consists of Clarksburg and its surrounding neighborhoods. Only 3.8 percent of the county’s land area falls into the Infill Impact Area, including urban cores downcounty (downtown Silver Spring, Friendship Heights, downtown Bethesda and White Flint), parts of the MD355 corridor near Rockville, parts of Gaithersburg and areas upcounty near Germantown. Most of the county (88.9 percent of the county’s land area), however, is in the Turnover Impact Area.

Figure 19. Population, Housing and Student Growth Rates by School Impact Area, 2013-2018.



Sources: U.S. Census; State Department of Assessments and Taxation; Montgomery County Public Schools.

Figure 19 provides a comparison of the three School Impact Areas with regard to their growth in population, housing units and student enrollment between 2013 and 2018. These data demonstrate the different growth contexts in the county and the need to have County Growth Policy tools that are sensitive to those different contexts. The Infill Impact Area saw the largest increase in housing units, but the smallest increase in students. The growth rates in the Greenfield Impact Area were the highest by far in all three categories. Over the five-year period, student enrollment in this area increased an astounding 50.7 percent. While the Turnover Impact Area demonstrated a healthy increase in all three categories, the fact that the area makes up nearly 90 percent of the land area and contains the vast majority of the county’s population, housing units and students, means that the growth rates for this area were substantially lower than those for the other areas. Table 5 provides the raw growth in population, housing units and student enrollment in the three areas.

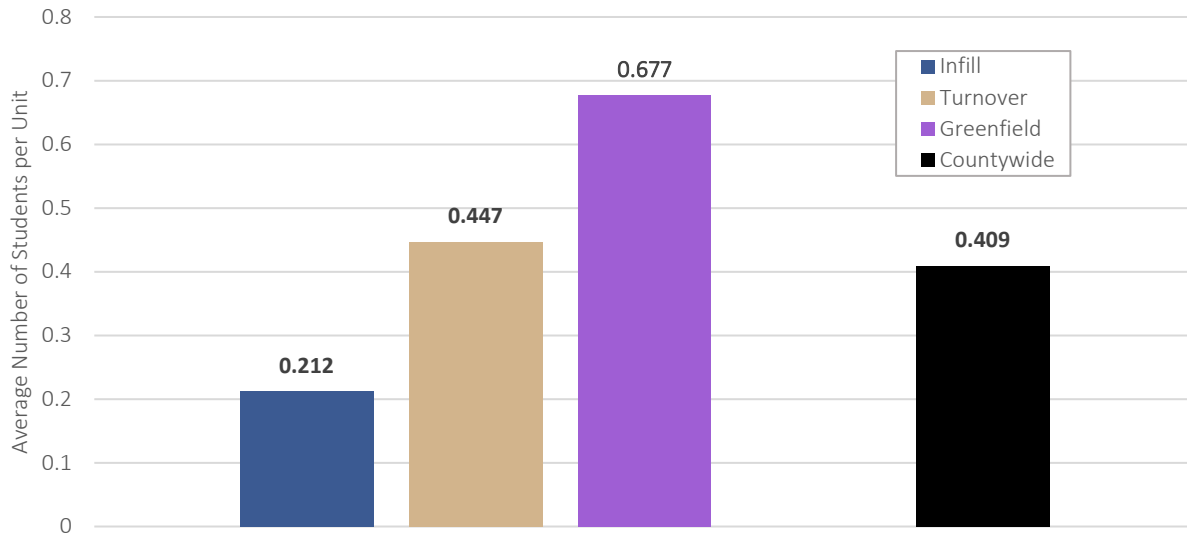
Table 5. Growth in Population, Housing and Students by School Impact Area, 2013-2018.

	Population	Housing Units	Student Enrollment
Infill Impact Area	+15,634 people	+15,826 units	+2,010 students
Turnover Impact Area	+27,213 people	+7,224 units	+6,263 students
Greenfield Impact Area	+7,812 people	+2,880 units	+2,237 students

Sources: U.S. Census; State Department of Assessments and Taxation; Montgomery County Public Schools.

Figure 20 shows the difference in student generation rates for all units by School Impact Area. On a per unit basis, dwelling units in the Turnover Impact Area are generating more than twice as many students as those in the Infill Impact Area. The Greenfield Impact Area dwelling units are generating more than three times as many students as those in the Infill Impact Area.

Figure 20. K-12 Student Generation Rates by School Impact Area, 2019.



In keeping with a move toward a more context-sensitive policy, these three School Impact Areas have implications on how various aspects of the County Growth Policy (including the Annual School Test) and related funding mechanisms are applied. For example, based on the different growth characteristics seen in each area, one major recommendation is to eliminate automatic moratoria throughout the county, except in the Greenfield Impact Area (see [Recommendation 4.8](#)).

Annual School Test and Utilization Report

The current Subdivision Staging Policy (SSP) requires the Planning Board to assess school infrastructure adequacy through the Annual School Test no later than July 1 of each year. The test evaluates projected utilization rates at individual schools and across school clusters. When the test indicates that capacity is an issue, the area in question (an individual school or a school cluster) is placed in a residential development moratorium – a temporary halt to new residential projects in a designated area – to limit continued public school enrollment growth resulting from new housing.

The Annual School Test is currently a two-tier test that evaluates the adequacy of 1) cluster capacity at each school level (elementary, middle and high school) and 2) capacity at each individual elementary and middle school.¹³ The countywide adequacy standards used to evaluate each cluster and school are based on projected utilization rates five years in the future.

- **Cluster Test.** An entire cluster service area is placed in moratorium if any school level (elementary, middle or high) is projected to exceed 120 percent capacity utilization cumulatively across the cluster five years in the future.
- **Individual Elementary School Test.** An individual elementary school service area is placed in moratorium if the school’s projected utilization (capacity to enrollment ratio) five years in the future exceeds 120 percent and if the school is over capacity by at least 110 students.

¹³ Since each cluster is defined by an individual high school, the cluster test at the high school level is the equivalent of an individual high school test.

- **Individual Middle School Test.** An individual middle school service area is placed in moratorium if the school's projected utilization (capacity to enrollment ratio) five years in the future exceeds 120 percent and if the school is over capacity by at least 180 students.¹⁴

The utilization rates used for the test are based on MCPS enrollment projections released each October. It is generally accepted that enrollment projections are most accurate in the shorter term across larger geographies. MCPS generally does a good job of projecting next year's countywide enrollment. But as the projection timeframe increases and/or the geographic scope of the projection gets smaller (countywide to cluster to individual school) there are many factors that hinder the accuracy of the projections, including unexpected school reassignments due to boundary changes or the relocation of special programs, unanticipated changes to external conditions such as the strength of the economy, unpredicted resident turnover in neighborhoods feeding a specific school and potentially unforeseen residential developments.

As part of the Annual School Test evaluation, staging ceilings are identified for each school and cluster that is not in moratorium. These thresholds identify the number of additional projected students required to trigger a moratorium in the school or cluster service area. It is against these thresholds that a residential development application is compared. If a development application is estimated to generate more students than the staging ceiling would allow, it cannot be approved.

In other words, both the identification of areas requiring residential development moratoria and the Planning Board's ability to approve new development in an area not in moratorium hinge on projections for enrollment five years in the future that are known to be highly unreliable. In some cases, these determinations are made based on one or two projected students. Montgomery Planning thinks it is important to generally move away from a reliance on these longer-term projections and a process that assumes such precision and accuracy.

The current SSP language pertaining to the Annual School Test is confusing regarding the impacts of the pipeline of approved residential development on the test. It is unclear whether the test thresholds should change with each development approval so that the test takes into account the estimated enrollment impacts of previously approved development applications. As such, Montgomery Planning compares each development application to the staging ceilings *as identified in the Annual School Test*, even if another development application was approved earlier in the year that was estimated to generate students at the same schools.

Aside from establishing the adequacy standards and thresholds for residential development moratoria, the current SSP does not outline specific procedures for addressing some of the more complicated aspects of conducting the Annual School Test. These procedures include

- how to distribute enrollment and capacity across multiple clusters when a school feeds into to more than one high school cluster,
- how to factor in enrollment relief provided by programmed capacity solutions at other schools, or

¹⁴ Projected utilization rate is calculated as projected enrollment divided by planned capacity. A projected seat deficit (or surplus) is calculated as planned capacity minus projected enrollment.

- how to adjust planned capacity based on solution (placeholder) projects¹⁵ the County Council includes in the Capital Improvements Program (CIP).

Recommendation 4.2: By January 1, 2021, the Planning Board must adopt a set of Annual School Test Guidelines which outline the methodologies used to conduct the Annual School Test and to evaluate the enrollment impacts of development applications and master plans.

[Section 8-32\(c\) of County Code](#) pertains to Planning Board procedures related to review of development applications. Subsection (4) specifically indicates that the “Planning Board may establish procedures to carry out its responsibilities under this Section.” To provide more transparency and formally document the procedures used to conduct the annual school test, Recommendation 4.2 requires the Planning Board to adopt a set of Annual School Test Guidelines.

The guidelines will explain how the test is conducted, including the calculation of any modifications to the planned capacities or projected enrollments published by MCPS resulting from placeholder projects or approved CIP projects at other schools. The data for the Annual School Test come from MCPS enrollment projections and planned capacity included in its annual [Educational Facilities Master Plan](#). Adjustments to a school’s projected enrollment are made for any CIP project at other schools specifically described in their CIP Project Description Form to relieve overcrowding at the subject school. In cases where the Project Description Form explicitly identifies an estimated number of students to be reassigned from the overcrowded school to the school with the CIP project, the Annual School Test results for these schools will be based on enrollment projections adjusted by the specified number.¹⁶ When the Project Description Form does not explicitly identify the number of students estimated to be reassigned, the Annual School Test results will be based on an assumed balance of projected utilization across all impacted schools in the tested year.¹⁷

¹⁵ Solution projects, or placeholders, are projects added to the CIP by the County Council to provide enough capacity to a school to prevent its service area from entering a moratorium. These projects are described in the CIP as classroom additions, but they are only placeholders for a future solution not yet defined by MCPS. The County Council typically only includes a placeholder in the CIP when the following conditions are met:

- A school or cluster is projected to enter moratorium;
- MCPS is actively studying potential solutions to the enrollment burden at the school or cluster;
- The County Council anticipates that MCPS will implement the ultimate solution within the timeframe of the school test; and,
- There is development pressure in the applicable school or cluster service area.

¹⁶ For example, the Project Description Form for the expansion of Seneca Valley High School opening in September 2020 for many years indicated that there would be “approximately 900 seats available to accommodate[sic] students from Clarksburg and Northwest high schools when the project is complete.” In this case, until a boundary alignment was recommended in October 2019, MCPS made no other assumptions about the number of projected future students that would be reassigned. For purposes of the Annual School Test, Montgomery Planning staff would allocate 900 collectively from Clarksburg and Northwest high schools to Seneca Valley High School.

¹⁷ For example, the Project Description Form for DuFief Elementary School indicates that it is intended to relieve over-enrollment at Rachel Carson Elementary School but does not indicate how many students DuFief is expected to receive from Rachel Carson when the expansion is completed in September 2022. For purposes of the Annual School Test, Montgomery Planning staff assumes that the utilization rates for the two schools will be balanced in the test year. In this case, the two schools are projected to have a cumulative utilization of 95.0 percent in the test year. To achieve that at each school, the test assumes that 389 students will be reassigned from Rachel Carson to DuFief in the test year.

The guidelines should also identify which student generation rates are to be used for what purposes. For instance, when estimating a development's enrollment impact, Montgomery Planning recommends using School Impact Area student generation rates given that they are predicated on an area's growth context and the impact of that growth on enrollment.

Recommendation 4.3: The Annual School Test will be conducted at the individual school level only, for each and every elementary, middle and high school, for the purposes of determining school utilization adequacy.

The 2016 SSP update introduced the individual school test. The individual school test intends to better capture and call attention to the individual school experience.¹⁸ The cluster test, which takes a look at the cumulative utilization of all schools at the same level across a cluster, masks overcrowding at individual schools. Since 2016, we have also seen the opposite occur. In the James H. Blake cluster, a few overcrowded elementary schools pushed the entire cluster, with otherwise fine utilization rates, into a residential development moratorium. If the individual school test was the only test used, parts of the cluster could have remained open to residential development in a part of the county that is yearning, according to local stakeholders, for economic investment.

Removing the cluster test also eliminates the need to complicate the annual school test by splitting a school's enrollment and capacity between clusters when it articulates to more than one high school. There are currently 21 elementary schools and 14 middle schools that each feed into more than one high school.

More importantly, as further discussed in [Recommendation 4.8](#), automatic moratoria will only apply in Greenfield Impact Areas characterized by large amount of new development of single-family homes generating many students. In Turnover Impact Areas and Infill Impact Areas, the test will identify schools requiring Planning Board review of school adequacy, the standards for which are discussed in [Recommendation 4.4](#). With less emphasis on automatic moratoria, and more on Planning Board review of school adequacy, it also makes sense to simplify the process of identifying which schools require Planning Board review. If an individual school serving the proposed development exceeds the adequacy thresholds, it will require the Planning Board to view data pertaining to the utilization and facility conditions at the school and other nearby schools. The data prepared for these reviews are discussed in [Recommendation 4.12](#).

For these reasons, Montgomery Planning recommends eliminating the cluster test and only utilizing the individual school test.

Recommendation 4.4: The Annual School Test will evaluate projected school utilization three years in the future using the following school utilization adequacy standards:

- Elementary School Adequacy Standard: Seat Deficit < 110 seats or Percent Utilization ≤ 120%
- Middle School Adequacy Standard: Seat Deficit < 180 seats or Percent Utilization ≤ 120%
- High School Adequacy Standard: Percent Utilization ≤ 120%

¹⁸ Since 2016, 18 individual school service areas have entered into residential development moratoria. Among these schools, 11 service areas were able to exit their moratorium status after only one year, although one school reentered moratorium three years later. Four school service areas were in moratoria for two consecutive years, and one school service area for three years. Two school service areas have remained in moratoria for all four years.

Test Timeframe: Recommendation 4.4 changes the timeframe of the Annual School Test from five years in the future to three years in the future. The current policy is largely based on the idea that it generally takes about five years before an approved development application results in occupied units adding students to schools. However, that is not always the case. Some projects are completed quicker whereas others take longer than five years. Some are completed in phases over a decade or longer. Some are changed in scope before construction begins and still others never materialize at all.

There are a couple of significant concerns with using the five-year projections for measuring school adequacy.

- First, community members frequently contend that the projects programmed in the out years of the CIP are not guaranteed. Indeed, projects with construction funds originally programmed in the out years are often delayed once or twice before they are completed, due to unforeseen budget circumstances. Among the 61 capacity projects completed in the last 10 years, at least six were delayed one year and at least three were delayed two years. Among the 21 projects currently in progress, five have been delayed by a year. As further evidence that the out years of the CIP are unpredictable, over the last ten years there have been 14 capacity projects identified to be opened in the out years of the CIP that have been removed from the CIP for various reasons.¹⁹ Some have argued that a CIP project should only be “counted” if construction funding is included in the first two years of the CIP, which tends to be more of a guarantee of the project’s completion and added capacity.
- The second, as discussed earlier, is that the five-year projections²⁰ for individual schools are the most unreliable of MCPS’ projections. The shorter the timeframe, the more accurate the projections.

School Utilization Adequacy Standards: Additionally, Recommendation 4.4 maintains the school utilization adequacy standards that exist under the 2016 Subdivision Staging Policy. Table 6 inverts the adequacy standards to demonstrate how they will be used to identify areas in moratorium or requiring Planning Board review and Utilization Premium Payments, based on the applicable School Impact Area.

Table 6. School Utilization Adequacy Standards.

School Level	Projected Utilization Adequacy Standards	Greenfield Impact Areas	Turnover and Infill Impact Areas
Elementary	Seat Deficit ≥ 110 seats and Utilization > 120%	Moratorium	Board Review and Utilization Premium Payments Required
Middle	Seat Deficit ≥ 180 seats and Utilization > 120%		
High	Utilization > 120%		

¹⁹ Generally, when a project was removed it was because the project was no longer needed either due to planned implementation of another solution or because the enrollment projections had changed. So this is not a problem from the Annual School Test perspective, it just demonstrates that projects planned in the out years of the CIP are far from a guarantee.

²⁰ It is also worth noting that these are frequently referred to as the six-year projections. When the projections are released in October, the projections are for six years in the future, but by the time the projections are used in the Annual School Test, which takes effect on July 1, they are for the school year five years in the future.

Recommendation 4.5: The Annual School Test will establish each school service area’s adequacy status for the entirety of the applicable fiscal year.

The current Subdivision Staging Policy requires the Annual School Test results to report a staging ceiling for each elementary and middle school as well as elementary, middle and high school staging ceilings for each cluster.²¹ The staging ceiling identifies the number of additional projected students that would trigger a moratorium in the respective school or cluster. It is against these staging ceilings that a residential development application’s enrollment impact is currently evaluated.

Many have argued that the current process places too much emphasis on a false level of precision. The enrollment impacts of a development application are based on regional student generation rates that assumes the new project will generate public school students at the average per dwelling unit rate of existing dwelling units in the region. Then those precise numbers (one estimated enrollment impact for each level – elementary, middle and high school) are compared to the staging ceilings that are based on understandably questionable enrollment projections for five years in the future. With that, a decision is made as to whether or not the application meets the school adequacy standards.

Table 7. School Status Identified in the Annual School Test.

School Status (by School Impact Area) Identified in the Annual School Test	Application Implication
Open	The school’s capacity is deemed adequate for new residential development in that given School Impact Area, meaning that an application can be approved.
In Moratorium	The school’s capacity is deemed inadequate for new development in Greenfield Impact Areas, ²² meaning that an application <u>cannot</u> be approved unless it meets the requirements of a moratorium exception.
Board Review and Utilization Premium Payments Required	The school’s capacity adequacy requires detailed review by the Planning Board. Per Recommendation 4.12 , the Planning Board will be provided with information pertaining to the subject school facility, nearby schools at the same school level (elementary, middle or high) and the estimated enrollment impacts of the proposed development. The Planning Board would then make the school facility adequacy determination. The development is also subject to a Utilization Premium Payment (discussed in Recommendation 4.16).

Under Recommendation 4.5, staging ceilings will not be used to evaluate residential development applications. Once a school service area’s status is determined by the Annual School Test, the status will remain in effect for the entire fiscal year (unless the County Council notifies the Planning Board of a

²¹ For example, the current SSP utilization adequacy standard for a high school is 120 percent utilization five years in the future, meaning the service area for any high school projected to have a utilization rate beyond 120 percent in the 2025-26 school year would be placed in moratorium. Gaithersburg High School has a planned capacity 2,443 student seats in 2025-26, meaning that a moratorium would be triggered if the projected enrollment was 2,932 students (2,443 multiplied by 120%) or more. MCPS’s 2025-26 enrollment projection for Gaithersburg High School is 2,840 students. Therefore, the staging ceiling for Gaithersburg High School is 92 students (2,932 minus 2,840).

²² Based on [Recommendation 4.8](#), moratoria will only be applicable in Greenfield Impact Areas.

material change to the MCPS CIP). That is not to say that a development application will not be reviewed for adequacy. The Annual School Test will report each school’s status for the year as either open, in moratorium or requiring Planning Board review, for each School Impact Area that applies to the school’s service area. These are explained more fully in Table 7.

Furthermore, a school’s status will not be changed during a fiscal year to reflect the impacts of new approvals in the development pipeline. Montgomery Planning will continue to provide MCPS with student generation and development pipeline data to incorporate in its enrollment projections. Because MCPS updates its projections annually and the school test is conducted annually based on the most current MCPS projections, there is ample time for MCPS projections to reflect approved projects in the development pipeline by the time they are expected to impact school enrollments.

Recommendation 4.6: The Annual School Test will include a Utilization Report that will provide a countywide analysis of utilization at each school level.

Under the updated County Growth Policy, the Annual School Test results will now be accompanied by a school “Utilization Report” each year. The report will be a one-stop resource for data that provide a countywide context to an individual school’s condition.

Data reported should include historical and projected:

- countywide utilization rates by school level, and
- share and number of schools at each level that fall into particular utilization categories (up to 80 percent utilized, between 80 and 100 percent utilized, between 100 and 120 percent utilized, and over 120 percent utilized)

The estimated enrollment impacts of future boundary realignments associated with capital projects will be taken into account for this reporting, as they are with the Annual School Test. However, the capacity impacts of any placeholder project will not be counted.

Examples of the type of data to be reported are identified in Table 8, Table 9 and Table 10.

Recommendation 4.7: The Utilization Report will also provide additional utilization and facility condition information for each school, as available.

In addition to providing countywide school infrastructure data, the Utilization Report will include data related to the facility conditions and infrastructure adequacy for each individual school. The information provided will be helpful in preparing master plans and in evaluating development applications. The information would also facilitate discussions between developers and MCPS about potential ways the developers can make improvements to school facility conditions (roof replacements, HVAC system upgrades, etc.).

The information reported for each individual school will include:

- historical and projected enrollment, program capacity, core capacity and utilization²³

²³ Utilization should include the percent of capacity utilized and the number of students over/under capacity. Additionally, the five-year projections must be adjusted to estimate the impacts of anticipated future boundary changes on enrollment.

- the current number of relocatable (portable) classrooms at the school
- the most current [MCPS Key Facility Indicator](#) data²⁴ and
- a list of the three nearest schools at the same school level along with the distance to the schools.

Figure 21 demonstrates the type of information that could be provided in the Utilization Report for an individual school, like South Lake Elementary School in Gaithersburg.

Table 8. Actual Countywide Enrollment, Capacity and Utilization by School Level, 2019-2020.

2019-20	Enrollment	Program Capacity	Seat Deficit/Surplus	Utilization
Elementary Schools	76,541	75,228	-1,313	101.7%
Middle Schools	37,649	38,840	+1,191	96.9%
High Schools	50,528	49,147	-1,381	102.8%
All Schools	164,718	163,215	-1,503	100.9%

Source: Montgomery County Public Schools.

Table 9. Projected Countywide Enrollment, Capacity and Utilization by School Level, 2025-2026.

2025-26	Enrollment	Program Capacity	Seat Deficit/Surplus	Utilization
Elementary Schools	77,511	80,146	+2,635	96.7%
Middle Schools	39,299	40,748	+1,449	96.4%
High Schools	55,725	52,127	-3,598	106.9%
All Schools	172,535	173,021	+486	99.7%

Source: Montgomery County Public Schools.

Table 10. Elementary School Facility Utilization by Range.

ELEMENTARY SCHOOLS	2019-20 Count	Percent of Schools	2025-26 Count	Percent of Schools
≤80% Utilization	16 schools	12%	25 schools	18%
80-100% Utilization	46 schools	34%	52 schools	38%
100-120% Utilization	51 schools	38%	48 schools	35%
>120% Utilization	22 schools	16%	12 schools	9%

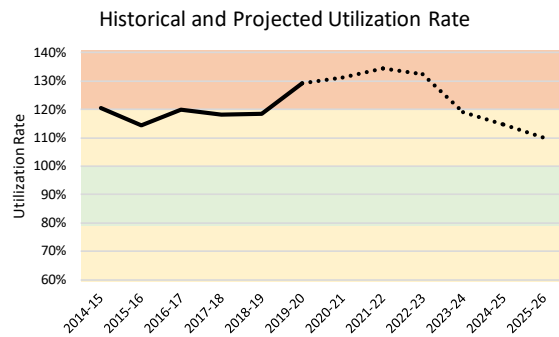
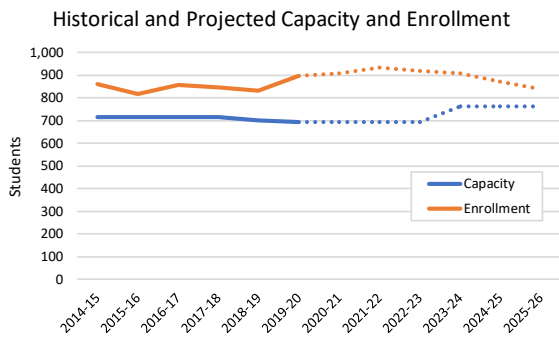
Source: Montgomery County Public Schools.

²⁴ The Key Facility Indicators provide an assessment conducted by MCPS of a school's major infrastructure elements utilizing scientific measurements against a series of industry standards.

Figure 21. Example of Individual School Data to be Reported in the Utilization Report.

South Lake ES
(Watkins Mill Cluster)

	Historical Actuals					Current	Projected					
	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Capacity	716	716	716	716	701	694	694	694	694	763	763	763
Enrollment	862	818	858	845	831	897	910	934	918	909	874	839
Space	-146	-102	-142	-129	-130	-203	-216	-240	-224	-146	-111	-76
Utilization	120.4%	114.2%	119.8%	118.0%	118.5%	129.3%	131.1%	134.6%	132.3%	119.1%	114.5%	110.0%



2019-20 Facility Characteristics	
Year Facility Opened	1972
Year Revitalized	N/A
Total Square Footage	83,038
Site Size (acres)	10.2
Adjacent Park	No
Relocatable Classrooms	10

Distance to Nearest Elementary Schools		
Gaithersburg ES	Gaithersburg Cluster	1.2 miles
Strawberry Knoll ES	Gaithersburg Cluster	1.7 miles
Watkins Mill ES	Watkins Mill Cluster	1.9 miles

2018 MCPS Key Facility Indicator Data	
Overall	Green
Foundations	Green
Basement	Green
Superstructure	Green
Exterior Enclosure	Green
Roofing	Green
Interior Construction	Green
Stairs	Green
Interior Finishes	Green
Conveying Systems	Green
Plumbing	Green
HVAC	Green
Fire Protection	Green
Electrical	Green
Equipment	Green
Furnishings	Green
Special Construction	Green
Classroom Shape	Red
IMC Size	Red
Cafeteria Size	Red
Corridor	Green
Temperature Control	Green
Humidity Control	Green
Natural Light	Red
Acoustic Features	Green
Building-Level Power Delivery	Green

Source: Montgomery County Public Schools.

Residential Development Moratorium

Under the current SSP, when schools reach 120 percent capacity utilization, the affected area goes into a moratorium, which means the Planning Board cannot approve new residential development. A moratorium generally lasts one year, or until school enrollment drops, school boundaries are changed, or additional classroom space is found or created.

Since July 2019, 12 percent of the county’s total land area has been placed in a residential development moratorium as a result of the FY 2020 Annual Schools Test. The coverage and impact of this moratorium is considerably higher in the areas of many recently adopted master plans. The areas for the Forest Glen/Montgomery Hills Sector Plan adopted earlier this year, and the Grosvenor-Strathmore Metro Area Minor Master Plan adopted in 2017 are under moratorium. Similarly, the Rock Spring Sector Plan (99 percent of the plan area is in moratorium), the White Flint 2 Sector Plan (77 percent), the Veirs Mill Corridor Master Plan (58 percent), and the Greater Lyttonsville Sector Plan (50 percent) areas have all been significantly impacted by the current moratoria.

Some community members favor the idea of a moratorium on the premise that even a small number of additional students can be a burden to overutilized facilities and should be curbed. However, it is important to not lose sight of the county's other policy priorities pertaining to filling its housing supply gap, providing attainable housing and supporting sustainable economic growth in order to remove what might amount to a very small source of school enrollment growth.

In preparing the update to this policy, stakeholders raised several other concerns about the Subdivision Staging Policy's use of automatic moratoria, and its particular impact on mixed-use infill development²⁵ that produces multifamily units that generate very few students per unit.

- **Slows the County's Ability to Fill Its Housing Supply Gap.** The county needs an additional 10,000 housing units by 2030 to meet future housing demand from population and job growth. This is beyond the existing 31,000 housing units already forecasted through the most recently completed MWCOC forecast process, Round 9.1. By stopping development in the county's infill areas, the current moratorium policy makes it difficult for the county to fill this housing gap and meet its share of regionwide housing targets. Multifamily residential development, in particular, serves a critical role in fulfilling the county's projected housing demand and achieving housing affordability goals. The recently completed [Housing Needs Assessment](#) Housing Forecast by Type and Tenure suggested that by 2040, more than half of the new housing needed to accommodate new households over the 2020 to 2040 period is projected to be multifamily rental housing.
- **Impacts Housing Affordability.** By restricting the supply of housing in the face of increasing demand for it, the moratoria apply upward pressures on housing prices and threaten the preservation of the county's affordable housing stock. The moratoria also stifle the county's Moderately Priced Dwelling Unit (MPDU) inclusionary housing program, the most successful tool in growing the county's supply of affordable housing, by stopping new residential development projects that would have provided new MPDUs.
- **Hinders Economic Development.** Moratoria directly hinder important aspects of the county's economic health by stopping new mixed-use development with housing that can provide many benefits. The county's residential development helps strengthen the economy by investing in the future of our communities, creating local jobs and increasing the tax base. Additionally, these infill projects add public amenities, shopping, restaurants and gathering spaces that attract new residents to vibrant, complete communities within the county's urban areas.
- **Prevents Sustainable Growth Patterns.** By halting development in desired growth areas, moratoria encourage growth elsewhere and prevent sustainable growth patterns. The county's desired growth areas focus on activity centers and connected corridors that provide residents with easy, multimodal access to jobs and amenities. They also foster sustainable growth by preserving our natural resources and utilizing and enhancing existing investments in transportation, water and other public infrastructure.
- **Does Not Solve Overcrowding.** Stopping development does not actually solve overcrowding in the county's schools. A review of recent housing and enrollment growth data revealed that less than 30 percent of the county's enrollment growth can be attributed to new development. In many of the county's single-family neighborhoods, school enrollment continues to increase due to turnover of the existing stock (i.e., single-family homes being sold to families with school-aged children). On the other hand, moratoria limit the collection of school impact tax revenue, which is

²⁵ Development of vacant parcels and redevelopment of under-used parcels within areas that are already largely developed.

specifically dedicated to increase school capacity across the county. When the Planning Board stops approving new residential development, it cuts off the future collection of impact taxes.

- **Raises Equity Concerns.** The current moratorium policy also has unintended equity consequences. In general, MCPS does not make its capital improvements decisions based on the county’s land use, economic or development priorities. However, pressure from developers and community members along with a desire to strengthen the county’s economy often leads the County Council to fund projects for schools at risk of moratorium in areas where developers are looking to build. Under constrained capital budgets, these decisions frequently and sometimes repeatedly delay projects at other overcrowded schools with substandard facilities located in areas with a lack of development interest. These overlooked schools can often have less-engaged parent advocates and a disproportionate share of high-needs students. But if there was less pressure on MCPS to relieve schools based on the amount of development interest, then more of the funding can be used to equitably ease crowding and improve facilities based on demonstrated need.

Recommendation 4.8: Automatic moratoria will only apply in Greenfield Impact Areas. The Planning Board cannot approve any preliminary plan of subdivision for residential uses in an area under a moratorium, unless it meets certain exceptions.

In light of the above, Montgomery Planning recommends the new County Growth Policy limit the use of automatic residential development moratoria—those that are established automatically when the Annual School Test determines that a school’s utilization exceeds a particular threshold. Rather than applying automatic moratoria countywide as is currently done, this type of moratoria would apply only to Greenfield Impact Areas. The Greenfield Impact Areas are still experiencing the type of development that originally led to the creation of the Adequate Public Facilities Ordinance in 1973, where the construction of new schools cannot keep pace with rapidly increasing enrollment caused by new development. Between 2013 and 2018, the Greenfield Impact Areas saw a 37.8 percent increase in population, a 40.1 percent increase in housing units, and a 50.7 percent increase in students attending MCPS schools. Figure 19 on page 34 demonstrates how these growth rates compare to those countywide and in the Turnover and Infill Impact Areas and makes the case for continuing to use automatic moratoria in the Greenfield Impact Areas.

Recommendation 4.9: Exceptions to moratoria will include commercial development projects, residential projects estimated to generate fewer than one full student at any school in moratorium, and projects where the residential component consists entirely of senior living units.

As with the current SSP, the new County Growth Policy should provide a few reasonable exceptions to moratoria. This includes proposed developments (regardless of the number of units) that are estimated to generate fewer than one full student at any school in moratorium, as well as any that only include age-restricted units for seniors 55 and older. The recommended de minimis exception of projects estimated to generate fewer than one full student (on average) *at any school in moratorium* marks a change from the current SSP, which excepts projects of “three units or fewer.” Using the number of students as the threshold rather than the number of units directly connects the exception to the impact on enrollment. It also accounts for both the type and number of units built and allows projects to be evaluated relative to their impact on the specific schools in moratorium.

Montgomery Planning considered higher de minimis student generation thresholds, but given that moratoria will only apply to Greenfield Impact Areas, where new development is the leading cause of school overcrowding and school construction cannot keep pace, it is acceptable to limit the moratorium

exception to only those projects estimated to generate fewer than one full student, on average. Compared to the SSP’s current de minimis exception of three units or fewer, this new exception is generally more lenient and would allow more residential projects to be approved in a Greenfield Impact Area under moratorium, as long as they are not estimated to generate new students. Based on the updated student generation rates discussed in more detail in [Recommendation 4.11](#), Table 11 identifies the number of units that can be built in a Greenfield Impact Area before generating (on average) a single student using the latest student generation rates.²⁶

Table 11. Maximum Number of Units Allowed Before Generating a Single Student.

	Maximum Number of Units Allowed Before Generating a Single:		
	ES Student	MS Student	HS Student
Single-family Detached	2 units	5 units	4 units
Single-family Attached	3 units	7 units	6 units
Multifamily	3 units	7 units	6 units

In other words, if a developer would like to build in an area that is in moratorium due to overcrowding at the middle school serving the property, then the developer can receive a waiver from the moratorium if the project is expected to generate fewer than one full middle school student. To achieve this, the developer could build up to five single-family detached units, or five single-family attached units, or seven multifamily units. If the elementary school was in moratorium, then the number of units allowed would fall to two single-family detached, 3 single-family attached or 3 multifamily.

²⁶ Current procedure rounds the estimates down to the nearest whole number. For example, four single-family detached units generate 0.824 students (4 units x an average of 0.206 students per unit), which is rounded down to zero.

Recommendation 4.10: Eliminate the moratorium exception adopted in 2019 pertaining to projects providing high quantities of deeply affordable housing or projects removing condemned buildings.

In 2019, the County Council amended the 2016-2020 Subdivision Staging Policy (SSP) to include a new exception to moratoria. The new exception would allow the Planning Board to approve an application for residential development in an area under moratorium if it is estimated to generate 10 students or fewer at any school and either:

- replaces a condemned or previously condemned and vacant structure located within or abutting an Opportunity Zone; or
- produces more than 50 percent of its units as affordable to households earning 60 percent or less of area median income.

When the exception was adopted, it was understood that it would likely be a temporary amendment that would allow for the revitalization of urban infill areas and for the development of large quantities of deeply affordable multifamily housing in areas under moratorium. There was an expectation that the quadrennial update to the SSP would result in a more permanent solution to the obstacles the moratorium creates to building thriving communities with housing for all. The areas of the county that benefit from the 2019 moratorium exception are those recommended to be completely relieved of automatic moratorium under [Recommendation 4.8](#). Under the new County Growth Policy, the moratorium will only be applicable in Greenfield Impact Areas, where new development of single-family homes continues to generate large quantities of students. These are areas where the moratorium remains a valuable tool to prevent the overcrowding of schools. To ensure that the moratorium can be an effective tool in those Greenfield Impact Areas, it does not seem necessary or appropriate to maintain this exception.

Student Generation Rate Calculation

Student generation rates are officially updated effective July 1 of every odd-numbered year based on the most recent school year's enrollment data. Every other year, MCPS provides Montgomery Planning with a dataset that includes the address and grade of every MCPS student. All other personal identifying information is scrubbed from the dataset.

Montgomery Planning maps the address of each student to tie the anonymous student to a parcel of land, which assigns the student to attributes of that parcel, including the type of residential structure on the parcel. From there, Montgomery Planning calculates student generation rates (the average number of students per dwelling unit) for various geographies, dwelling types and school levels.

For this County Growth Policy update, Montgomery Planning prepared and reviewed with the Schools Technical Advisory Team an assortment of alternate student generation rates based on neighborhood and parcel attributes. These data were used to inform many of the recommendations included in this update. Graphs highlighting some of these data are provided in Appendix G.

Recommendation 4.11: Calculate countywide and School Impact Area student generation rates by analyzing all single-family units and multifamily units built since 1990, without distinguishing multifamily buildings by height.

Prior to 2016, to calculate student generation rates based on dwelling type, all multifamily units regardless of the year the structure was built were considered, while for single-family units only those built in the last 10 years were considered. This was largely based on adept lobbying from the parent

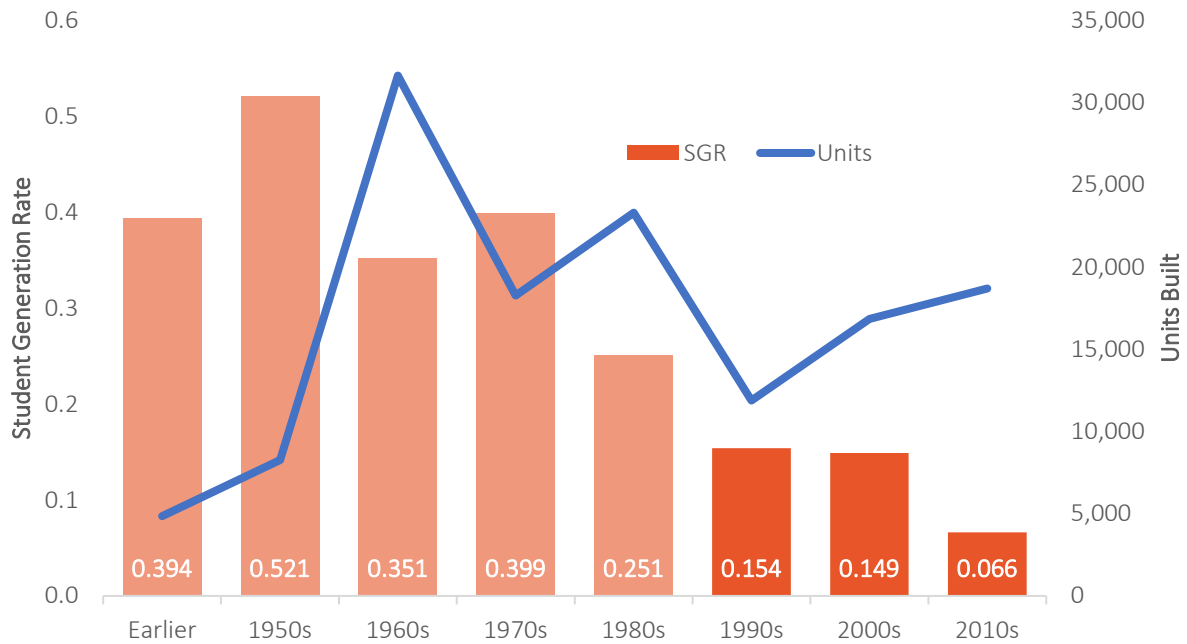
community because in both cases these produced the highest SGRs. In 2016, the units considered for calculating single-family student generation rates changed to include all units regardless of the year built as well, in better reflection of the average number of students generated over the lifetime of the unit. During the research stage of the current policy update, Montgomery Planning found that this reasoning stands for single-family units since they behave in predictable cycles - increasingly generating students when first sold regardless of the age of the home, then decreasing after about 10 years. Meanwhile, multifamily units tend to generate the same number of kids consistently, in large part because most are rental units that experience turnover more frequently.

Low-rise/High-rise Distinction: Current student generation rates demonstrate a major difference between low-rise and high-rise housing units, with low-rise (four stories or fewer) generating on average across the county 3.58 times more students per unit than high-rise (five stories or more). Some of our recent generation rate analyses suggest that the distinction between low- and high-rise might be more of a distinction between old and new buildings, with the older multifamily structures tending to have fewer stories and larger units with more bedrooms. Additionally, there are several methodological complications with separating multifamily into low-rise and high-rise:

- The land use designations in State Department of Assessments and Taxation (SDAT) parcel data are inconsistent and unreliable for multifamily uses and require an extensive amount of correction with each calculation of student generation rates. Also, SDAT is no longer maintaining the land use field.
- The original distinction between low- and high-rise was based on the construction type – less expensive lumber could be used to build four stories or fewer, but not five stories or more. Today, that distinction is blurred as lumber is frequently used to build structures of six stories.
- It is unclear how to classify buildings with multiple heights (four stories on one end of the building and five or more stories on the other end).

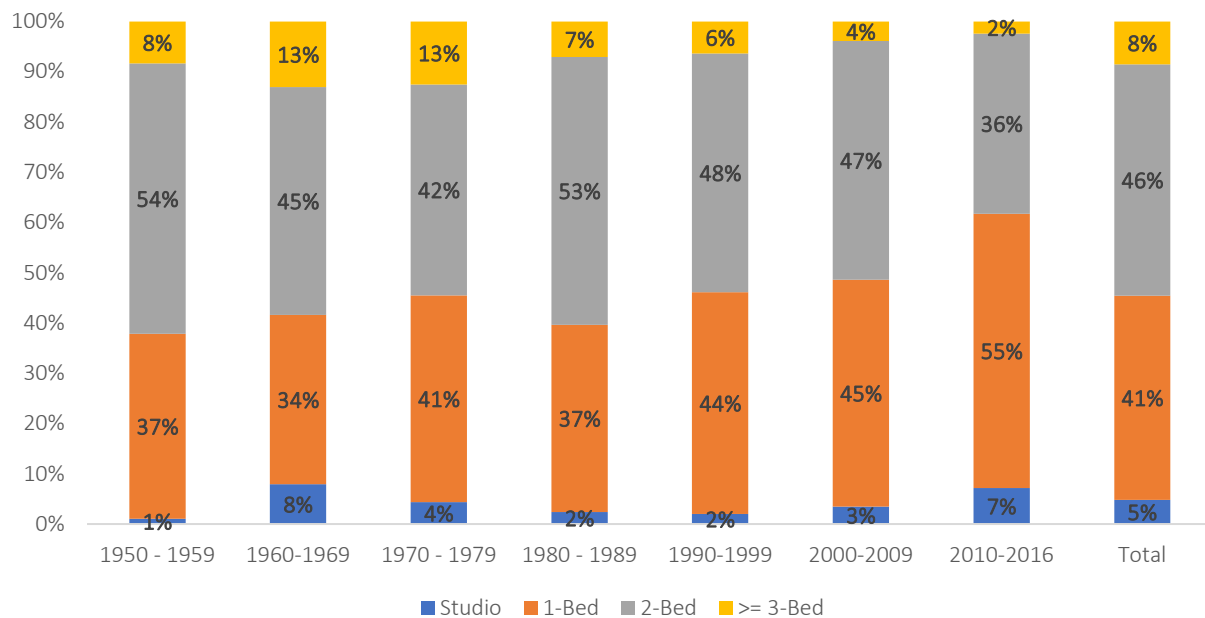
Multifamily Rates: A review of student generation rates by dwelling type and year built clearly indicates that multifamily units built in the last several decades generate students differently than older multifamily units. After running several tests, Montgomery Planning found that the average K through 12 student generation rate for multifamily structures built prior to 1990 was statistically different from the average for structures built in 1990 and later. Likewise, the multifamily student generation rate for structures built in the 1980s was significantly different statistically from the rate for those built in the 1990s and from the rate for multifamily units built since 1990. There was no statistical difference, however, between the average generation rates for multifamily structures built in the 1990s, 2000s and 2010s. The units built in more recent decades tend to have fewer bedrooms and be smaller and more expensive, making them less family oriented. Figure 22 demonstrates the relationship between decade built and student generation from multifamily units. Figure 23 shows the cumulative new housing units delivered since 1950 in multifamily buildings by unit size.

Figure 22. Multifamily Student Generation Rates and Units Built by Decade, 2018.



Sources: Montgomery County Public Schools and Maryland State Department of Assessment and Taxation.

Figure 23. Multifamily Rental Units Built by Unit Size, 1950-2016.



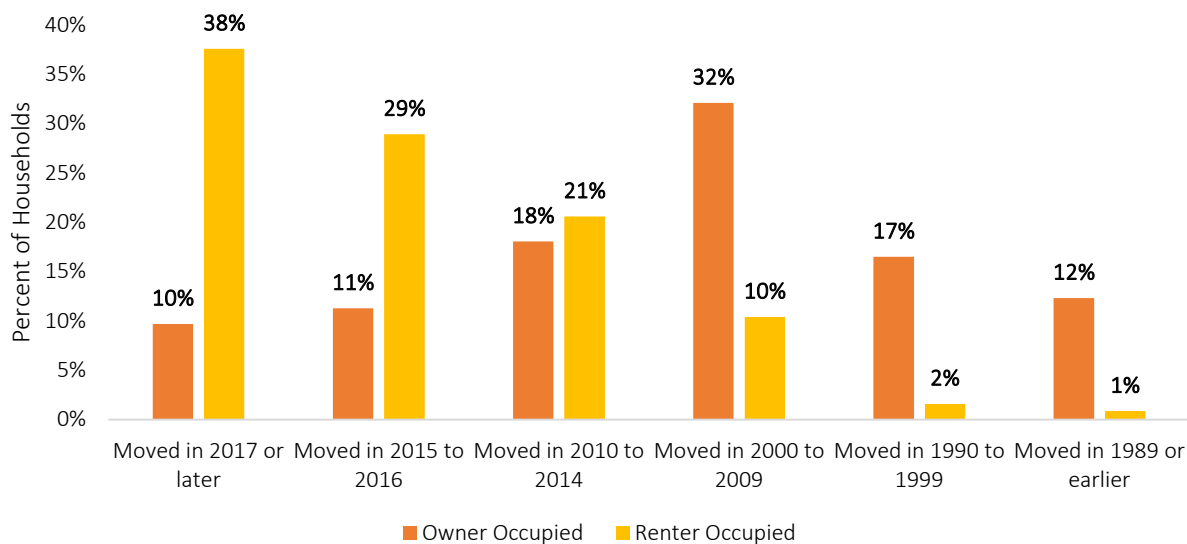
Source: Department of Housing and Community Affairs Rental Facility Survey

Single-family: For single-family housing units, which are generally owner-occupied units, the relationship between year built and student generation is less clear because single-family homes tend to generate students in cycles based on how recently they were sold, regardless of age. Montgomery Planning

analysis of enrollment data revealed that a single-family home is very likely to generate students for the first 10 to 15 years after being sold. Ten years post-sale, the average student generation begins to drop. Fifteen years post-sale, the typical single-family home generates no students for long periods of time until they are sold again. That turnover cycle for single-family homes, however, is long compared to multifamily units. As shown in Figure 24, 61 percent of the households in owner-occupied units, which tend to be single-family homes, have lived in their homes for more than 10 years (moved in 2009 or earlier). This explains why nearly three quarters of the county’s single-family detached homes have no public school students at all, as shown in Figure 25. In contrast, 38 percent of households in renter-occupied units have lived in their units for less than two years. In 2019, approximately 4 percent of the county’s single-family detached units were sold, whereas about 33 percent of the county’s renters move out of their apartments each year.

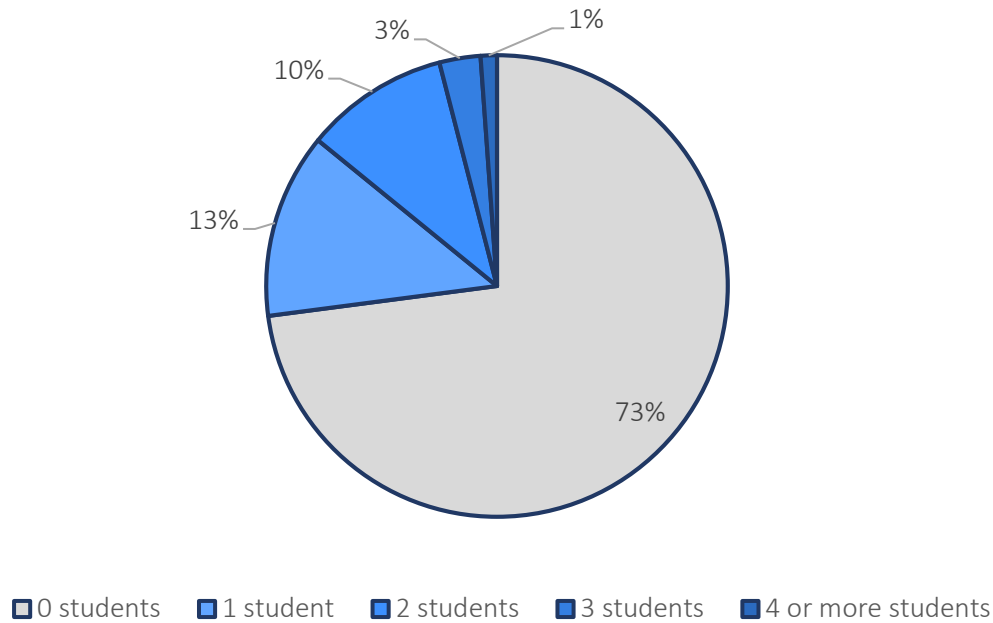
Prior to 2016, student generation rates for single-family units were calculated using only homes that had been built within the last 10 years. Homes built in the last 10 years are also ones that have sold in the last 10 years. As such, using recently built single-family homes excluded every home that last sold more than 10 years ago – homes that are far less likely to be generating students – and therefore resulted in biased rates that were disproportionately high. As a result, the County Council decided in 2016 to use student generation rates that captured the average student generation over the entire life of the home.

Figure 24. Year Householder Moved Into Unit, Owners/Renters.



Source: 2018 One-Year American Community Survey, U.S. Census.

Figure 25. Shares of Single-Family Detached Homes by Number of Students, 2019.



Updated student generation rates: Given the data discussed above, which give a better understanding of how single-family units and multifamily units generate students, [Recommendation 4.11](#) calls for calculating countywide and School Impact Area student generation rates using all single-family units and only multifamily units built since 1990. The recommendation also calls for not distinguishing multifamily buildings by height, based on the increased difficulties this presents methodologically. As a result, Table 12 identifies the updated student generation rates, calculated by Montgomery Planning using 2019 enrollment and parcel data.

Table 12. 2019 Student Generation Rate Countywide and by School Impact Area.

		Student Generation Rates			
		ES	MS	HS	K-12
Countywide	Single-Family Detached	0.198	0.111	0.155	0.464
	Single-Family Attached	0.222	0.115	0.151	0.487
	Multifamily (Since 1990)	0.066	0.030	0.036	0.133
Greenfield Impact Areas	Single-Family Detached	0.336	0.181	0.206	0.723
	Single-Family Attached	0.318	0.141	0.158	0.618
	Multifamily (Since 1990)	0.253	0.131	0.149	0.532
Turnover Impact Areas	Single-Family Detached	0.194	0.109	0.155	0.458
	Single-Family Attached	0.225	0.118	0.157	0.499
	Multifamily (Since 1990)	0.090	0.046	0.055	0.192
Infill Impact Areas	Single-Family Detached	0.171	0.082	0.113	0.366
	Single-Family Attached	0.179	0.092	0.119	0.391
	Multifamily (Since 1990)	0.049	0.020	0.024	0.093

Development Application Review

While this updated County Growth Policy eliminates automatic moratoria for the vast majority of the county (that is, the Turnover and Infill Impact areas), the Planning Board continues to have a responsibility to evaluate individual development applications against the adequacy of public infrastructure to support the proposed development. Further, it is not sufficient to have an adequate public facilities policy that assumes the school system can and will adequately resolve all capacity issues all the time. Therefore, the Annual School Test will identify school service areas within Turnover and Infill Impact areas that require intentional Planning Board review. Development applications that fall within these school service areas should receive increased scrutiny from the Board for their potential impact on schools that are overcrowded.

Recommendation 4.12: The County Growth Policy should explicitly allow the Planning Board to deny a residential development project in Turnover Impact Areas and Infill Impact Areas if it deems there is inadequate public school infrastructure, after consideration of the applicable data and circumstances.

[Section 8-32\(c\)\(3\) of County Code](#) requires that the Planning Board “must find, consistent with the adopted [County] Growth Policy, whether all applicable public facilities will be adequate to support the proposed development.” To that end, even when an automatic moratorium doesn’t apply, the Planning Board is required to assess the adequacy of school facilities and at its discretion can choose to deny a residential development project for lack of adequate school infrastructure. To aid the Planning Board’s decision making in this regard, Montgomery Planning will provide the Board with the following, as available:

- school facility status information, including number of relocatable classrooms and Key Facility Indicator information
- the development application’s estimated enrollment impacts
- historical, current and projected school utilization data for the schools serving the subject property
- the current and projected utilization of the three other schools at each level (elementary, middle, and high school) that are nearest to the subject parcel (network distance)
- updated development pipeline status for approved development applications served by the same schools as the subject property

The above information will be provided for all regulatory cases involving residential units, not just those that are in school service areas requiring Planning Board review.

Recommendation 4.13: Amend Chapter 50, Article II, Section 4.3.J.7. of the County Code to require a development application to be retested for school infrastructure adequacy when an applicant requests an extension of their Adequate Public Facilities validity period.

County Code currently limits the validity of an approved preliminary plan for a development’s adequate public facilities (APF) approval to “no less than 5 and no more than 10 years after the preliminary plan is approved, as determined by the Board when it approved the plan.”²⁷ If the applicant requests an extension of the APF validity period, County Code requires that the applicant demonstrate it has secured financing and met other markers indicating that project is moving forward. It also allows the Planning

²⁷ Montgomery County Code, Chapter 50. Section 4.3.J.5.

Board to require the applicant to submit an updated traffic study “to demonstrate how the extension would not be averse to the public interest.”²⁸

Recognizing that school conditions and school tests also change over time, this recommended amendment to the County Code would require an updated schools APF determination for any remaining unbuilt residential units utilizing the school infrastructure adequacy test in place at the time of the Planning Board’s review of the extension request.

Recommendation 4.14: Amend Chapter 50, Article II, Section 4.3.J.7. of the County Code to cap the Adequate Public Facilities validity period for development to no more than 22 years, at which point the applicant can no longer request an extension of the approval and must restart the plan application process.

Lengthy extensions can complicate long-term planning and school enrollment projection efforts. If approved, this amendment to [Chapter 50, Article II, Section 4.3.J.7.](#) would clear the development pipeline of such projects to require that they be evaluated within the framework of current planning visions and growth policy priorities. The proposed amendments limits the entire APF validity period to 22 years, inclusive of the original validity period and any combination of extensions under Section 4.3.J.7.

Recommendation 4.15: Require MCPS to designate a representative to the Development Review Committee to better tie the development review process with school facility planning. Ensure this representative has appropriate authority to represent MCPS’ official positions.

The Development Review Committee is established in County Code as a committee consisting of Montgomery Planning staff and representatives from utility companies and federal, state, county and municipal agencies. The committee’s responsibility is to meet with development applicants to review their application for regulatory conformance, reconcile conflicting requirements and generally facilitate agency review of the application. establishes the Development Review Committee and [Chapter 50, Article II, Section 4.2](#) identifies the reviewing agencies that serve on the committee. MCPS is currently identified as a reviewing agency that receives copies of all development applications. This recommendation would compel MCPS to provide a representative to serve on the Development Review Committee and provide comments when pertinent (i.e., on all applications proposing residential development). MCPS’ participation on the committee will benefit both MCPS and the Montgomery Planning by fostering better understanding of school conditions, a development’s potential impact on schools and any potential solutions. It will also afford the development applicant an opportunity during the development review process to negotiate with MCPS the terms of any potential land dedication, school construction or facility improvement to be performed by the applicant.

Utilization Premium Payments

Montgomery County must find ways to encourage economic development and desired growth patterns while solving overcapacity issues in schools. Chapter 6 includes recommendations related to impact taxes, which are paid per unit by developers to offset the enrollment impacts of new development, and the recordation tax, which is paid by homebuyers and can be used to mitigate the enrollment impacts of housing turnover. Currently, developers pay school impact taxes on all new residential development, whether or not the schools in the area of development are over capacity. The school impact tax helps pay for the construction or expansion of school facilities across the entire county and is calculated to cover 120 percent of the cost of each additional student seat a new housing unit generates. The school impact

²⁸ Montgomery County Code, Chapter 50. Section 4.3.J.7.

tax recommendations in Chapter 6 generally make the taxes lower and more context-sensitive based on the School Impact Areas.

Additionally, [Recommendation 4.8](#) limits automatic moratoria to Greenfield Impact Areas only. While this recognizes the unique context of those areas it also acknowledges that there is limited new development in Turnover Impact Areas and the type of development in the Infill Impact Areas has a limited per unit impact on enrollment. That is not to say that new development in these areas has no impact on enrollment. Enrollment in the Infill Impact Areas increased 15.3 percent between 2013 and 2018 and some of the schools serving those areas are overcrowded.

To help ensure the needed school construction funds, Montgomery Planning recommends shifting the developer impact burden to those areas with the most significant school capacity issues by introducing Utilization Premium Payments. The Utilization Premium Payments will be collected at the same time as impact taxes—when a developer applies for a building permit.

Recommendation 4.16: Require applicants to pay Utilization Premium Payments in Turnover and Infill Impact Areas when a school’s projected utilization three years in the future exceeds established adequacy standards.

With Utilization Premium Payments, if the schools serving a residential development project are overcapacity, the developer will be required as a condition of preliminary plan approval to pay more for further burdening the schools and to help provide the necessary school infrastructure. The payments are only required if the property is located in an area the Annual School Test identifies as requiring the payments, using the thresholds identified in Table 13. If multiple schools serving the project site exceed the given threshold then payments are required for each.

Table 13. Utilization Premium Payment Thresholds and Payment Factors.

School Level	Utilization Premium Payment Thresholds	Payment Factor
Elementary School	Projected three years in the future: <ul style="list-style-type: none"> • seat deficit \geq 110 seats and • utilization $>$ 120% 	25% of the standard impact tax for the School Impact Area
Middle School	Projected three years in the future: <ul style="list-style-type: none"> • seat deficit \geq 180 seats and • utilization $>$ 120% 	15% of the standard impact tax for the School Impact Area
High School	Projected three years in the future: <ul style="list-style-type: none"> • utilization $>$ 120% 	20% of the standard impact tax for the School Impact Area

The per unit payment amount due, if applicable, will be set at the time of the approval, but will be paid when the developer files for building permits. The Utilization Premium Payments will be calculated as a percentage of the applicable standard impact tax rates, as shown in Table 13. The factors vary by school level to reflect the relative impact housing units have on student enrollment at each level. Table 14 identifies applicable Utilization Premium Payment rates by School Impact Area and dwelling type.

Table 14. Proposed Utilization Premium Payment Factors and Amounts by School Impact Area and Unit Type.

Schools Exceeding Payment Thresholds	Premium Payment Factor	Turnover Impact Areas			Infill Impact Areas		
		Single-Family Detached	Single-Family Attached	Multifamily	Single-Family Detached	Single-Family Attached	Multifamily
Elementary School	25%	\$5,407	\$5,876	\$2,234	\$4,297	\$4,576	\$1,081
Middle School	15%	\$3,244	\$3,525	\$1,340	\$2,578	\$2,745	\$649
High School	20%	\$4,325	\$4,701	\$1,787	\$3,437	\$3,661	\$865
Total (if all three levels exceed the thresholds)	60%	\$12,976	\$14,102	\$5,362	\$10,312	\$10,982	\$2,595

The only exemptions from the Utilization Premium Payments would be:

- legacy development projects that received their approvals prior to adoption of the County Growth Policy and therefore without the Utilization Premium Payment condition of approval, and
- MPDUs (and other affordable units).

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Chapter 5 Transportation Element Recommendations

Here are the key objectives of the County Growth Policy²⁹ transportation elements.

- Prioritizing human life over mobility and other objectives of the road system. The road system should be safe for all users, for all modes of transportation, and in every community.
- Recognizing that the county’s communities span a variety of land use environments with a continuum of place-types across urban, suburban and rural areas, and the county’s area master plans, zoning and other supporting policies reflect the varied expectations in each environment for ease of travel by foot, bike, transit or car.
- Ensuring that both private sector development and public sector transportation infrastructure proceed in a coordinated fashion to achieve the master plan vision.
- Incentivizing development attributes that improve the efficiency of the planned transportation infrastructure through the management of travel demand³⁰ and parking supply.

Traffic is understandably a concern for people who live, work and play in Montgomery County. However, the solution isn’t halting development. If we do not allow development in the county, people will move, and businesses will build and develop outside of Montgomery County. With these moves, they’ll take their talent and contributions to the community – and their jobs and tax dollars – elsewhere.

Increased traffic is a byproduct of having great things in our community. When everyone wants to be here, naturally roads get more congested. This is one of the reasons the County Growth Policy is so important. It provides guideposts for planning smarter with needed transportation infrastructure and diverse transportation options. But as the county’s development patterns shift, we must ensure that the transportation tests we use to ensure a balance between proposed new development and transportation infrastructure shift to reflect these new realities.

The County Growth Policy plays a large role in offering better transportation options and mitigating increased traffic. The policy’s transportation elements serve a single purpose: ensuring that new residential and commercial development provides adequate public infrastructure facilities in an appropriate manner and to an appropriate extent. The policy is the process by which the county defines the term “adequacy” for transportation infrastructure and by which it defines the nexus between development and transportation adequacy. In particular, the County Growth Policy defines the processes for assessing how the travel demand generated by new development contributes to the need for, and the provision of, transportation facilities and services that are explicitly defined in master plans or consistent with those plans.

Currently, there are three means by which the development approval process affects the provision of transportation capacity, described below from the broadest to the narrowest focus.

- The Transportation Impact Tax assesses the degree to which all development contributes to funding the provision of significant master-planned transportation projects that the county is

²⁹ Note: Consistent with [Recommendation 3.1](#), we will refer to the updated 2020-2024 Subdivision Staging Policy as the County Growth Policy. We will continue to refer to the current policy, last updated in 2016, as the Subdivision Staging Policy, or SSP.

³⁰ Trips resulting from new residential and/or commercial development.

responsible for constructing. The impact tax, governed by Section 52 of the County Code, is not technically part of the County Growth Policy, but it is integral to the consideration of transportation impacts. This document recommends changes to the impact tax to be implemented concurrently with the County Growth Policy recommendations.

- The Local Area Transportation Review (LATR) process assesses the degree to which transportation conditions in the immediate vicinity of the development site are adequate, the extent of which is determined by the size of the project. The LATR is a set of transportation adequacy tests (applied to motor vehicle, transit, bike and pedestrian travel) for determining new development impacts on travel demand and intersection performance for local roads near the proposed development site. These tests are used to determine whether an area can support new development. If it cannot support new development, the LATR process determines what transportation facilities must be in place for new development to move forward or what traffic mitigation payment must be made toward areawide transportation needs.
- Finally, many site development approval conditions related to transportation are derived from other elements of the regulatory process, notably site layout design, mode access and internal travel circulation features, and are based on design standards that are independent of the County Growth Policy.

The Subdivision Staging Policy features multiple tools and measurements to determine if transportation infrastructure is adequate to support future development. It does this by analyzing current and future travel conditions; this analysis also informs how to create future land use and transportation balance in master plans. In addition, the SSP should align (to the extent possible) with other high priority county policies and initiatives – such as Vision Zero. Currently, the SSP relies on the application of: (1) the multimodal Local Area Transportation Review (LATR) process and Unified Mobility Programs (UMPs)³¹ for the evaluation of transportation adequacy for subdivision applications and (2) the motor vehicle transportation adequacy test for the evaluation of master plans.

To assist in updating the transportation elements of the policy, Montgomery Planning formed the Transportation Impact Study Technical Working Group (TISTWG). The TISTWG consists of key stakeholders, including staff representing the Montgomery Planning, Montgomery County Department of Transportation (MCDOT), Maryland State Highway Administration (MDSHA) and representatives of civic groups and the private development community. The TISTWG, working in collaboration with the Fehr & Peers DC/Toole Design consulting team, informed Montgomery Planning staff with the evaluation of alternative approaches and development of recommendations for the County Growth Policy. Further information about the TISTWG, including a member roster, is documented in Appendix J.

Montgomery County Policy Areas

Montgomery County is diverse, ranging from Metrorail-served Central Business Districts like Bethesda and Silver Spring to the rural Agricultural Reserve, with a wide range of built environments in between.

³¹ Unified Mobility Programs are pro-rata share districts in which each development contributes resources (whether facility construction or funding) towards a well-defined set of projects with the contribution defined in proportion to the relative level of demand contributed by that development. The pro-rata share concept can be expressed as a fraction in which the numerator is the private sector funding for total system supply and the denominator is the unit of development demand. Beyond this basic concept, the details of defining the numerator and denominator vary from place to place; they are dependent upon the physical, environmental, and political context. Currently, an UMP is operational in White Oak and another is under development in Bethesda.

The SSP has long recognized a one-size-fits-all approach does not satisfy the county’s transportation needs, but instead require a context-sensitive approach to defining transportation system adequacy, assessing impacts and developing and implementing solutions.

Montgomery County’s organizing approach has been to identify policy areas that broadly gauge the diversity of places within the county and help assess transportation needs from an areawide perspective. A major outcome of the 2016-2020 SSP was the division of the county into 38 different policy areas classified as Red, Orange, Yellow or Green.³² This change reflected the recognition that Policy Areas vary greatly by many characteristics, such as density, land use types, function and capacity of the road network, and availability of transit, bike and pedestrian facilities and services.

Most importantly, the transportation network serving each Policy Area has performance expectations that are established through the master plan process describing how these characteristics are to change over time. A more quantitative accounting of how Policy Areas differ now and in the future was developed as part of the 2016-2020 SSP review process as a means of distinguishing among place types so that the eventual “tests” for adequacy might better align with existing conditions as well as the future vision in the *1993 General Plan*.

Using existing Policy Area geographies, the Policy Areas are categorized (as depicted in Figure 26) by: (1) observed Non-Auto Driver Mode Share (NADMS)³³ for work trips; (2) observed land use density and (3) land use density forecasts. Relative to earlier policy area categorizations, the current Policy Area grouping is better aligned with the *1993 General Plan*, area master/sector plans and Road Code guidance regarding place types.

Currently, the SSP organizes County Policy Areas into four (4) categories described as follows and depicted in the map below:

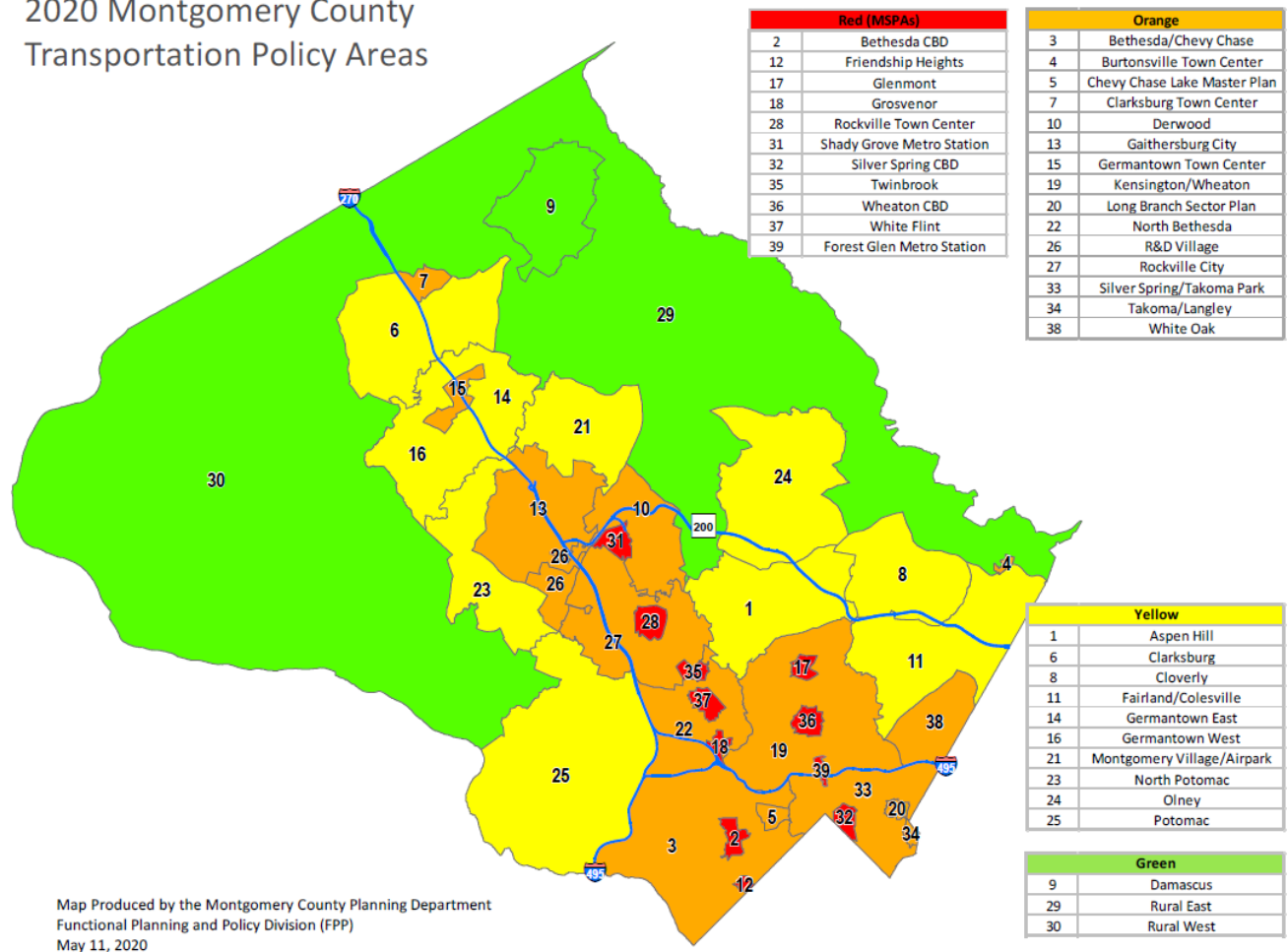
- **Red (MSPAs):** Downcounty Central Business Districts and Metro Station Policy Areas characterized by high-density development and the availability of premium transit service (i.e., Metrorail/MARC).
- **Orange:** Corridor cities, town centers, and emerging Transit-Oriented Development (TOD) areas where premium transit service (i.e., Corridor Cities Transitway, Purple Line/bus rapid transit) is planned.
- **Yellow:** Low-density areas of the county characterized by mainly residential neighborhoods with community-serving commercial areas.
- **Green:** The county’s Agricultural Reserve and rural areas.

³² The Forest Glen MSPA will be added as the 39th policy area as part of this SSP update.

³³ Non-Auto Driver Mode Share is defined as the sum of all person trips made **not** as the driver of an automobile.

Figure 26. County Policy Areas Organized by Four Categories.

2020 Montgomery County Transportation Policy Areas



Multimodal Local Area Transportation Review

Local Area Transportation Review (LATR) is the transportation adequacy test used to evaluate local-level transportation conditions affected by proposed development. The current process is context-sensitive in its application, with individual tests for vehicular, pedestrian, bicycle and transit travel, as described below.

Motor vehicle adequacy is defined by a series of intersection level of service standards by policy area and includes volume to capacity ratios, average vehicle delay, and Critical Lane Volume (CLV). For signalized intersections located within Red or Orange policy areas, the Highway Capacity Manual (HCM) operational (delay-based) level of service standard applies to all study intersections. For signalized intersections located within Yellow or Green policy areas, the CLV-based level of service standard applies to study intersections with a CLV of 1,350 or less, and the Highway Capacity Manual delay-based level of service standard applies to study intersections with a CLV of more than 1,350. The concept of travel time reliability was introduced to the *2017 LATR Guidelines* through a reference to the regional congestion management report; signalized intersections on roadway segments that have an observed travel time index of 2.0 must perform a network analysis that considers queuing and spillback.

Pedestrian system adequacy is defined as providing level of service (LOS) D³⁴ service or better for any signalized crosswalk. The methodology for evaluating pedestrian level of service is described in the 2010 HCM in Chapter 18. Any site that generates more than 50 pedestrian peak hour trips (including trips to transit) must:

- Fix (or fund) Americans with Disabilities Act (ADA) non-compliance issues within a 500-foot radius of site boundaries, and
- Ensure LOS D for crosswalk pedestrian delay (or no more delay than existing) at LATR study intersections within 500 feet of site boundaries or within areas where the county's road construction code specifies use of urban design standards.

Regardless of the development size and location, if an intersection operational analysis is triggered for any intersections within a Road Code Urban Area (RCUA)³⁵ or Bicycle Pedestrian Priority Area (BPPA)³⁶, mitigation must not increase average pedestrian crossing time at the intersection.

Bicycle system adequacy is defined as providing a low Level of Traffic Stress (LTS) for bicyclists. For any proposed development generating at least 50 peak-hour, non-motorized trips and located within a quarter mile of an educational institution or existing/planned bikeshare station, the applicant must make improvements needed to provide low Level of Traffic Stress (LTS-2) conditions that link the site to or otherwise extend an LTS-2 facility within 750 feet of a development site boundary or implement a master-planned improvement that provides an equivalent improvement in LTS.

Transit system adequacy for LATR is defined as providing a peak load of LOS D for bus transit service routes (1.25 transit riders per seat) during the peak period (in the peak direction). For any development generating at least 50 peak-hour transit riders, the applicant must inventory bus routes at stations/stops within 1,000 feet of the site and identify the peak load for each route at that station. The applicant must coordinate with the transit service provider to identify and implement (or fund) improvements that would be needed to address conditions worse than LOS D due to additional patrons generated by the development.

Over time, in lieu of LATR, the county will expand the application of Unified Mobility Programs for specific small areas countywide. In its simplest form, UMPs involve the development of: (1) trip forecasts for a sub-area and (2) the capital costs necessary to fund the supporting sub-area master-planned infrastructure in order to determine a cost per trip to be applied to proposed development within the area in question.

Motivation for Changes to the Local Area Transportation Review Adequacy Test

The 2016-2020 Subdivision Staging Policy guides the current LATR process. This process was not informed by the [county's adoption of Vision Zero](#)³⁷ earlier that same year.

The county's [2020 Vision Zero Action Plan](#) recommends updating the Subdivision Staging Policy to align with Vision Zero principles, some of which can be conceivably incorporated into LATR and transportation impact studies. These Vision Zero principles include:

³⁴ Pedestrian level of service D – a pedestrian's freedom to select walking speed and pass others is restricted, there is a high probability of conflicts for reverse or cross movements.

³⁵ <https://montgomeryplanning.org/planning/transportation/highway-planning/road-code/>

³⁶ <https://www.montgomerycountymd.gov/dot-dte/BiPPA/index.html>

³⁷ Vision Zero is a proven strategy to prevent transportation-related deaths and severe injuries.

- **Transportation-related deaths and severe injuries are preventable and unacceptable.**
- **Human life takes priority over mobility and other objectives of the road system.** The road system should be safe for all users, for all modes of transportation, and every community
- **Human error is inevitable;** the transportation system should be designed to anticipate error, so the consequences are not severe injury or death. Advancements in vehicle design and technology, as well as roadway engineering advancements, personal electronic device innovations, etc., are necessary components for avoiding the impacts of human errors.
- **People are inherently vulnerable, and speed is a fundamental predictor of crash survival.** The transportation system should be designed for speeds that protect human life.
- **Safe human behaviors, education and enforcement are essential contributors to a safe system.**
- **Policies at all levels of government need to align, making safety the highest priority for roadways.**

The transportation recommendations described below seek to better reflect these principles in the current LATR process.

Vision Zero Resources

Recommendation 5.1: Design roads immediately adjacent to new development to account for all identified recommendations from applicable planning documents including Functional Plans, Master Plans and Area Plans.

Since adopting the Vision Zero Action Plan, the county launched several Vision Zero-related initiatives. These initiatives should be leveraged and incorporated into the LATR process. Some of these initiatives have been completed and adopted while others are ongoing and could be incorporated in the future, including

- [Bicycle Master Plan](#) – adopted
- [Pedestrian Master Plan](#) – ongoing
- [High Injury Network](#) – completed
- [Predictive Safety Analysis](#) – ongoing
- [Bicycle Level of Traffic Stress Map](#) – completed
- [Pedestrian Level of Comfort Map](#) – ongoing
- [Vision Zero Toolkit](#) – ongoing
- [Complete Streets Design Guide](#) – ongoing

The resources listed above, in particular the Bicycle Level of Traffic Stress and Pedestrian Level of Comfort Map, are only useful if the models are built on data that accurately reflects the conditions for bicyclists and pedestrians. To support Recommendation 5.1, the transportation consultant shall check the accuracy of the bicycle and pedestrian network attributes in the county’s database relative to the observed existing conditions in the context of performing a transportation impact study for any development project. The consultant should identify any inaccurate network attributes and any attributes to be updated in accordance with the development “as built” plans and report this information to Montgomery Planning to update the county’s databases accordingly.

Mitigation Priorities

Mitigation strategies to increase vehicular capacity or reduce delay for motor vehicles may be counter to Vision Zero principles. Increases in speed or increasing motor vehicle capacity through roadway widening,

signal phasing or timing changes may increase hazards for pedestrians, bicyclists and drivers. It is critical that any capacity-based mitigation strategy does not negatively impact the safety of any roadway user. As listed in preferential order below, the current *LATR Guidelines* prioritize the application of modal mitigation approaches as follows when projected traffic generated from proposed projects exceeds the applicable policy area congestion standard:

- *Transportation demand management (TDM) approaches to reduce vehicular demand*
- *Pedestrian or bicycle improvements*
- *Transit facility or service improvements*
- *Intersection operational improvements*
- *Roadway capacity improvements*

In Road Code Urban Areas (RCUAs) and Bicycle Pedestrian Priority Areas (BiPPAs), adjusting the prioritization of mitigation approaches listed above may allow for developer mitigation payment in lieu of construction.

Recommendation 5.2: Prioritize mitigation strategies designed to improve travel safety.

With Recommendation 5.2, Montgomery Planning recommends using the following revised list of mitigation strategies to prioritize the application of modal mitigation approaches in the context of the subdivision review process:

- crash mitigation strategies to achieve Vision Zero, such as those identified in the Vision Zero Toolkit
- transportation demand management (TDM) approaches to reduce vehicular demand
- pedestrian or bicycle improvements beyond the development site frontage including those identified in the Pedestrian Master Plan and Bicycle Master Plan
- transit facility or service improvements
- intersection operational improvements
- roadway capacity improvements

Development Review Committee

Upon submission of a development application, the Development Review Committee (DRC), comprised of representatives from public agencies and utilities, discuss the application with Montgomery Planning and provide comments on the development application. Staff then prepares recommendations to present to the Planning Board as part of the public hearing on the proposed site plan. The DRC plays an important role in the development review process and should be used as a platform to elevate travel safety principles. An appropriate individual with a focus on Vision Zero, representing a public agency or Vision Zero advocacy group, should be incorporated into the committee.

Recommendation 5.3: Given the additional focus on Vision Zero principles in the development review process, add a specific Vision Zero representative to the Development Review Committee to review the development application and Vision Zero elements of LATR transportation impact studies and to make recommendations regarding how to incorporate the conclusions and safety recommendations of LATR transportation impact studies.

Transportation Impact Study Approach

A literature review of similar efforts by other selected jurisdictions aided Montgomery Planning in identifying approaches for enhancing integration of Vision Zero goals and objectives into the multi-modal

LATR process. The findings derived from the literature review informed identification of the transportation impact study approach recommendations described below.

Recommendation 5.4: Introduce a Vision Zero Impact Statement for all LATR studies pertaining to subdivisions that will generate 50 or more peak-hour person trips.

To ensure development is executed to better align with Vision Zero principles, all LATR studies must include a Vision Zero Impact Statement that describes:

- any segment of the high injury network located on the development frontage.
- crash analysis for the development frontage.
- an evaluation of the required sight distance for all development access points.
- identification of conflict points for drivers, bicyclists and pedestrians and a qualitative assessment of the safety of the conflict.
- a speed study including posted, operating, design and target speeds.
- any capital or operational modifications required to maximize safe access to the site and surrounding area, particularly from the Vision Zero Toolkit³⁸.

In addition, mitigation recommendations from the capacity-based adequacy determination must address the needs identified in the Vision Zero Impact Statement and the current Pedestrian and Bicycle Impact Statement. A goal of the requirements listed immediately above is to ensure Vision Zero resources accurately reflect conditions on the development frontage.

Recommendation 5.5: For LATR studies of new development generating 50 or more peak-hour weekday person trips, couple current multi-modal transportation adequacy tests with options that can be implemented over time utilizing Vision Zero-related tools and resources currently available and under development. When the appropriate set of tools described in the Vision Zero Resources section above are operational, the current multi-modal transportation adequacy tests should be updated as described below.

Because the various modes of the transportation system are not isolated, adequacy tests are required if the new development produces greater than 50 peak-hour weekday person trips. The motor vehicle system adequacy test is required if the site generates at least 50 peak-hour person trips. The pedestrian, bicycle and transit system adequacy tests are required if the given mode generates at least five peak-hour trips by that mode, with an exception for the Americans with Disabilities Act (ADA) component of the pedestrian system adequacy test which is required if the site generates 50 or more peak-hour pedestrian trips.

Safety System Adequacy

Safety system adequacy will be defined through a **Vision Zero test**. This test will entail a safety performance analysis that will be performed utilizing a safety performance function (SPF). A SPF is an equation used to predict the number of crashes per year at a location as a function of exposure, land use and roadway or intersection characteristics. Development can impact the factors that influence the estimated number of crashes. The county is conducting a Predictive Safety Analysis for estimating SPFs and the estimated number of crashes for common crash types. **After the county develops this resource,**

³⁸ The Montgomery County Planning Department is developing a detailed document for community members to explain Vision Zero concepts and crash mitigation strategies for common crash risks. A draft toolkit is under review by the Department.

safety system adequacy will be defined as no increase to the estimated number of crashes (based on SPFs) for the build conditions at each of the study intersections. This method should factor in development-generated site trips as well as development-related changes to the transportation network and public space. If the number of expected crashes is found to increase with the new development traffic, safety mitigation must be applied in order to reduce the number of expected crashes at each study intersection to predevelopment levels. The developer should make a fair share contribution to mitigation at study intersections that are not direct access points to the development.

The process and final recommendation for utilizing the SPF approach in the Vision Zero test should be refined and described in greater detail after the Montgomery County Planning Department completes the Predictive Safety Analysis. Until the SPF methodology can be applied as the safety test to measure the safety system adequacy, Crash Modification Factors³⁹ (CMF) should be used to determine the system adequacy. No mitigation to address capacity at any study intersections should have a CMF greater than 1.0 per the Crash Modification Factor Clearinghouse.

Motor Vehicle System Adequacy

Maintaining the adequacy measurement from the current LATR Guidelines, motor vehicle adequacy related to capacity will be defined by the applicable policy area intersection level of service traffic congestion standard. For intersections located within Red or Orange policy areas, the Highway Capacity Manual operational (delay-based) level of service standard applies to all study intersections⁴⁰. For intersections located within Yellow or Green policy areas, the critical lane volume (CLV) level of service standard applies to study intersections with a CLV of 1,350 or less. The Highway Capacity Manual delay-based level of service standard applies to study intersections with a CLV of more than 1,350. Vehicular capacity mitigation must not negatively impact the results of the safety test.

Pedestrian System Adequacy

The current standard for pedestrian system adequacy, will be updated to apply to any site generating at least five pedestrian peak-hour trips (including trips to transit), is the ability to travel via somewhat comfortable or very comfortable routes based on the Pedestrian Level of Comfort⁴¹ (PLOC) to destinations within 500 feet of a development site boundary – including commercial centers, transit stations, schools, parks, libraries, recreation centers, medical facilities, among other things – or transit stops within 1,000 feet of the development site boundary. If current conditions are not adequate, the applicant must construct up to 1,000 feet of improvements to achieve adequacy from the site frontage. Specific improvements to be constructed should be identified in consultation with Montgomery Planning. Additionally, at any site generating at least 50 pedestrian peak-hour trips (including to transit) all ADA noncompliance issues should be addressed within a 500-foot radius of site boundaries.

The pedestrian adequacy test should also include an evaluation of existing street lighting based on Montgomery County Department of Transportation (MCDOT) standards along roadways or paths from the development to destinations within 500 feet of the development site boundary or to transit stops within 1,000 feet of the development site boundary. Where standards are not met, street lighting shall be upgraded to meet the applicable standards. The streetlight field review shall include a field inventory of

³⁹ <http://www.cmfclearinghouse.org/>

⁴⁰ Although all signalized intersections in Red and Orange policy areas are subject to Highway Capacity Manual analysis, intersections analyzed as part of a corridor will reflect the average delay of the entire corridor rather than the subject intersection in isolation.

⁴¹ <http://montgomeryplanning.org/wp-content/uploads/2018/10/Pedestrian-Level-of-Comfort-Description.pdf>

existing streetlight and pedestrian scale fixtures with current spacing and general location of luminaire noted (utility pole mounted, stand-alone pole mount, or pedestrian scale). All longitudinal spacing or intersection locations that do not meet MCDOT standards should be noted. Note this inventory is not intended to be a full lighting study with measurement of illuminance levels but will identify missing lighting locations at intersections as well as longitudinal spacing deficiencies as per MCDOT streetlight standards.

Bicycle System Adequacy

Maintaining the adequacy measurement from the current LATR Guidelines, bicycle system adequacy will be defined as providing a low or very low Level of Traffic Stress (LTS) for bicyclists. The current test should be updated to apply to any site generating at least five bicycle peak-hour trips. If current connections are not adequate, the applicant must construct up to 750 feet of side-paths, separated bike lanes, or trails that create or extend a low level of traffic stress up to 750 feet from the site frontage. In consultation with Montgomery Planning, the improvements to be constructed will be informed by the Bicycle Master Plan priority tiers.

Transit System Adequacy

To better reflect access to transit stops, the capacity-based adequacy test for the transit system will be maintained from the current LATR Guidelines but should be updated to apply to any site generating at least five peak-hour transit trips. The standard for transit system adequacy is defined as providing a peak load of level of service (LOS D) for bus transit service routes (1.25 transit riders per seat) during the peak period in the peak direction. The development applicant must inventory bus routes at stations/stops within 1,000 feet of the site and identify the peak load for each route at that station. The applicant must coordinate with the transit service provider to identify and implement (or fund) improvements needed to address conditions worse than LOS D due to additional patrons generated by the development.

Transportation Impact Study Scoping

Application of LATR in Red Policy Areas

Recommendation 5.6: Eliminate the LATR study requirement for motor vehicle adequacy in Metrorail Station Policy Areas (MSPAs).

The Red Metrorail Station Policy Areas of the county share several characteristics that make the application of the traditional LATR study approach in these areas problematic.

- The application of capacity-based level-of-service (LOS) measures often results in mitigation requirements that are in direct conflict with Vision Zero-related travel safety goals and objectives.
- For transportation efficiency, development is most desirable in these areas to leverage the significant investment in the Metrorail system, so streamlining the development approval process is most important in these areas.
- Relative to other areas, the transportation infrastructure in Red Metrorail Station Policy Areas is the most complex, and desired master-planned improvements are most likely to be multimodal and operational in nature rather than capacity-based improvements for any single mode.
- The multimodal environment in these areas supports the long-standing policy acceptance of higher levels of traffic congestion (a 120 seconds/vehicle Highway Capacity Manual average intersection vehicle delay standard); combined with the fact that most MSPAs have a robust

street grid that disperses traffic resulting in relatively few LATR studies requiring transportation improvements.

For these reasons, this recommendation eliminates the motor vehicle adequacy component of the LATR study requirement for MSPAs. Instead, the assessment of motor vehicle transportation system performance in these areas should be performed through the biennial monitoring program⁴², including a Comprehensive Local Area Transportation Review⁴³ (or comparable analysis), to identify and prioritize master planned infrastructure implementation needs. Concurrently, the establishment of Unified Mobility Programs (UMPs) should be considered for MSPAs, as appropriate.

Transit Corridor LATR Intersection Congestion Standard

Two major planning initiatives that focus on increasing the level of high-quality transit service in the county were recently adopted or are in various stages of long-range planning or implementation. These initiatives and supportive proposed policy changes are described below.

Montgomery County Transit Corridors

The adopted *2013 Countywide Transit Corridors Functional Master Plan* (CTCFMP) recommends the corridors depicted in Figure 27 for bus rapid transit (BRT) service. Several of these BRT corridors are currently identified for project implementation in Visualize 2045, the federally required long-range transportation plan for the National Capital Region⁴⁴.

These transit corridors traverse Red, Orange and, to a much lesser degree, Yellow policy areas currently designated with average delay standards ranging from 51 to 120 seconds/vehicle for signalized intersections.

Recommendation 5.7: Increase the intersection delay standard to 100 seconds/vehicle for transit corridor roadways in Orange and Yellow policy areas to promote multi-modal access to planned Bus Rapid Transit service in transit corridors.

This proposed change reflects a conceptual “hybrid” of the average intersection delay standards currently designated for Red and Orange policy areas. The current applicable average delay standards for other signalized intersections not located along transit corridor roadways in these Orange and Yellow policy areas will be retained. This policy change is consistent with the recommendation in the recently adopted *2019 Veirs Mill Corridor Master Plan* for signalized intersections along Veirs Mill Road (MD 586).

This County Growth Policy update recommends the elimination of the LATR Motor Vehicle Adequacy test requirement in MSPAs. As a result, this proposed 100 seconds/vehicle average intersection delay policy will **not** apply to signalized intersections along transit corridor roadways in MSPAs.

Table 15 depicts the current and proposed intersection congestion standards for the transit corridor roadways that will result from the application of this policy.

⁴² A key element of the program would be a Biennial Report to be developed during the spring of each odd-numbered year and incorporated with biennial status reports that help inform development of the County Executive’s biennial Capital Improvement Program during the following fall.

⁴³ A comprehensive transportation analysis that will identify and recommend for County Council approval and action specific projects and services necessary to promote adequate transportation service.

⁴⁴ Montgomery County BRT projects identified in Visualize 2045 are US 29, MD 355, New Hampshire Avenue, Randolph Road and the Corridor Cities Transitway.

Figure 27. Recommended Transit Corridors Identified in the Countywide Transit Corridors Functional Master Plan, 2013.

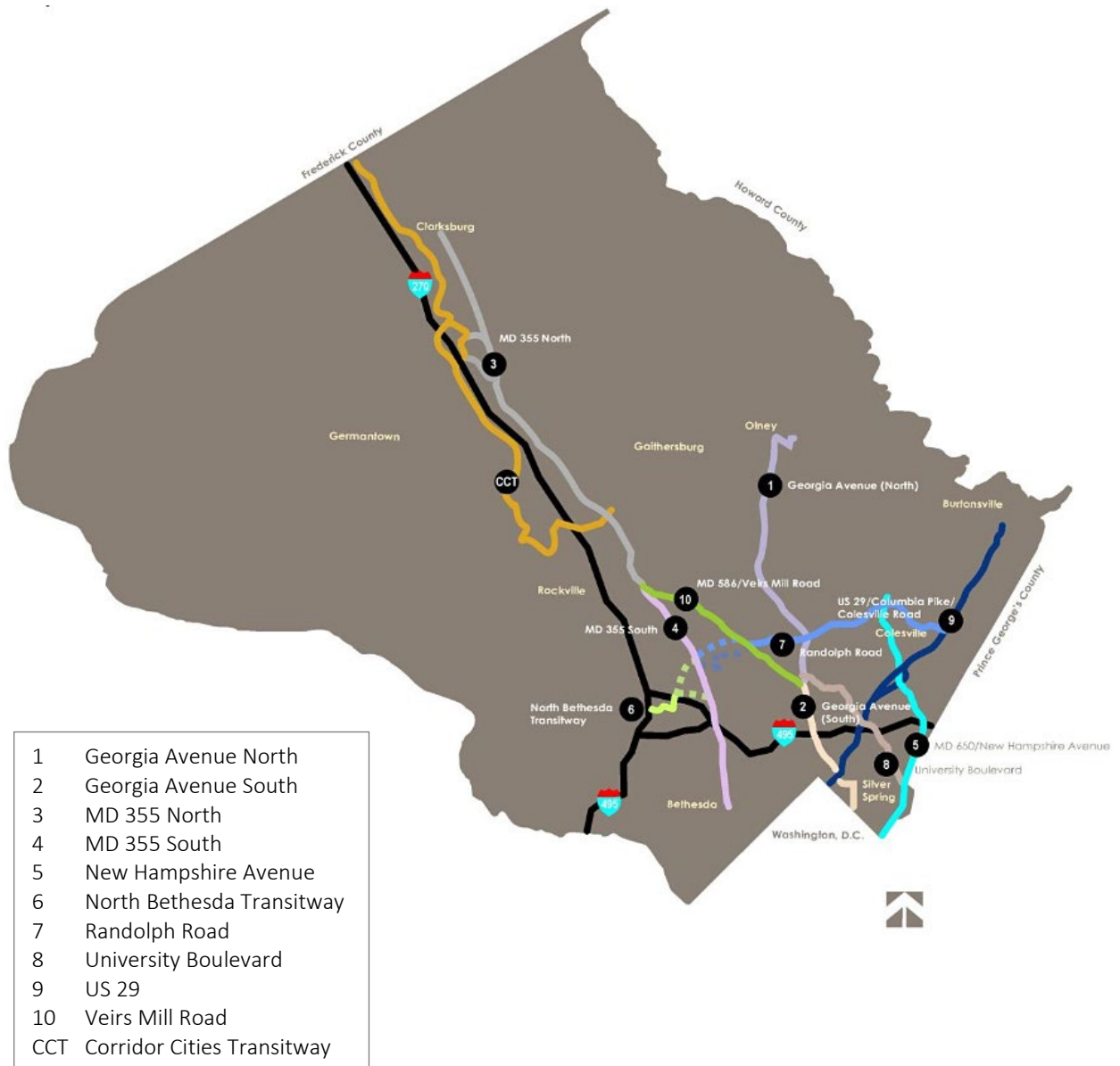


Table 15. Proposed Transit Corridor Roadway Congestion Standards (for signalized intersections).

Transit Corridor Roadway (1)	Policy Area(s) Traversed	Policy Area Category	Current Congestion Standard (secs/veh)	Proposed Congestion Standard (secs/veh)
1. Georgia Avenue North	Olney	Yellow	55	100
	Aspen Hill	Yellow	59	
2. Georgia Avenue South	Kensington/Wheaton	Orange	80	100
	Silver Spring/Takoma Park	Orange	80	
3. MD 355 North	Clarksburg	Yellow	51	100
	Clarksburg Town Center	Orange	63	
	Germantown East	Yellow	51	
	Germantown Town Center	Orange	63	
	Gaithersburg City	Orange	51	
	Rockville City	Orange	63	
4. MD 355 South	Rockville City	Orange	63	100
	North Bethesda	Orange	71	
	Bethesda/Chevy Chase	Orange	80	
5. New Hampshire Avenue	Fairland/Colesville	Yellow	59	100
	White Oak	Orange	80	
6. North Bethesda Transitway: Old Georgetown Road (2) Rock Spring Drive	North Bethesda	Orange	71	100
7. Randolph Road	Kensington/Wheaton	Orange	80	100
	White Oak	Orange	80	
8. University Boulevard	Kensington/Wheaton	Orange	80	100
	Silver Spring/Takoma Park	Orange	80	
9. US 29	Burtonsville Town Center	Orange	71	100
	Fairland/Colesville	Yellow	59	
	White Oak	Orange	80	
	Kensington/Wheaton	Orange	80	
	Silver Spring/Takoma Park	Orange	80	
10. Veirs Mill Road (3)	Kensington/Wheaton	Orange	80	100
	Aspen Hill	Yellow	59	
	North Bethesda	Orange	71	
	Rockville City	Orange	63	
11. Corridor Cities Transitway (4): Century Boulevard Observation Drive	Germantown West	Yellow	51	100
	Germantown Town Center	Orange	63	
	Germantown East	Yellow	51	
	Clarksburg	Yellow	51	

Notes:

- (1) Proposed policy would **not** apply to roadway segments traversing MSPAs. Pursuant to [Recommendation 5.6](#), the LATR intersection congestion standard in MSPAs is proposed to be eliminated.
- (2) Proposed intersection congestion standard policy change would be consistent with the State Highway Administration’s planned road diet along Old Georgetown Road.
- (3) Proposed policy already established on this roadway pursuant to recommendation of the adopted *2019 Veirs Mill Corridor Master Plan*.
- (4) Much of the Corridor Cities Transitway alignment south of Metropolitan Grove is within the municipalities of Gaithersburg and Rockville, which administer their own adequate public facilities policies. As a result, this proposed policy will not apply to roadways within the municipal rights of way.

The Purple Line

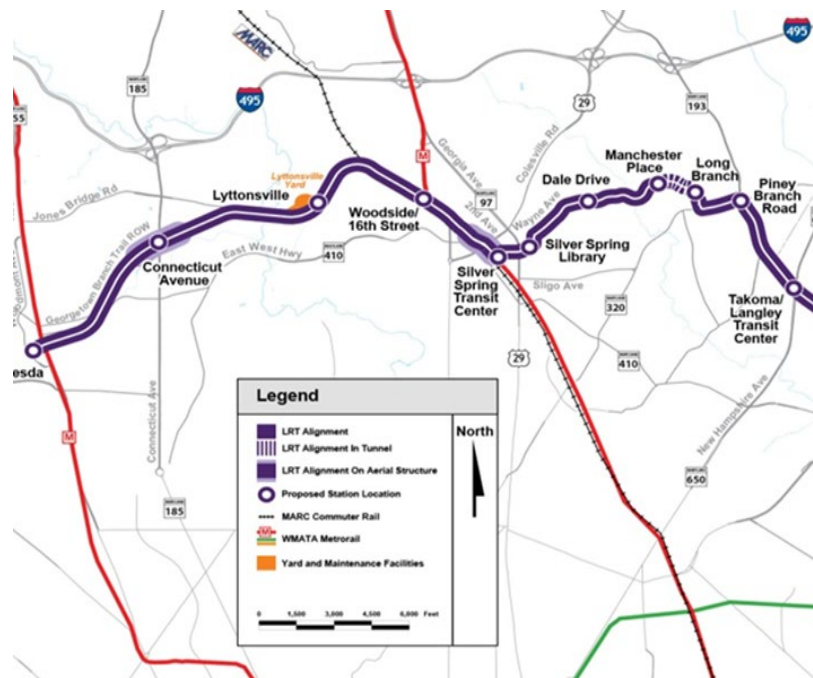
Construction is currently underway for the Purple Line (Montgomery County alignment depicted in Figure 28 below), a proposed 16-mile light rail transit (LRT) line with 21 stations, which will run from Bethesda to New Carrollton and provide direct connections to Metrorail, local and inter-city bus, the MARC train and Amtrak. This project will serve as an east-west route connector for Montgomery and Prince George's counties. Completion of construction is anticipated in 2023.

The Purple Line alignment traverses three areas, designated as Purple Line station policy areas, where planned Purple Line transit service should be leveraged to support transit-oriented development:

- Long Branch,
- Takoma/Langley, and
- Chevy Chase Lake.

Currently, these Purple Line Station policy areas are categorized as orange – consistent with their “parent” Bethesda/Chevy Chase and Silver Spring /Takoma Park policy areas. In recognition of the availability of improved transit service and development potential the Purple Line will bring to the Purple Line Station policy areas, a change in how these areas are categorized in the SSP is warranted.

Figure 28. Montgomery County Purple Line Alignment



Recommendation 5.8: Place the three Purple Line Station policy areas in a new dark red policy area category (Figure 29). Conceptually, this change will reflect a “hybrid” between the red and orange policy area categorization. Commensurate with this new categorization, the congestion standard for signalized intersections and transportation impact tax rates in the Purple Line Station policy areas will change as described in Table 16 and Table 17, respectively.

Figure 29. Montgomery County Organized by Five Policy Area Categories – Including Proposed Purple Line Station Policy Area Category.

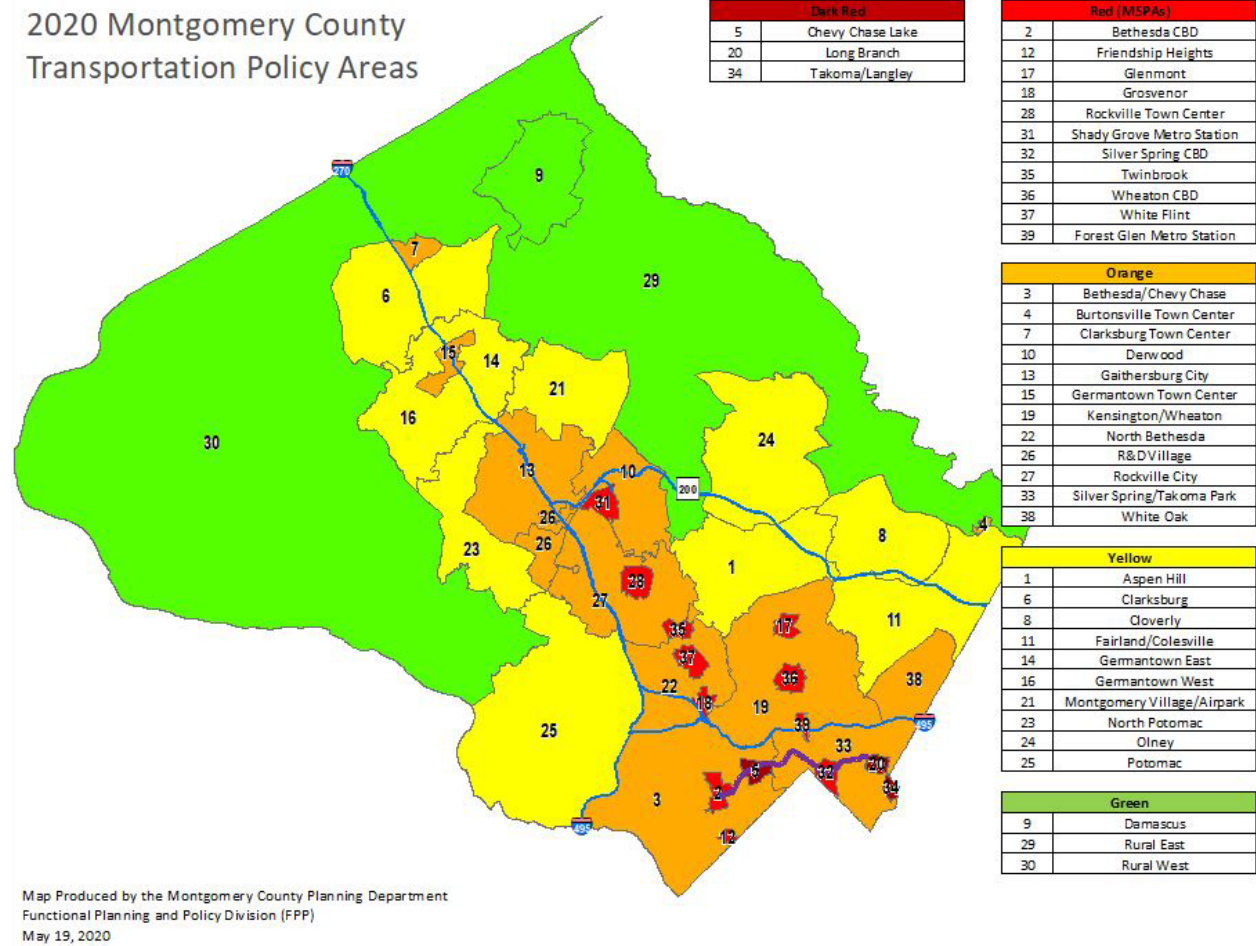


Table 16. Recommended Intersection Delay Standard Changes to Purple Line Station Policy Areas.

Purple Line Station Policy Area	Current HCM Delay Standard (seconds/vehicle)	Proposed HCM Delay Standard (seconds/vehicle)
Long Branch	80	100
Takoma/Langley	80	100
Long Branch	80	100

Table 17. Proposed Transportation Impact Tax Rates for Purple Line Station Policy Areas.

Building Type	Red Policy Areas (Metro Stations)	PROPOSED Dark Red Policy Areas (Purple Line Stations)	Orange Policy Areas	Yellow Policy Areas	Green Policy Areas
Residential Uses (per unit)					
Single-Family detached	\$7,838	\$13,715	\$19,591	\$24,490	\$24,490
Single-Family attached	\$6,413	\$11,222	\$16,030	\$20,038	\$20,038
Multifamily Low Rise	\$4,986	\$8,726	\$12,465	\$15,582	\$15,582
Multifamily High Rise	\$3,561	\$6,233	\$8,904	\$11,130	\$11,130
Senior Residential	\$1,424	\$2,493	\$3,562	\$4,452	\$4,452
Student-Built Houses	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Commercial Uses (per sq. ft. Gross Floor Area, unless noted)					
Office	\$7.15	\$12.53	\$17.90	\$22.40	\$22.40
Industrial	\$3.60	\$6.25	\$8.90	\$11.20	\$11.20
Bioscience facility	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Retail	\$6.35	\$11.18	\$16.00	\$19.95	\$19.95
Place of worship	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Clergy House (per unit)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Private elementary and secondary school	\$0.55	\$1.00	\$1.45	\$1.85	\$1.85
Hospital	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Charitable, Philanthropic Institution	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Other nonresidential	\$3.60	\$6.25	\$8.90	\$11.20	\$11.20

Recommendation 5.9: Continue producing the Mobility Assessment Report (MAR) on a biennial schedule as a key travel monitoring element of the County Growth Policy.

The MAR is a biannual monitoring report that summarizes transportation datasets to track and measure various mobility metrics in Montgomery County. A key purpose of the report is to inform residents and public officials of how the transportation system is changing, evolving, and performing within the county.

This recommendation recognizes and supports the need for increased reliance on travel monitoring requirements going forward in response to the proposed changes to LATR transportation study requirements.

Re-introduction of a Policy Area-level Review for Master Planning

Ideally, every master plan balances its proposed land use with its proposed transportation network and services. For more than two decades, the county defined this “balance” as what is needed to meet the current adequate public facilities (APF) requirements as described in the Subdivision Staging Policy (SSP). Achieving this balance in a master plan is not an academic exercise; if a plan is not balanced, then at some point a proposed master-planned development will be unable to proceed because it has no means to meet the APF requirements.

The adopted 2016-2020 SSP eliminated the policy area-level transportation adequacy test, largely due to the desire to streamline the subdivision review process. The LATR transportation adequacy test was retained and updated in the 2016-2020 SSP to reflect traffic congestion standards for signalized intersections in Montgomery County policy areas based on volume/capacity ratio (using the Highway Capacity Manual method), which translates to an average vehicle delay measured in seconds/vehicle and equivalent level of service (LOS) for automobile travel.

To determine whether or not a master plan is in balance, the County Council applies the LATR transportation adequacy test in the context of a long-range planning horizon (typically 20 to 25 years into the future). This test (as described in the Vision Zero integration into LATR discussion provided above) evaluates the traffic generated by master-planned development buildout in combination with a transportation network that assumes certain intersection improvements. This analysis methodology has utility when used to evaluate local transportation adequacy for a subdivision application in a Capital Improvement Program (CIP) planning horizon context (i.e., five to six years into the future). However, the utility of this approach raises some concerns when used to evaluate transportation adequacy for master plans/sector plans in the context of a long-range planning horizon, including:

- **No Consideration of Areawide Effects** – The current HCM-based LATR analysis process is limited to the evaluation of the local signalized intersection roadway network within a master plan study area to assess the adequacy of the master-planned transportation system to accommodate master-plan recommended land use development. However, this process does not help understand the implications of master plan recommendations in a broader areawide context. Conventional intersection-based analysis also typically emphasizes the additive nature of automobile trips generated by land use development. However, well-planned land use development also has the potential to change trip distribution patterns, to shorten trips, and to shift the mode of travel by providing new destination options in closer proximity.
- **Limited Confidence in Analysis Results** – The application of the HCM intersection delay analysis process is appropriate in the context of a CIP planning horizon (five to six years) when traffic signal-phasing and signal-timing operations parameters used as key analysis inputs can be generally assumed with confidence rather than in a long-term master-planning horizon (20-25 years) when assumptions pertaining to these parameters are far more speculative. As a result, the confidence associated with projecting accurate estimates of intersection delay in the context of a long-term master-planning horizon is limited.

The following recommendations focus on re-introducing a policy area-level transportation adequacy review process for the evaluation of master plans and sector plans to address the concerns cited above associated with using LATR for this purpose.

Policy Area Review

Following are recommendations pertaining to alternative areawide transportation adequacy review approaches for consideration as a potential replacement for the current LATR-based approach used to evaluate the transportation adequacy of master plans. Montgomery Planning anticipates that one of these approaches will ultimately be selected to support master plan evaluation.

Thresholds for the proposed metrics are typically set at a value greater or less than the future baseline conditions. Future baseline conditions currently reflect the modeled land use program for the year 2040, including the Metropolitan Washington Council of Governments' (MWCOG) cooperative forecasts and any adopted master plans, as well as any programmed transportation improvements for the year 2040. These may be revised as plans are updated. In the case of the Low-Stress Bike Accessibility metric, the 2018 Montgomery County Bicycle Master Plan provides the bicycle network baseline, while land use changes would reflect the MWCOG cooperative forecasts and any adopted master plans.

Any changes contemplated in an evaluated master plan will be compared against conditions in the region in the absence of the changes contemplated in the master plan under evaluation using the information available at the time of evaluation. This comparison to future baseline is used to evaluate whether the

master plan under evaluation continues to provide the same level (or an improved level) of public-facility adequacy relative to a previously adopted plan.

A high-level overview of calculation methodologies is described below for purposes of illustrating the meaning of the metrics. Montgomery Planning anticipates retaining the flexibility to adjust the specific calculation approach at the time of master plan evaluation, including sensitivity to the rounding of threshold values.

Finally, application example discussions are provided for each metric. These examples do not reflect complete, calculated results from model runs, they are designed to illustrate how the metrics might play out in practice.

Auto and Transit Accessibility

Recommendation 5.10: The proposed auto and transit accessibility metric is the average number of jobs that can be reached within a 45-minute travel time by automobile or walk access transit.

This metric indicates accessibility to destinations and better reflects existing and planned multi-modal travel options and transit-supportive land use densities, and better aligns growth with the provision of adequate public facilities. This metric can also demonstrate accessibility tradeoffs of new destination options, increased density of development, increased congestion and transportation network changes.

As the number of jobs in the region grows, each county resident will have access to more jobs. With increasing traffic congestion, job accessibility in some policy areas will slightly decrease. As long as these policy areas already have above average access to jobs, the net effect of adding more residents to those policy areas is to increase average jobs accessibility – thereby encouraging development in more accessible locations.

Auto and transit accessibility must meet or exceed future baseline conditions. The threshold proposed for auto and transit accessibility is the average number of jobs accessible within 45 minutes for future baseline conditions. Montgomery County’s regional travel demand model known as “Travel/4,”⁴⁵ provides “skims,” which are tables representing the auto and transit time needed to travel from each transportation analysis zone (TAZ) to every other TAZ in the modeled region. For each TAZ, the number of jobs accessible to that TAZ is equal to the sum of the number of jobs in that TAZ with a skim value less than or equal to 45 minutes. These values are then averaged for all of Montgomery County, weighted by the population of each TAZ to reflect the average number of jobs accessible to a Montgomery County resident. When calculated using the Travel/4 model in February 2020, these values were:

- 1,159,950 jobs on average accessible within 45 minutes by auto
- 134,160 jobs on average accessible within 45 minutes by transit

Hypothetical Application Example – Clarksburg (Yellow Policy Area)

A proposed master plan for Clarksburg contemplates the addition of significantly more housing than included in the future baseline, with all other considerations being equal. Because Clarksburg has lower average values of both jobs accessible by auto within 45 minutes (349,250) and jobs accessible by transit (850) than the Montgomery County average, it is likely that this increase in residents will reduce the

⁴⁵ Travel/4 is a Montgomery County-focused adaptation of the regional travel demand model used by the Metropolitan Washington Council of Governments.

Montgomery County average and the master plan will not meet the thresholds. To meet the thresholds, Clarksburg does not need to reach the Montgomery County average; it just needs to maintain or improve the overall Montgomery County average. What are examples of the ways the master plan could be modified to improve the county average and demonstrate adequacy?

- Improve the jobs/housing balance by adding jobs and housing. This will increase auto accessibility to jobs within Clarksburg, but also improve access for all areas within 45 minutes of where the jobs are added, which will likely improve the county's average auto access to jobs.
- If in the example above the jobs are also added near the limited existing transit service within the Clarksburg policy area, it may also improve the county's average transit access to jobs.
- Add transit service to connect the new housing (or other existing housing in the master plan area) to jobs. This will improve the county's average transit access to jobs.

Hypothetical Application Example – Wheaton Central Business District (Red Policy Area)

A proposed master plan for the Wheaton Central Business District (CBD) contemplates the addition of significantly more housing than included in the future baseline, with all other considerations being equal. In a relatively dense and congested location, adding development may slightly reduce the auto travel shed- the area accessible by auto within a given amount of time – thereby reducing the jobs accessible by auto. However, because the Wheaton CBD has lower average values of both jobs accessible by auto within 45 minutes (1,713,440) and jobs accessible by transit (492,900) than the Montgomery County average, it is likely that this increase in residents will improve the county average and the master plan will meet the thresholds.

If, however, the increased congestion reduces auto accessibility for residents elsewhere in the county to the extent that it reduces overall county job access by auto, adjustments to the land use program or transportation network may be necessary to maintain or improve auto accessibility.

Auto and Transit Travel Times

Recommendation 5.11: The proposed metric for auto and transit travel times is average time per trip, considering all trip purposes.

This metric indicates the total amount of time spent traveling per trip and is a more intuitive measure of travel time burden than intersection delay. Changes in transportation service and facilities in a policy area affect travel times not only for that policy area but also for much of the county. Traffic congestion may increase, but effects on travel times for individual trips may be offset by changes to trip distribution patterns and shorter trip distances afforded by new destination options in closer proximity.

Auto and transit travel times must not exceed future baseline conditions. The threshold proposed for policy area-level analysis is average travel time per trip (all trips) for the future baseline. The Travel/4 model provides the duration of each trip and the metric is a simple average of all Montgomery County trips. When calculated using the Travel/4 model in February 2020, these values were:

- 18.8 minutes for auto
- 51.7 minutes for transit

Vehicle Miles Traveled (VMT) per Capita

Recommendation 5.12: The proposed metric for vehicle miles traveled per capita is daily miles traveled per “service population,” where “service population” is the sum of population and total employment for a particular TAZ.

This metric, indicative of the total amount of driving per person, assesses how well people’s needs can be met without traveling by car and prescribes a more efficient use of space. Changes in transportation service and facilities in a policy area affect VMT not only for that policy area but also for other parts of the county. VMT per capita (demonstrated in Figure 30) will reflect changes in trip distribution patterns, trip lengths, and shifts in mode of travel due to changing destination options.

Vehicle miles traveled per capita must not exceed future baseline conditions. The threshold proposed for policy area-level analysis is daily vehicle miles traveled per “service population” for the future baseline. The Travel/4 model provides matrices of the total number of vehicle trips between TAZs and “skims” of the length (distance) of those trips. Combining the two results in VMT, which is then divided by the “service population” of each TAZ to estimate VMT per capita. The VMT per capita metric includes 100 percent of miles traveled for trips that both start and end in Montgomery County, 50 percent of the mile traveled that either begin or end in Montgomery County, zero percent of the miles traveled for trips that only pass through Montgomery County (See Figure 31). VMT per capita can then be aggregated to the county level using an average weighted by “service population.” When calculated using the Travel/4 model in February 2020, the threshold value was 12.4 VMT per capita.

Figure 30. Calculation of Vehicle Miles Traveled (VMT) per Capita.

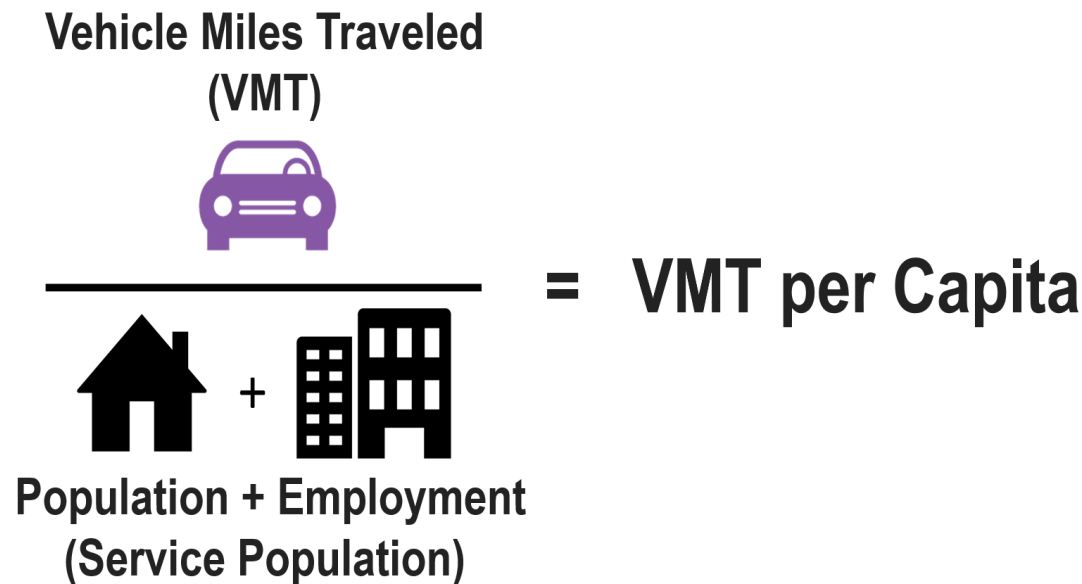
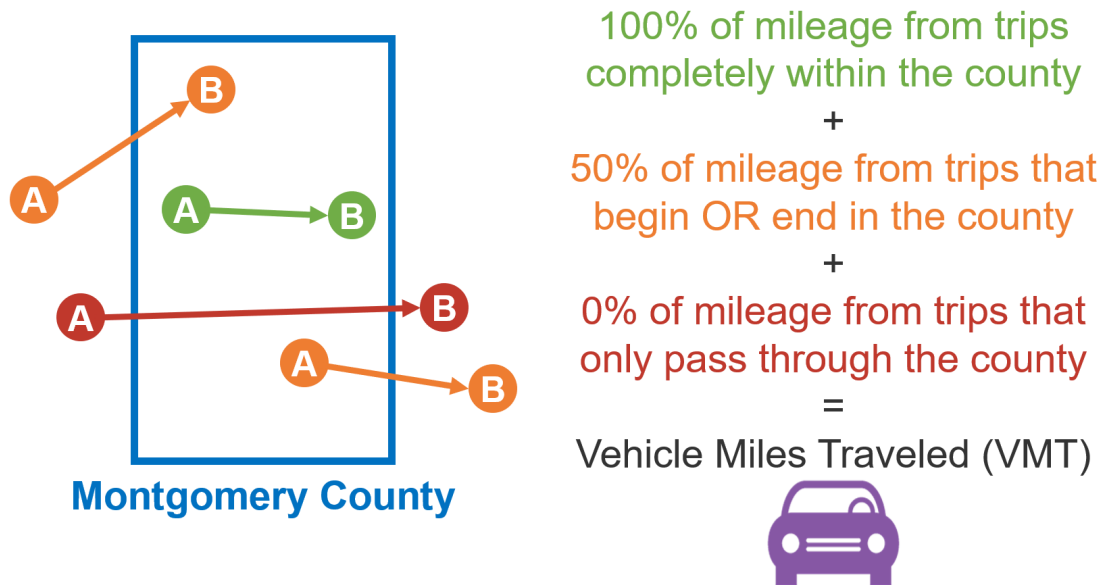
$$\frac{\text{Vehicle Miles Traveled (VMT)}}{\text{Population + Employment (Service Population)}} = \text{VMT per Capita}$$


Figure 31. Montgomery County Vehicle Miles Traveled.



Non-Auto Driver Mode Share (NADMS)

Recommendation 5.13: The proposed metric for non-auto driver mode share is the percentage of non-auto driver trips (i.e., HOV, transit and nonmotorized trips) for trips of all purposes.

This metric is indicative of the use of non-auto modal options for all trips and reflective of the degree to which master plan recommended NADMS goals are achieved. Changes in transportation service and facilities in a policy area affect mode choice decisions not only for that policy area but also for other parts of the county.

Non-auto driver mode share must meet or exceed future baseline conditions. The threshold proposed for policy area-level analysis is the percentage of non-auto driver trips for the future baseline. The Travel/4 model provides estimates of the number of trips by each mode, including SOV, HOV2, HOV3+, transit, and nonmotorized (combined pedestrian and bicycle trips). NADMS is estimated as the total share of all person trips by HOV2, HOV3+, transit and nonmotorized modes. When calculated using the Travel/4 model in February 2020, the threshold value was 46 percent NADMS.

Low-Stress Bicycle Accessibility

Recommendation 5.14: The proposed metric for bicycle accessibility is the Countywide Connectivity metric documented in the 2018 Montgomery County Bicycle Master Plan (page 200).

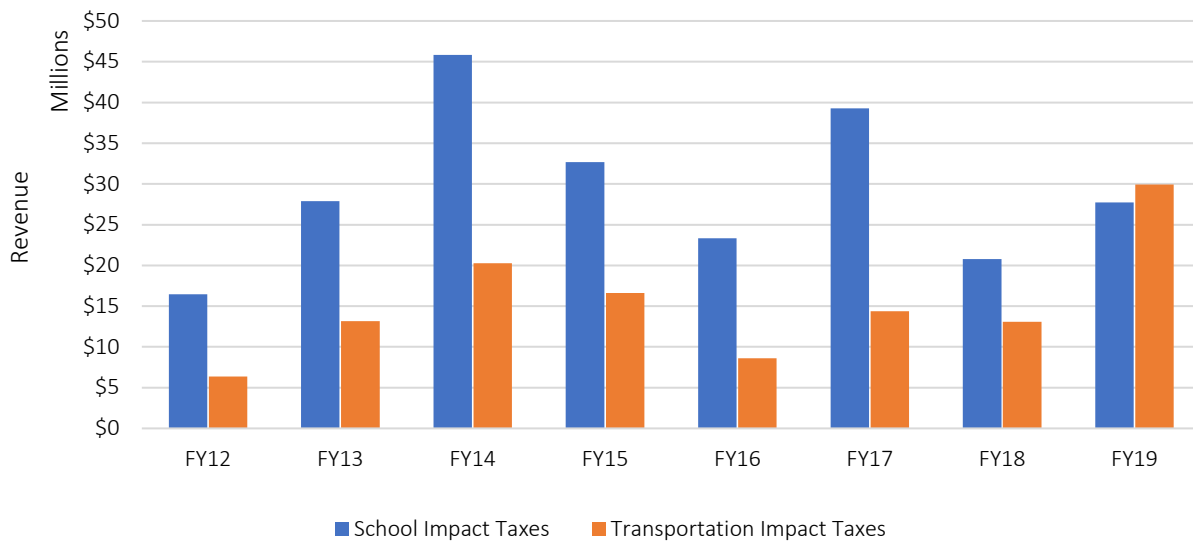
This metric estimates the percentage of potential bicycle trips that can be made on a low-stress bicycling network that is “appropriate for most adults” or “appropriate for most children.” This metric is indicative of bike accessibility to destinations in the county and is a proxy for safe segment and crossing connectivity. The threshold proposed for policy area analysis is a Countywide Connectivity percentage greater than or equal to the value calculated for the Bicycle Master Plan buildout (estimated at 80.0 percent in the Bicycle Master Plan, but subject to annual adjustments).

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Chapter 6 Tax Recommendations

Private developers share the responsibility of investing in public schools and roads by paying impact taxes for both. Traditionally, updates to the Subdivision Staging Policy have been conducted concurrently with reviews of development impact taxes. A frequent refrain heard from various stakeholders is the need to generate more funding for the MCPS capital budget. Impact taxes play a role, funding approximately 8 percent of the MCPS capital budget in both FY19 and FY20. Figure 32 demonstrates the amount of both school and transportation impact taxes collected over the last eight years.

Figure 32. Development Impact Taxes Collected Annually, FY12-FY19.



Source: Montgomery County Department of Finance, Controller’s Division

School Impact Taxes

Currently, developers pay school impact taxes on all new residential development, whether or not the schools in the area of development are over capacity. The school impact tax helps pay for the construction or expansion of school facilities across the entire county and is currently calculated at 120 percent of the cost of each additional student seat generated by a new housing unit. In addition to the 120 percent factor, the current tax calculation uses countywide student generation rates, by dwelling type, and per student school construction costs provided by MCPS.

Recommendation 6.1: Change the calculation of school impact taxes to include one tax rate for all multifamily units, in both low-rise and high-rise buildings, based on the student generation rate for multifamily units built since 1990.

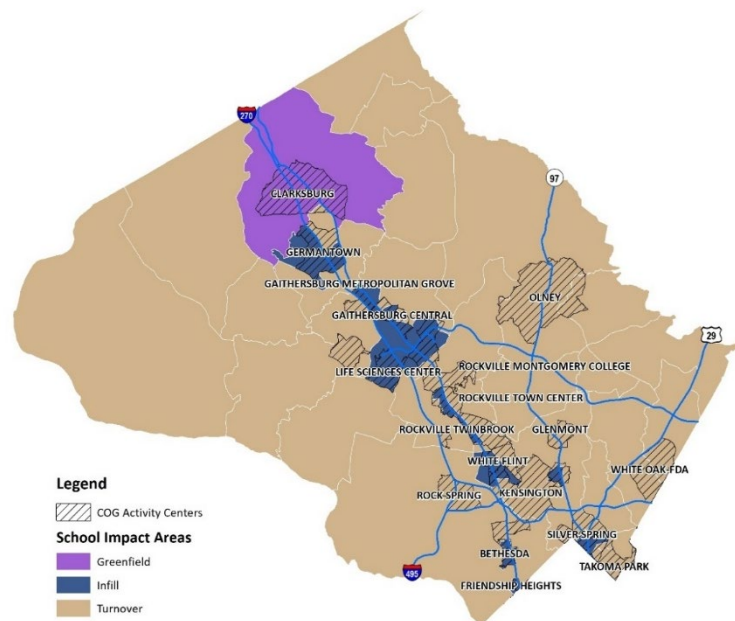
The school impact taxes currently include two different impact taxes for multifamily housing, one for high-rise buildings (five stories or more), and one for low-rise (four stories or less). Montgomery Planning recommends charging one impact tax for multifamily regardless if the units are in low-rise or high-rise buildings. As discussed earlier in [Chapter 4](#), there is no distinguishable difference in the student generation rates of low-rise and high-rise multifamily units constructed since 1990. This recommendation is consistent with [Recommendation 4.11](#) pertaining to updated student generation rates.

Recommendation 6.2: Calculate standard school impact taxes at 100% of the cost of a student seat using School Impact Area student generation rates. Apply discount factors to incentivize growth in certain activity centers. Maintain the current 120% factor within the Agricultural Reserve Zone, except for projects with a net increase of only one housing unit, in which case a 60% factor would be applied.

In 2016, the County Council changed the calculation of impact taxes, which had previously been calculated at 90 percent of the cost of a student seat, to be calculated at 120 percent of the cost of a student seat. This was done, in part, to compensate for elimination of additional developer payments, that were required when a cluster exceeded certain projected utilization thresholds. With the introduction of Utilization Premium Payments (see [Recommendation 4.16](#)) for schools that are identified as overcrowded, Montgomery Planning recommends setting the calculation of the standard school impact tax rates using a 100 percent factor.

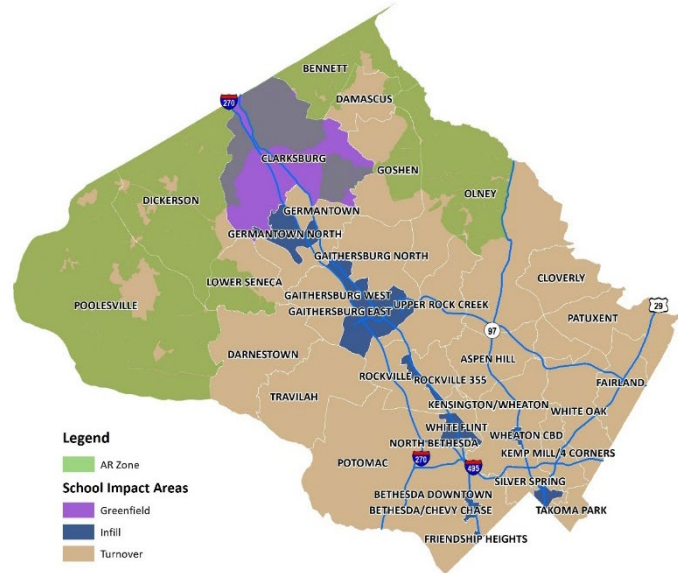
The [Montgomery County Housing Needs Assessment](#) demonstrated that housing cost burden, defined as households who pay more than 30 percent of their income for housing, is rising within the county’s transit corridors – many of which connect the county’s Activity Centers.⁴⁶ Activity Centers are typically where future housing growth is directed due to proximity to multi-modal transportation and employment centers. Rather than charging the full school impact tax calculation for residential projects in Activity Centers, charging 60 percent of the impact tax in Activity Centers will help encourage growth in those areas by helping to lower development costs. Not only is this consistent with smart and sustainable growth principles, it can help reduce the cost burden in these areas by both increasing the housing supply generally and increasing the amount of affordable housing. Figure 33 shows the location of the Activity Centers relative to the School Impact Areas.

Figure 33. Map of School Impact Areas and Activity Centers.



⁴⁶ Activity Centers are identified by the Metropolitan Washington Council of Governments in conjunction with local planning agencies. The 23 Montgomery County Activity Centers are concentrated in urban centers, towns and along major transportation corridors.

Figure 34. Map of School Impact Areas and the AR Zone.



Maintaining the current 120 percent factor for school impact taxes collected on housing units built within the Agricultural Reserve zone recognizes that we do not want to encourage growth in these areas. This zone already limits development density to one unit per 25 acres and does not see large scale development anyway. In order to not financially burden the occasional property owner looking to build a single home for farm workers or a family member, Montgomery Planning recommends only applying the 120 percent factor to projects with a net increase of two units or more. The impact for a project with only one unit would be calculated with a discount factor of 60 percent. Figure 34 shows the location of lands in the Agricultural Reserve zone relative to the School Impact Areas.

Table 18 provides a comparison of the new school impact taxes, per unit.

Table 18. Proposed Context Sensitive School Impact Tax Rates.

		Calculation Factor	Single-family Detached	Single-family Attached	Multifamily	
					Low-Rise	High-Rise
Current Rates		120%	\$26,207	\$27,598	\$21,961	\$6,113
Proposed Rates	Infill Impact Areas	Standard	100%	\$17,186	\$18,303	\$4,325
		Activity Center	60%	\$10,312	\$10,982	\$2,595
	Turnover Impact Areas	Standard	100%	\$21,627	\$23,503	\$8,936
		Activity Center	60%	\$12,976	\$14,102	\$5,362
		AR Zone	120%	\$25,952	\$28,204	\$10,723
		AR Zone (single unit)	60%	\$12,976	\$14,102	N/A
	Greenfield Impact Areas	Standard	100%	\$33,809	\$28,691	\$24,898
		Activity Center	100%	\$33,809	\$28,691	\$24,898
		AR Zone	120%	\$40,571	\$34,429	\$29,878
		AR Zone (single unit)	60%	\$20,285	\$17,215	N/A

Recommendation 6.3: Allow a school impact tax credit for any school facility improvement constructed or funded by a property owner with MCPS' agreement.

Impact tax credits are currently available for the value of dedicated land and any improvements that add classroom capacity. This recommendation allows a credit for other school facility condition improvements (roof replacements, HVAC system upgrades, etc.) made or paid by the developer.

Recommendation 6.4: Eliminate the current impact tax surcharge on units larger than 3,500 square feet.

Developers are currently charged an impact tax premium surcharge of \$2.00 for each square foot of gross floor area that a single-family unit exceeds 3,500 square feet, to a maximum of 8,500 square feet. As demonstrated in Figure 35, student generation data show that there is no relationship between the size of a single-family unit and the number of public school students generated. In other words, larger single-family homes do not necessarily generate more students compared to smaller-sized homes.

Figure 35. Single-Family Detached Student Generation Rates by Gross Floor Area.

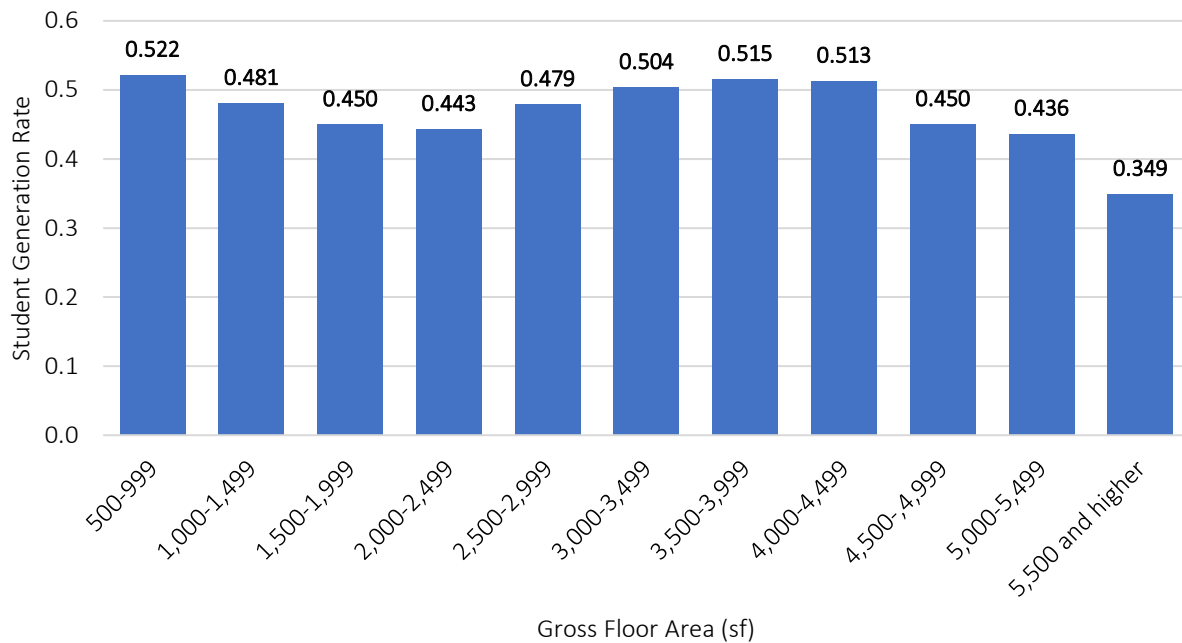
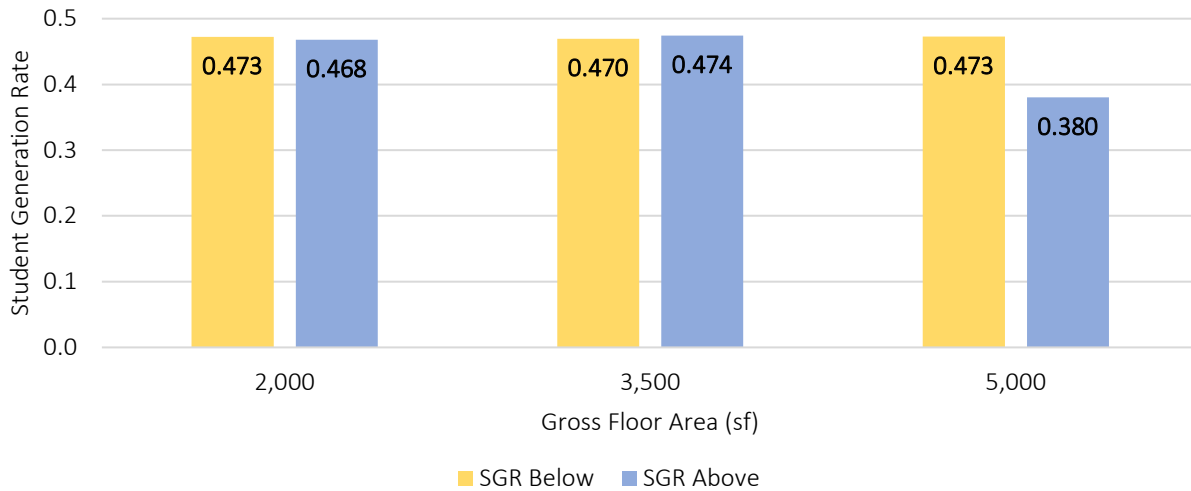


Figure 36 further highlights the difference between home size above and below three different thresholds: 2,000 square feet, 3,500 square feet and 5,000 square feet. These data demonstrate no connection between the size of the home and the number of public school students living in the home.

Figure 36. Single-Family Detached Student Generation Rates Above and Below Particular Gross Floor Area Thresholds.



Impact Tax Exemptions on Residential Uses

Table 19 identifies the school and transportation impact tax exemptions that currently apply to residential uses.

Table 19. Current Exemptions to Development Impact Taxes.

Exemption	School	Transportation
1 Any Moderately Priced Dwelling Unit (MPDU)	Exempt	Exempt
2 Any dwelling unit for which the price or rent charged is limited for at least 15 years to make the unit affordable to households earning equal to or less than 60% of the area median income, adjusted for family size	Exempt	Exempt
3 Any Personal Living Quarters unit that meets the price or rent eligibility standards for an MPDU	Exempt	Exempt
4 Any dwelling unit in an Opportunity Housing Project, which meets the price or rent eligibility standards for an MPDU	Exempt	Exempt
5 Any dwelling unit built by high school students under a program operated by the Board of Education	Exempt	Exempt
6 Any farm tenant dwelling	Not exempt	Exempt
7 Any dwelling unit in a development that is age-restricted for seniors 55 and older	Technically not exempt, but rate set to \$0	Not exempt
8 Any development located in an Enterprise Zone designated by the state or in an area previously designated as an Enterprise Zone	Exempt	Exempt (including commercial uses)
9 Any otherwise non-exempt dwelling unit in a development in which at least 25% of the dwelling units are exempt under number 1, 2, 3 or 4 above	Exempt	Exempt

Montgomery Planning recommends maintaining the exemptions identified as numbers 1 through 6 above. Exempting impact taxes on these affordable units helps make them more financially viable to the developer and supports the construction of affordable housing in the county.

Communities that are age-restricted for residents 55 and older can still have school-aged residents, although a quick review of 2018 countywide enrollment data revealed that there are very few MCPS students residing in age-restricted units. The need for housing that meets the needs of older adults, however, will grow significantly in Montgomery County in the years to come, largely because of the aging baby boom generation population increasing the county's already large base of residents 55 and older.

Montgomery Planning does have recommendations on the final two exemptions pertaining to Enterprise Zones and providing 25 percent affordable units, described below.

Enterprise Zone Exemptions

The Maryland Enterprise Zone program designates areas of the state meeting certain requirements as targets for employment growth. A business owner in an Enterprise Zone may apply for income tax credits based on the number of jobs created by the business within the zone. Property tax credits are also available for businesses that hire new employees or invest in capital improvements. The Enterprise Zone designations are for a period of 10 years. In Montgomery County there are former Enterprise Zones in Wheaton (expired in 2019) and the Silver Spring CBD (expired in 2006), and current Enterprise Zones in Olde Towne Gaithersburg (expires in 2028), Glenmont (expires in 2023), Long Branch/Takoma Park (expires in 2023), and Burtonsville/Briggs Chaney (expires in 2027).

Recommendation 6.5: Eliminate the current impact tax exemptions for development in former Enterprise Zones.

The purpose behind exempting Enterprise Zones from impact taxes was to encourage revitalization and support economic growth within the zone by making development more affordable. In 2007, the County Council increased the transportation and school impact taxes significantly. Recognizing that the Silver Spring CBD's Enterprise Zone designation had recently expired and the district was only just beginning to experience the desired redevelopment, the Council chose to extend the impact tax exemptions to former Enterprise Zones. Fourteen years have passed since the expiration of the Silver Spring CBD Enterprise Zone designation, and both Silver Spring and Wheaton have experienced strong revitalization efforts.

Both former Enterprise Zones areas are also located within designated Activity Centers. Montgomery Planning recommends applying an impact tax discount to development within identified Activity Centers, as discussed in [Recommendation 6.2](#). Most of both areas are also located within school Infill Impact Areas and transportation Red Policy Areas, where impact taxes are lowest. Therefore, reintroducing impact taxes to these former Enterprise Zones is not expected to hinder development in either area but will help generate funds needed to support the school and transportation CIP projects from which these areas benefit.

25 Percent Affordable Housing Exemptions

The benefits of Montgomery County's inclusionary zoning program, the Moderately Priced Dwelling Unit (MPDU) Ordinance, are well documented. Enacted in 1973, the MPDU law requires any development with 20 or more residential units to include a minimum of either 12.5 percent or 15 percent of all units to be set aside as affordable. The units are rented or sold to households earning between 65 and 70 percent of the area median income, which makes them affordable to households (of four) earning between \$82,000 and \$88,000 per year. Currently, over 4,500 MPDUs are under a control period.

The benefits of the units also extend beyond providing housing for Montgomery County households. The Century Foundation’s [Housing Policy Is School Policy](#) found that low- and moderate-income children housed in MPDUs in Montgomery County and attending lower-poverty schools significantly outperformed (in reading and math) their lower- and moderate-income peers that did not live in MPDUs.

In 2015, the County Council amended the impact tax law to provide a new exemption based on the amount of affordable housing in a project. If 25 percent of the residential units qualify for an affordable housing impact tax exemption (those identified as number 1, 2, 3 or 4 in Table 19), then all residential units in the project receive the exemption. Since that time, seventeen projects in various stages of the application process have either used the waiver or signaled their intent to do so. Six projects have gone to building permit and had a total of \$24 million in transportation and school impact taxes waived. Seven projects have received Planning Board approval, and four projects are in the early stages of the application process but have signaled their intent to use the waiver. In total, if all seventeen projects use the waiver \$102 million in total impact taxes will have been waived (\$57 million in school impact taxes, and \$45 million in transportation impact taxes).⁴⁷ Of note, together the seventeen projects will create over 550 additional MPDUs beyond what would otherwise have been required. In the past five years, the MPDU program has created on average around 220 MPDUs per year (both rental and for-sale).

Of the seventeen projects, eight projects have at least a homeownership component, creating affordable and attainable homeownership opportunities that are sorely needed. The [Montgomery County Housing Needs Assessment](#) noted that the household income required to afford the county’s median home value is higher than the county’s median household income.⁴⁸ The Housing Needs Assessment also noted a receding supply of market-rate units since 2014. In that year, the county had a surplus of 5,700 units affordable to households at 65 percent of AMI. By 2018, that number receded to a surplus of only 800 units. If this trend continues, there will be a gap of available units in the 65 percent range. Increased MPDU production can help fill this anticipated gap. The MPDU program also helps fill a critical need for households earning below 60 percent of AMI. One-third of MPDUs serve households below 60 percent of AMI, mainly through partnerships with non-profits and the Housing Opportunities Commission.

The benefit provided to a developer by this exemption varies by type of unit and by geography (currently due to the transportation policy areas but also due to the school impact areas in the future). Since the adoption of this exemption, the County Council has also modified the Moderately Price Dwelling Unit (MPDU) law to increase the MPDU requirement for new development projects to 15 percent in areas with high median incomes.

Recommendation 6.6: Modify the current impact tax exemptions applied to all housing units when a project includes 25% affordable units to:

- 1. not apply the exemption to school impact taxes in the Greenfield Impact Areas,*
- 2. require the affordable units be placed in the county’s MPDU program, and*
- 3. require the project to include two times the standard share of MPDUs applicable to the project location.*

⁴⁷ These totals are estimated using the current impact tax rates, not the rates proposed in this report by Montgomery Planning.

⁴⁸ In 2018, the household income required to afford the median home value was \$125,000 and the actual median income was \$108,000.

Montgomery Planning recognizes the importance of balancing county priorities, including affordable housing production and schools and transportation infrastructure. The suggested modifications to the impact tax exemption seek to strike a balance between the existing county priorities of incentivizing affordable housing production and ensuring adequate schools and transportation infrastructure.

Recommendation 6.6 advances the following amendments to the impact tax code:

1. **Greenfield Impact Areas.** These areas are experiencing high amounts of residential development generating large numbers of students (see Figure 19 on page 34). The county should not incentivize growth through impact tax policy in areas where development currently has the greatest impact on schools. These are areas where school infrastructure is struggling to keep pace with development, so it should be a priority to ensure the impact taxes are paid when residential development occurs in Greenfield Impact Areas.
2. **MPDU Program.** Requiring the affordable housing units constructed to be placed in the MPDU program ensures the control period on the units is maximized. The MPDU program safeguards the affordability of rental units for a control period of 99 years, whereas other affordable housing programs have much shorter control periods.
3. **Share of MPDUs.** When this MPDU exemption was adopted in 2015, a developer's standard MPDU requirement was to build 12.5 percent of their units as MPDUs on all projects with 20 or more units. Thus, to receive the exemption, a developer was required to double the share of affordable units otherwise required. Since that time, the County Council has modified the MPDU law to require a 15 percent share in areas meeting certain median income thresholds. In these areas, when a developer produces the extra 10 percent required for the exemption, the county is foregoing large sums of impact taxes in return for a smaller increase in affordable units than otherwise would have been required if the base was 12.5 percent. The lost impact tax per each additional affordable housing unit can be quite hefty. Therefore, Montgomery Planning recommends that a developer double the MPDU share required to receive this exemption. In areas with a base requirement of 12.5 percent MPDUs, the exemption will require 25 percent of the units to be MPDUs to receive this exemption. In areas with a base requirement of 15 percent MPDUs, a developer will be required to build 30 percent MPDUs to receive this exemption.

Recommendation 6.7: Continue to apply impact taxes on a net impact basis, providing a credit for any residential units demolished.

This recommendation affirms the current policy in response to Bill 34-19 Housing Impact Fairness Act⁴⁹, which would have applied school impact taxes to single-family homes that replace demolished homes. Currently, impact taxes are not paid on the replacement homes, as long as construction on the new home begins within a year of the demolition of the original home.

Montgomery Planning analysis of student generation rates among recently torn down and rebuilt homes shows that they generate slightly fewer students on average than other single-family homes that have recently been sold (regardless of the home's age). The 848 replacement homes built across the county

⁴⁹ Bill 34-19 was introduced on October 15, 2019 by lead sponsor Councilmember Evan Glass and co-sponsor Councilmember Will Jawando. The bill would apply the school impact tax on certain replacement homes and create an excise tax for replacement homes that exceed the square footage of the original home. The bill does not alter the applicability of the transportation impact tax. The purpose of the bill is to increase revenue for affordable housing initiatives and public school capital projects.

between 2014 and 2018 were generating, on average, 0.557 students per home, or 20.6 percent more students per home than the average single-family detached home across the county (regardless of year built), however, a review of single-family detached homes sold between 2014 and 2018 revealed that they were generating 0.622 student per home on average in 2018, or 11.7 percent more than replacement homes.

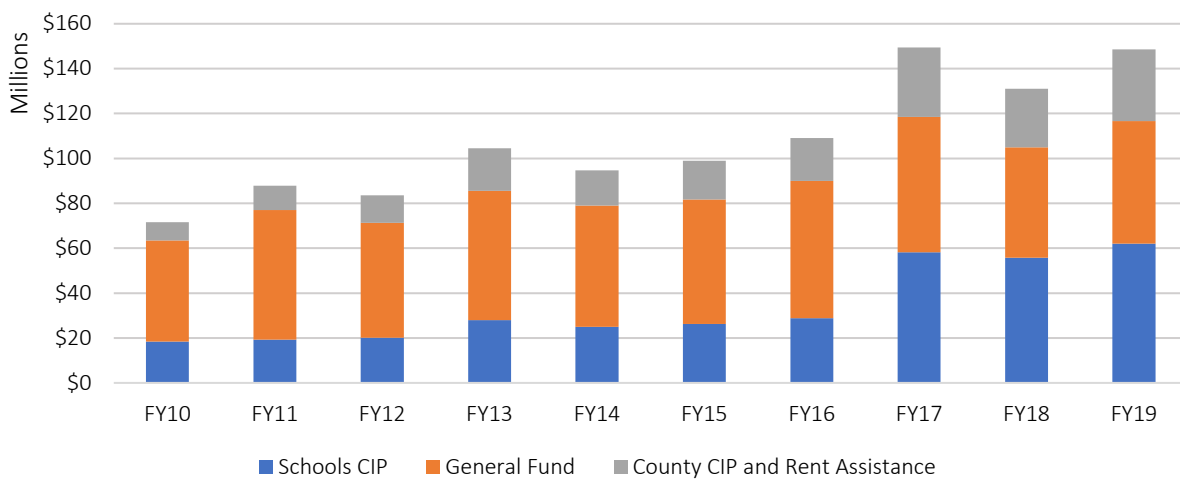
Furthermore, when a single dwelling unit replaces another single-dwelling unit, the net housing impact is zero. Over the life of the new home, it will be expected to generate as many students on average in any given year as the original home.

Recordation Tax

The recordation tax is paid on the sale of a property by the purchaser.⁵⁰ The tax is progressive in that the amount paid is based on the sales price of the property and the rate paid increases at higher sales prices. The recordation tax is another source of funding for the MCPS Capital Improvements Program (CIP). In recent years, it has generated more revenue for the schools CIP than development impact taxes.

In May 2016, the County Council adopted Bill 15-16, which took effect on September 1, 2016 and dedicated more funding to the MCPS CIP. The portion dedicated to schools was increased from \$1.25 for each \$500 increment in sales price to \$2.37 (the other changes to the tax are shown in Table 20). The impact of this change can be seen in Figure 37 as the funding for the schools CIP increased from \$28.8 million in FY2016 to \$58.1 million in FY2017.

Figure 37. Recordation Tax Revenue, FY2010 to FY2019.



Source: Montgomery County Department of Finance, Treasury Division

Countywide, Montgomery Planning estimates that more than 70 percent of recent countywide growth in MCPS enrollment can be attributed to turnover of existing dwelling units. The rate is even higher if replacement homes are considered turnover instead of new homes.⁵¹ Given the large role that single-

⁵⁰ The tax is also paid when a mortgage is refinanced and the new amount borrowed is higher than the principal remaining on the original mortgage.

⁵¹ Replacement homes do not increase the housing supply as it is one new home replacing an older existing home. Sometimes, there is no change in ownership. But often there is, and that is simply a transfer of improved property from one owner to another and thus should be viewed as turnover.

family turnover plays in enrollment growth, Montgomery Planning is recommending a modification to the calculation of the recordation tax to contribute more funding to the MCPS capital budget and to further support the county's housing priorities.

Recommendation 6.8: Incorporate progressive modifications into calculation of the Recordation Tax to provide additional funding for school construction and the county's Housing Initiative Fund.

The Recordation Tax is a progressive tax that helps fund numerous initiatives. Table 20 highlights the current recordation tax steps and rates and the respective funding targets and compares these to the recommended modifications. Currently, the recordation tax provides \$2.37 to the MCPS CIP for every \$500 interval (or part thereof) above \$100,000 in sales price. Montgomery Planning recommends increasing that component by 50 cents to \$2.87. Additionally, Montgomery Planning recommends adding a new 50 cent charge earmarked for the MCPS CIP for every \$500 interval above \$500,000. To help make homeownership attainable to more people, Montgomery Planning recommends increasing the recordation tax exemption for first-time homebuyers from the first \$100,000 in sales price to the first \$500,000.

Montgomery Planning also recognizes the increasing need for rental assistance, which is funded through the Housing Initiative Fund. [The Montgomery County Housing Needs Assessment](#) noted that the number of cost burdened households in Montgomery County has increased by almost 10,000 households since 2009.

The Housing Initiative Fund (HIF) is a locally funded housing trust fund that receives revenue from a variety of sources including loan repayments and property tax revenue. Administered by Montgomery County's Department of Housing and Community Affairs, the fund provides loans to the Housing Opportunities Commission (HOC), nonprofit developers, experienced rental property owners, and for-profit developers to build new housing units, renovate deteriorated multifamily housing developments, preserve existing affordable housing, and provide housing for people with disabilities.

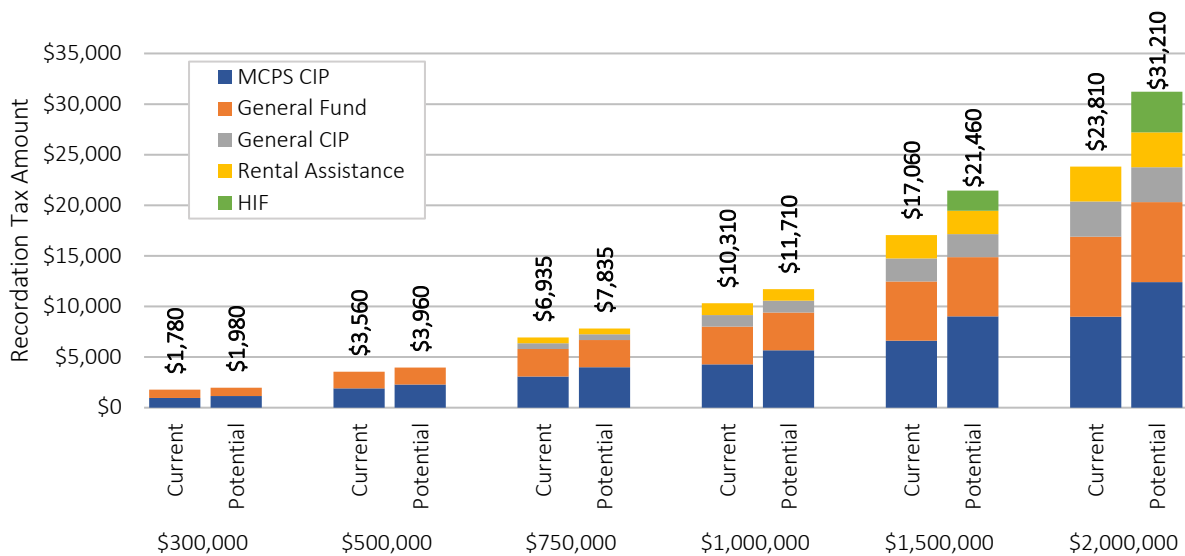
The portion of the Recordation Tax that supports the HIF must be used for rental assistance to low- and moderate-income households. These revenues are used to pay traditional monthly rental subsidies but can also be used to permanently buy down the cost of a unit to make it more affordable (for example, making a unit that would have been affordable to a household earning 60 percent AMI to one earning 30 percent AMI).

Montgomery Planning recommends a more progressive Recordation Tax structure to further support rental assistance funding through the HIF. Montgomery Planning recommends a charge of \$1.00 for every \$500 interval in excess of \$1 million. The proposed charge would only be applied to the sale of single-family dwelling units (both detached and attached).

Table 20. Past, Current and Proposed Changes to the Recordation Tax.

	Prior to September 1, 2016	Current Recordation Tax	Proposed Recordation Tax
Exemptions	<ul style="list-style-type: none"> • First \$50,000 of consideration payable, if it's the homebuyer's principal residence 	<ul style="list-style-type: none"> • First \$100,000 of consideration payable, if it's the homebuyer's principal residence 	<ul style="list-style-type: none"> • First \$100,000 of consideration payable, if it's the homebuyer's principal residence • First \$500,000 of consideration payable, if the purchaser is a first-time homebuyer and it's the homebuyer's principal residence
For each \$500 that the sales price exceeds \$100,000	<ul style="list-style-type: none"> • \$1.25 to the CIP for schools⁵² • \$2.20 to the county's general fund 	<ul style="list-style-type: none"> • \$2.37 to the MCPS CIP • \$2.08 to the county's general fund 	<ul style="list-style-type: none"> • \$2.87 to the MCPS CIP • \$2.08 to the county's general fund
For each \$500 that the sales price exceeds \$500,000	<ul style="list-style-type: none"> • \$1.55 split evenly between the county CIP and rental assistance 	<ul style="list-style-type: none"> • \$2.30 split evenly between the county CIP and rental assistance 	<ul style="list-style-type: none"> • \$2.30 split evenly between the county CIP and rental assistance • \$0.50 to the MCPS CIP
For each \$500 that the sales price of a single-family home exceeds \$1 million	<ul style="list-style-type: none"> • Not applicable 	<ul style="list-style-type: none"> • Not applicable 	<ul style="list-style-type: none"> • \$1.00 to the county's Housing Initiative Fund

Figure 38. Potential Change to Recordation Tax and Components by Home Sales Price.



⁵² Prior to the 2016 amendment, this portion could also be spent on Montgomery College information technology capital projects.

Table 21. Estimated Impact of Proposed Recordation Tax Changes by Home Sales Price.

	Home Sales Price					
	\$300,000	\$500,000	\$750,000	\$1,000,000	\$1,500,000	\$2,000,000
Tax Increase	11%	11%	13%	14%	26%	31%
Tax Increase Amount	\$200	\$400	\$900	\$1,400	\$4,400	\$7,400
Increase as Share of Price	0.07%	0.13%	0.12%	0.14%	0.29%	0.37%
MCPS Funding Increase	21%	21%	29%	33%	36%	38%

Figure 38 and Table 21 demonstrate the impacts of the proposed changes on the recordation tax applied to homes sold at various price points. While all price points will pay more, the amount of the increase is larger for the higher priced homes. While these calculations account for the exemption on the first \$100,000 of a principal residence, it does not account for potential reductions in recordation tax charges due to the proposed exemption for first-time homebuyers.

Based on the actual recordation tax revenue reported by the Montgomery County Department of Finance, Montgomery Planning has roughly estimated that the proposed changes would have generated approximately \$20 million more in revenue for school construction in FY19 (this does not account for offsets from the proposed first-time homebuyer exemption). A more detailed analysis, including the impact of the proposed HIF portion will be conducted by the Department of Finance as the proposed changes advance through the legislative process.

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