

City of Rockville
Community Planning and Development Services

Municipal Growth Element

Comprehensive Master Plan

*Public Hearing Draft
April 2010*

City of Rockville, Maryland

Municipal Growth Element Comprehensive Master Plan



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Table of Contents

1) INTRODUCTION.....	1
2) PURPOSE, AND RELATIONSHIP TO CITY’S LONG-TERM VISION.....	3
3) PROCESS FOR DEVELOPING AND APPROVING THE MGE.....	4
4) PAST GROWTH PATTERNS	5
5) LAND USE AND ZONING.....	8
6) DEVELOPMENT CAPACITY ANALYSIS (GROWTH PROJECTIONS)....	12
7) IMPACT OF PROJECTED GROWTH.....	18
PUBLIC SCHOOLS	18
PUBLIC LIBRARIES	22
POLICE FACILITIES	23
FIRE AND EMERGENCY MEDICAL SERVICES	25
RECREATIONAL LAND AND OPEN SPACE	27
IMPACT ON SENSITIVE ENVIRONMENTAL FEATURES.....	30
FINANCIAL MECHANISMS TO ACCOMMODATE GROWTH.....	32
8) FUTURE LAND NEEDS AND BOUNDARY EXPANSION	36
FUTURE LAND NEEDS	36
CURRENT OPPORTUNITIES FOR EXPANSION/ANNEXATION	36
ROCKVILLE’S MAXIMUM EXPANSION LIMITS	36
9) CONCLUSION	43
APPENDICES.....	45
APPENDIX A: SOURCES.....	45
APPENDIX B: MDP EXTENSION LETTER.....	46
APPENDIX C: LETTER TO MDP ON DCA METHODOLOGY.....	51
APPENDIX D: LETTER FROM MDP APPROVING DCA METHODOLOGY	52
APPENDIX E: ROCKVILLE’S FORECASTING METHODOLOGY	52
APPENDIX F: ROCKVILLE LAND USE CATEGORIES	57
APPENDIX G: ROCKVILLE ZONING DISTRICTS	58

List of Tables

TABLE 1: LAND AREA AND POPULATION DENSITY	6
TABLE 2: EXISTING LAND USE	10
TABLE 3: ZONING CATEGORIES	10
TABLE 4: ROUND 8 FORECASTS, ROCKVILLE	15
TABLE 5: RESIDENTIAL FORECAST BY HOUSING TYPE, ROCKVILLE.....	16
TABLE 6: ROUND 8 EMPLOYMENT FORECASTS, ROCKVILLE	16
TABLE 7: STUDENT GENERATION RATES IN SOUTHWESTERN MONTGOMERY COUNTY.....	21
TABLE 8: ESTIMATED INCREASE IN MCPS STUDENTS IN ROCKVILLE, 2010-2040.....	21
TABLE 9: PARKS AND OPEN SPACE IN ROCKVILLE, 2010	28
TABLE 10: SOURCES OF GENERAL FUND REVENUES, FY09	32
TABLE 11: SOURCES OF ENTERPRISE FUND REVENUES, FY09	33
TABLE 12: SOURCES OF CAPITAL PROJECTS FUND REVENUES, FY09	34
TABLE 13: RESIDENTIAL FORECASTS, ROCKVILLE'S MEL	41
TABLE 14: RESIDENTIAL FORECASTS, ROCKVILLE CITY AND MEL	41
TABLE 15: EMPLOYMENT FORECASTS, ROCKVILLE'S MEL.....	41
TABLE 16: EMPLOYMENT FORECASTS, COMBINED ROCKVILLE AND MEL.....	42
TABLE 17: ROUND 8 FORECASTS, ROCKVILLE	56

List of Figures

FIGURE 1: ANNEXATION HISTORY	7
FIGURE 2: CURRENT LAND USES IN ROCKVILLE.....	9
FIGURE 3: CITY OF ROCKVILLE ZONING MAP	11
FIGURE 4: LOCATION OF FUTURE ROCKVILLE GROWTH	15
FIGURE 5: PUBLIC SCHOOLS IN THE CITY OF ROCKVILLE AND VICINITY	20
FIGURE 6: PUBLIC LIBRARIES IN ROCKVILLE AND VICINITY	23
FIGURE 7: POLICE FACILITIES IN ROCKVILLE AND VICINITY	25
FIGURE 8: FIRE AND EMERGENCY FACILITIES IN ROCKVILLE AND VICINITY	27
FIGURE 9: PARKS AND OPEN SPACE IN ROCKVILLE AND VICINITY	29
FIGURE 10: ROCKVILLE'S EXISTING AND PROPOSED MAXIMUM EXPANSION LIMITS.....	38
FIGURE 11: ROCKVILLE'S PROPOSED MEL - AREA A.....	39
FIGURE 12: ROCKVILLE'S PROPOSED MEL - AREA B	40
FIGURE 13: MAP OF COUNCIL OF GOVERNMENTS (COG) REGION	49
FIGURE 14: POPULATION/HOUSEHOLD GROWTH, 2005-2040.....	56

1) Introduction

The Municipal Growth Element (MGE) is a new requirement of Article 66B of the Annotated Code of Maryland as amended by House Bill 1141 (HB 1141) in 2006. HB 1141 requires the addition of an MGE to a jurisdiction's Comprehensive Master Plan (CMP).

“The municipal growth element must examine past growth trends and patterns. It shall include a projection of future growth in population and resulting land needs based on a capacity analysis of areas selected for future municipal annexation and growth. It also requires an examination of the effects of growth on infrastructure and natural features both within and adjacent to the present municipality and on future growth areas that may be annexed.”¹

Under the new requirements of Article 66B, municipalities must:

- Complete an analysis of land capacity available for development, including infill and redevelopment, and document the level of growth anticipated at densities consistent with its zoning ordinance and the CMP;
- Include a Municipal Growth Element in the CMP that specifies where the municipality intends to grow outside its existing corporate limits. Once a comprehensive plan growth element is in place for a municipality, a municipality's annexation plan, if it has one, must be consistent with the growth element of the municipality².
- Share with other planning agencies, especially those that are affected and adjacent, an annexation plan that is consistent with its growth element in the CMP.
- Examine the interrelationships between land use and the projections for growth of population and housing, and their impacts on public facilities and services. The MGE needs to address in broad terms the expected impact on the demand for public services and infrastructure resulting from the projected growth within the municipal growth areas. Subject areas include public schools, public safety, libraries, recreation, and the water elements. Other sections of the CMP provide more detail on plans for enhanced community facilities.
- Identify the infrastructure needed to serve future growth and the anticipated financing mechanisms available to support necessary public services.

¹ <http://www.mdp.state.md.us/PDF/OurProducts/Publications/ModelsGuidelines/mg25.pdf>, p. 1.

² <http://www.mdmunicipal.org/documents/pubdocs/MunicipalAnnexationHandbook.pdf>
(p. 6)

This document meets the goals and technical requirements of the MGE, as described in the Annotated Code (Article 66B, §3.05(a)(4)), by incorporating all of the required components in the methodology. Water and Sewer Services and Storm Water Management Systems are addressed separately in the Water Resources Element. The requirement of identifying Rural Buffer and Transition Areas does not apply to the City of Rockville because of its location in an urbanized area.

The initial deadline for meeting the requirement of adopting the Municipal Growth Element for all municipalities in Maryland was October 1, 2009. The Maryland Department of Planning approved a deadline extension for Rockville until October 1, 2010 (Appendix B), per the City's request as provided for in the legislation. If a jurisdiction does not meet the requirement of a MGE, the jurisdiction would not be permitted to change the zoning for any property until the MGE has been completed.

This document also includes, and serves as Rockville's compliance with, the State requirement to complete and adopt a Development Capacity Analysis (DCA). "Local governments in Maryland are now committed to conduct and include a development capacity (i.e. build-out) analysis when they update their comprehensive plans."³

The primary purpose of the DCA is to estimate the growth that is expected in a local jurisdiction, including whether the available land within a jurisdiction can accommodate the projected demand. According to State of Maryland guidance, the DCA is "an estimate of the total amount of development that may be built in an area under a certain set of assumptions, including applicable land use laws and policies (e.g., zoning), environmental constraints, etc."⁴

State guidance has provided local governments with flexibility regarding the approach to the DCA. The City developed an approach, which it submitted to the Maryland Department of Planning for approval. Appendices C and D provide the City's suggested approach, and Maryland Department of Planning's approval of this approach, which is discussed in more detail later in this document.

The DCA is the foundation for the MGE in that the DCA provides the growth projections upon which the MGE conducts analysis. The DCA has also been used as a foundation for the Water Resources Element (WRE), in that the analysis within the WRE also relies on the DCA growth projections. *The DCA does not represent a recommended level of growth. Instead, it represents a projection of how growth could occur given current zoning and other policies.*

This document is organized in accordance with the Maryland Department of Planning's "Models and Guidelines, Volume 25, Writing the Municipal Growth Element to the Comprehensive Plan"⁵, which provides guidance on the elements required to be covered, including how the DCA is incorporated into the analysis.

³ http://www.mdp.state.md.us/PDF/OurWork/dev_cap/Final_Guidebook.pdf, p. 2.

⁴ http://www.mdp.state.md.us/PDF/OurWork/dev_cap/Final_Guidebook.pdf, p. 3.

⁵ <http://www.mdp.state.md.us/PDF/OurProducts/Publications/ModelsGuidelines/mg25.pdf>

2) Purpose, and Relationship to City's Long-Term Vision

There are local and State purposes for the MGE. At the local level, Rockville's primary regulatory purpose for the MGE is to comply with State requirements. As discussed in the Introduction, the document also provides the State-required Development Capacity Analysis (DCA), as part of the analysis for the MGE.

More fundamentally, the purpose of the MGE, and its relationship to the City's long-term vision and plans, is to examine the interrelationships among land use, population growth, employment growth and municipal boundaries; and the related impacts on public facilities and services.

From these results, the City will have a stronger basis for setting land use and growth management policies in the future, through a better understanding of the multi-dimensional implications of change. In addition, conducting the MGE at this point is strategically useful for the City of Rockville. In 2009, Rockville completed the State-required 6-year review of its Comprehensive Master Plan (CMP). A key result of that review was the Mayor and Council's determination that a broader revision of the CMP is warranted, beginning in 2011. Having a completed MGE, in combination with new 2010 Census data, will provide a strong basis on which to begin the community outreach, visioning and planning process. It will also provide key inputs for analysis that will support revision of other CMP elements, including but not limited to Transportation, Public Facilities, Housing and Economic Development.

One of the most important impacts of growth is how it affects water resources. The DCA's growth projections have provided key input to the State-required Water Resources Element (WRE), which is being completed in parallel with the MGE.

Furthermore, MGE provides a tool for the City to coordinate with other jurisdictions to understand what is proposed near the City boundaries, and regarding areas where annexation is possible. When all local governments prepare their MGEs, all jurisdictions have a better understanding of the intentions and goals of their neighbors, which offers the potential of better coordination among governments. For Rockville, the MGE is a tool to coordinate better with the City of Gaithersburg, Montgomery County, the State of Maryland and the region; and for Rockville to protect its interests.

The broader State purpose of the MGE is to be able to combine the MGE-cited impacts from the various local governments, in order to determine overall impacts that may require State resources as a response. The State of Maryland may, for example, use this information to determine the amount and location of State transportation or park resources needed to serve the growth that is projected.

3) Process for Developing and Approving the MGE

The process for completing the Municipal Growth Element of the City of Rockville's Comprehensive Master Plan involves a series of discrete steps, which are described in greater detail in their respective sections in this document.

Step 1: Growth Projections and the Development Capacity Analysis - Develop projections for Rockville's population, household and employment growth up to 2040, based on the approved methodology for conducting the Development Capacity Analysis.

Step 2: Link these projections to potential increase in demands on public services and infrastructure resulting from this growth.

Step 3: Consider areas beyond the current City boundaries where annexation would be considered by the City of Rockville, were property owners to petition the City to be annexed. These areas are known as the City's Maximum Expansion Limits (MEL). Review existing MEL and determine whether expansion of the MEL is recommended.

Step 4: Estimate population and household growth for the entire MEL.

Step 5: Produce public draft of document and send to the State, surrounding jurisdictions, and the public for comments 60 days in advance of the Planning Commission Public Hearing

Step 6: Planning Commission Public Hearing.

Step 7: Planning Commission review and recommendation to Mayor and Council.

Step 8: Mayor and Council Public Hearing.

Step 9: Mayor and Council review, approval and adoption into the City's Comprehensive Master Plan.

Step 10: Send completed, approved and adopted Municipal Growth Element to the Maryland Department of Planning.

4) Past Growth Patterns

The U.S. Census Bureau's 2008 estimate of Rockville's population was 60,734, making it the second largest incorporated municipality in Maryland, behind Baltimore (636,919).⁶ The Cities of Frederick (59,219) and Gaithersburg (58,744) were the third and fourth largest in Maryland, respectively. Rockville staff's 2010 estimated population is 62,476.⁷

Rockville was incorporated as a city in 1860 by an act of the Maryland General Assembly. At that time, Rockville was 73 acres and had a total population of 365. The City is authorized under its enabling authority to annex property. Over the years the city has grown outward from its center through many annexation actions.

Following World War II, the presence of utilities, availability of land, and proximity to Washington, DC spurred a population and housing boom in Rockville. The largest single annexation in terms of land area occurred on June 1, 1949, when 2,210 acres were added to the City, followed by large-scale housing development on that annexed land. Rockville's population grew by 276%, or an average rate of 13.6% each year, during the 1940s and 1950s.

A series of factors promoted growth west of Rockville Pike (MD Route 355) in the 1960s, including a new interstate highway (I-270) extending north from the Washington Beltway (I-495), the extension of the Watts Branch trunk sewer line west of the interstate, the City's 1960 Comprehensive Plan and the adoption of a new zoning ordinance. Population growth averaged 5.1% annually during this decade. In accordance with the Plan and Zoning, pre-planned neighborhoods were built at suburban densities. Key new communities included Woodley Gardens, College Gardens, Fallsmead, and New Mark Commons.

Population growth slowed during the 1970s and 1980s. The arrival of Metro stations in Rockville in the early 1980s, however, provided additional connections for Rockville with Washington, DC and the rest of the region. Two large annexations occurred to the northwest part of the city during the 1990s. Rockville annexed Falls Grove (254 acres, formerly known as Thomas Farm) and King Farm (440 acres) in 1993 and 1995, respectively. Both King Farm and Falls Grove developed in a mixed-use manner, with a mix of single-family, townhouse and multifamily housing; as well as office, retail, schools and open space, all within walking distance of public transportation. By 2000, Rockville had grown to 8,320 acres in size (13.4 square miles) with a population of 47,399, and these projects had not yet been completed.

Population in Rockville has grown by an estimated annual average of 2.7% since the 2000 census. This growth has come from two primary sources: 1) residential development in areas annexed during the 1990s (King Farm and Falls Grove), and 2) "infill" development and redevelopment.

⁶ U.S. Census, Annual Estimates of the Resident Population for Incorporated Places in Maryland

⁷ Round 8 Forecast Estimates prepared by City of Rockville, CPDS

The 12.5-acre Rockville Town Square is a key example of the second type. The project was completed in 2007, in implementation of the City’s Town Center Master Plan. This mixed-used project included 644 dwelling units, retail/restaurants, offices, and public and non-profit uses. The project is transit-oriented, as it is immediately across MD Route 355 from the Rockville Station that serves Metro, MARC, Amtrak and Ride-One bus service. Other examples of infill redevelopment included The Fitz and Congressional Village, both adding housing along MD Route 355.

This mixed-use redevelopment of properties, which had primarily been single-story commercial uses, with higher densities resulted in an increase in overall population density. Whereas population density in Rockville had for the entire 20th century been under 4,000 people per square mile, the estimated 2010 population density is approximately 4,600. Rockville’s overall density clearly establishes it as an urban area according to the U.S. Census Bureau’s definition, which judges 1,000 persons per square mile in the “core census block groups” to be urbanized density.⁸ Rockville exceeds this density for the entire city.

Since 2000, several small-scale annexations have occurred bringing Rockville’s total square miles to 13.54 or 8,665.5 acres in 2010.

Table 1: Land Area and Population Density

CITY OF ROCKVILLE-LAND AREA AND POPULATION DENSITY				
YEAR	POPULATION	LAND AREA (ACRES)	CITY LAND AREA IN MILES	POPULATION DENSITY PER SQ MILE
1860	365	73	0.2	1,825
1870	660	134	0.2	3,300
1880	688	139	0.22	3,127
1890	1568	228	0.35	4,480
1900	1,110	354	0.55	2,018
1910	1,181	354	0.55	2,147
1920	1,145	354	0.55	2,082
1930	1,422	354	0.55	2,585
1940	2,047	466	0.73	2,804
1950	6,934	2,753	4.3	1,613
1960	26,090	4,473	6.99	3,732
1970	42,739	7,047	10.9	3,921
1980	43,811	7,146	11.16	3,926
1990	44,835	7,744	12.1	3,705
2000	47,388	8,320	13.4	3,536
2010	62,476*	8,665	13.5	4,628*

Source for Population Data: US Census for 1860-2000

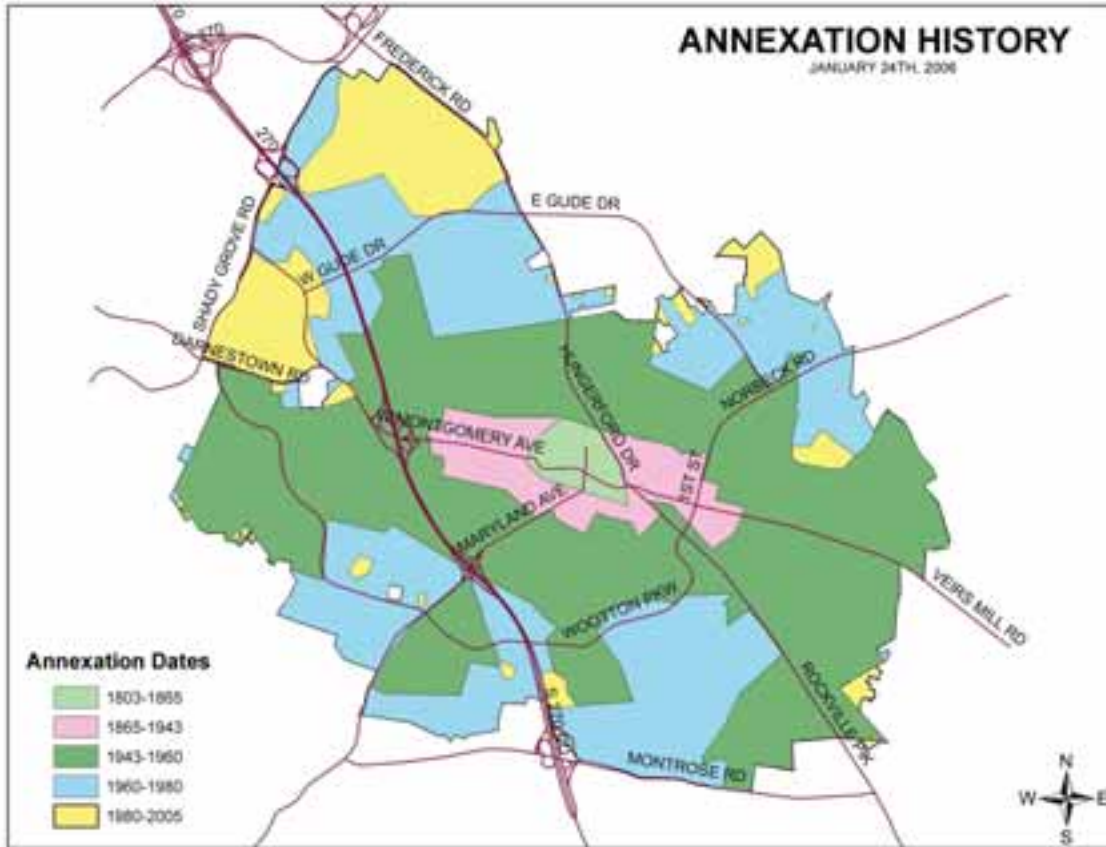
Source for Land Area data is from City sources.

*CPDS Round 8 Estimate for 2010

⁸ http://www.census.gov/geo/www/ua/ua_2k.html

Figure 1 provides a graphic illustration of the growth history for Rockville's municipal boundaries.

Figure 1: Annexation History



5) Land Use and Zoning

This section provides a summary of how land is currently used in Rockville, and a summary of the zoning that will guide how land will be used in the future.

Considering that there is very little developable land that does not already have some level of development, the vast majority of all growth in the foreseeable future is expected to come from redevelopment and increased density. In an effort to manage this type of future growth, the City recently updated and revised its Zoning Ordinance. The new Ordinance was adopted in December 2008 and incorporates land use concepts that emerged during the development of both the most recent version (2002) of the overall Comprehensive Master Plan (CMP), and a series of local plans that were adopted into the CMP, including Town Center, East Rockville, Lincoln Park and Twinbrook. The Ordinance is designed to help shape a city that is maturing toward full development, while maintaining the high quality of life that the residents of Rockville desire.

Protecting the integrity of the residential neighborhoods where single-family housing is predominant has been a consistent goal of previous City and neighborhood plans and will remain a primary goal. With this goal in mind, the single-unit residential zones have been retained in the new Ordinance, with minor modifications.

Seven new mixed-use zones, representing approximately 15% of the City's land area, have replaced the former single-use commercial zones. These new zones allow a mix of residential, office and other commercial uses, and a range of densities, according to location. The highest levels of density are proposed for areas adjacent to Metro stations and other public transit.

Figures 2 and 3, together with Tables 2 and 3, provide information regarding Land Use and Zoning in Rockville. Land Use describes how land is being used currently, regardless of zoning. Zoning describes the permitted uses for future development projects. Though Land Use and Zoning are frequently the same on a given property, such as for the majority of properties zoned exclusively Residential, there are times when the current Land Use is different than the Zoning. For example, the Land Use category for an existing shopping center along Rockville Pike is listed as "Commercial (Retail/Wholesale)", while the Zoning category is mixed use.

Figure 2 and Table 2 provide a summary of current Land Use categories. Figure 3 and Table 3 provide a summary of Zoning under the new Ordinance. Appendices F and G provide more details regarding the Land Use and Zoning Categories.

The largest land use is Residential, which covers nearly 50% of the City's land area. More than 22% of Rockville's land area is protected forest, wetlands, or parkland, and these environmentally sensitive areas will remain undeveloped.

Figure 2: Current Land Uses in Rockville

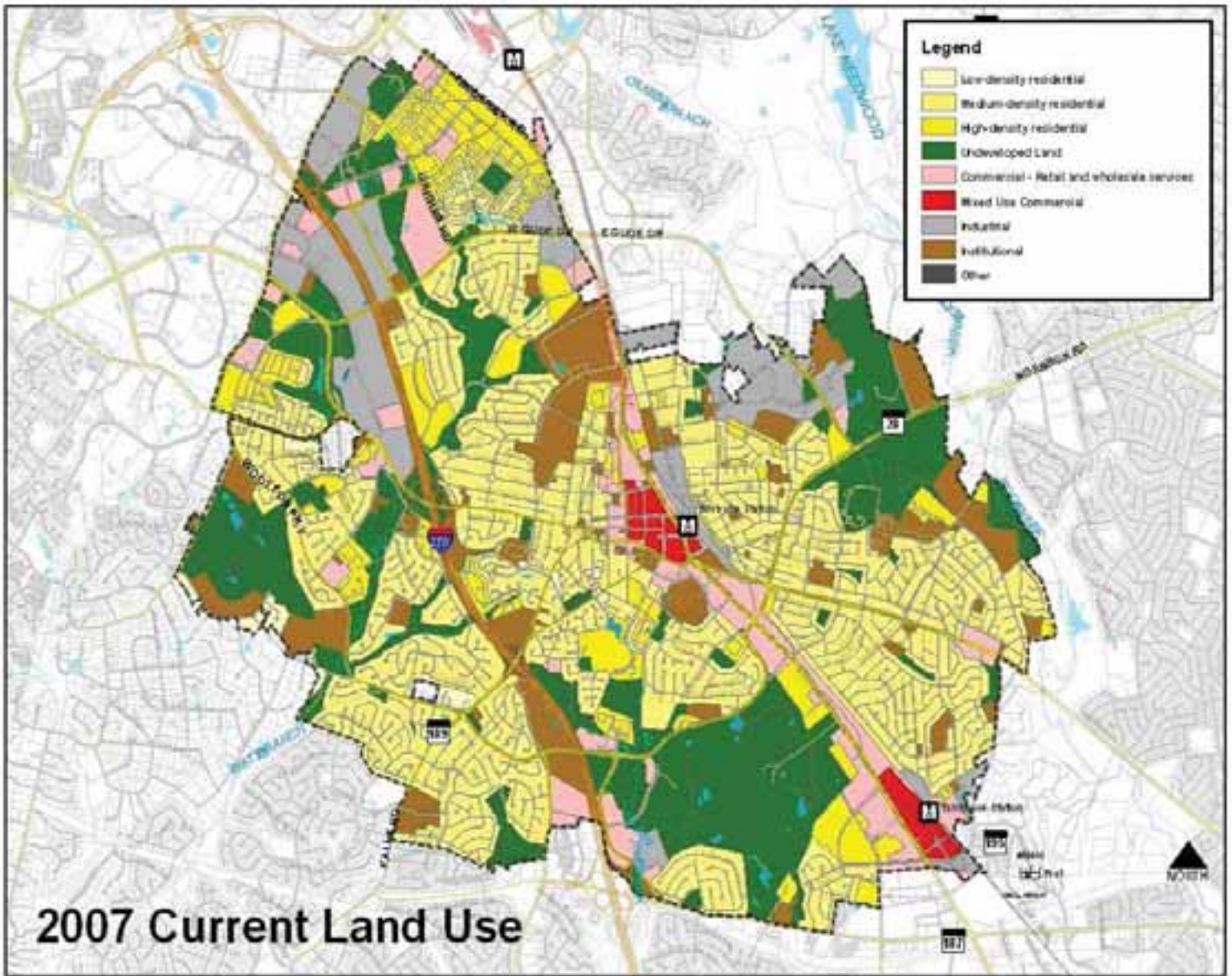


Table 2: Existing Land Use

LAND USES - 2007	ACRES	% OF TOTAL
RESIDENTIAL (ALL TYPES)	4,275	49.3%
UNDEVELOPED	1,913	22.1%
INSTITUTIONAL	811	9.4%
INDUSTRIAL	694	8.0%
COMMERCIAL (RETAIL/WHOLESALE)	628	7.2%
TRANSPORTATION	232	2.7%
COMMERCIAL MIXED-USE	114	1.3%
TOTAL	8,667	100.0%
SOURCE: CITY OF ROCKVILLE, CPDS		

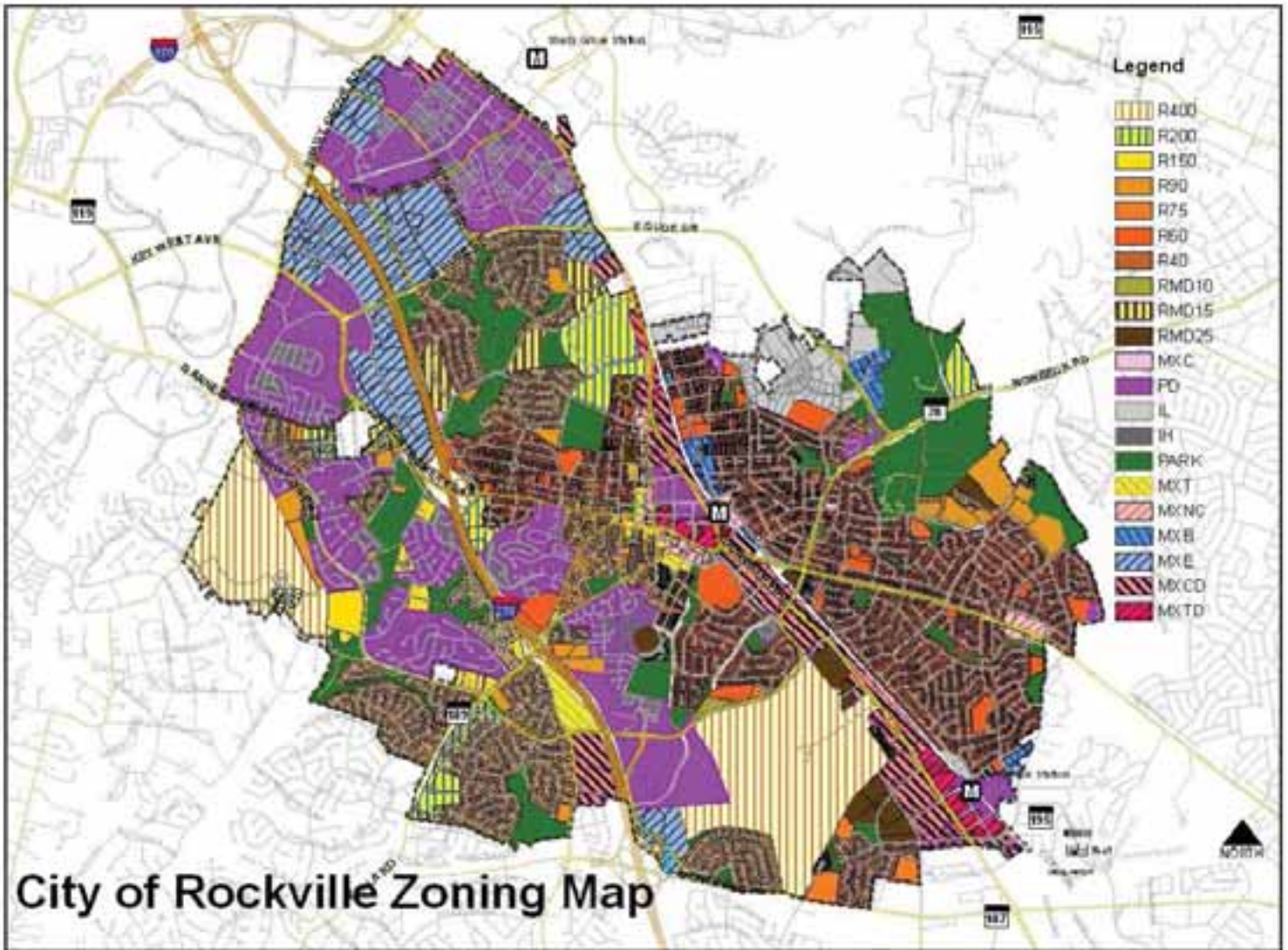
Table 3 gives a brief overview of the amounts of land under the particular zones, and Figure 3 shows the distribution of zones across the City.

Table 3: Zoning Categories

CURRENT ZONING	ACRES	% OF TOTAL
RESIDENTIAL (ALL TYPES)	3,653	51.4%
PLANNED DEVELOPMENT (RESIDENTIAL & COMMERCIAL)	1,315	18.5%
MIXED-USE	1,022	14.4%
PARK	856	12.0%
LIGHT INDUSTRIAL	184	2.6%
NO ZONE	80	1.1%
TOTAL	7,110	100.0%
SOURCE: CITY OF ROCKVILLE, CPDS, 2008 ZONING MAP		

Notes: The current Zoning Ordinance was adopted in 2008. Public rights-of-way, including roads, are not included in zoning figures. This accounts for the difference between land use and zoning totals.

Figure 3: City of Rockville Zoning Map



Additional information, on the zoning ordinance, including a full copy the zoning ordinance and map and a description of zoning categories, is available at www.rockvillemd.gov/zoning.

In this document, both the current land use and the zoning are crucial to estimating Rockville’s growth, because most of Rockville’s growth will come from redevelopment. Redevelopment frequently involves eliminating the current land use to replace it with a use or mix of uses that are now permitted under the new zoning ordinance. The growth will, then, be the incremental growth – the “new” development minus the “old” development.

6) Development Capacity Analysis (Growth Projections)

The core information upon which the Municipal Growth Element (MGE) relies is the projection for growth within the existing city limits and within the areas where the expansion of municipal boundaries could occur (Maximum Expansion Limits). The State of Maryland requires that municipalities prepare a Development Capacity Analysis (DCA) to determine the amount of growth that can be absorbed, and that the DCA be used as the base for the MGE to anticipate the impacts and needs arising from that projected growth. This section fulfills this requirement.

It is very important to understand that growth projections presented in this document do not represent recommended growth or recommendations for a particular type of development pattern. They represent, instead, a forecast of what may occur based on existing laws and assumptions that are discussed below.

Projection Methodology in an Uncertain World

City staff proposed to the Maryland Department of Planning (MDP) an approach for preparing the DCA that rests on the City's existing methodology for projecting growth. MDP approved this proposal in May 2009 (Appendices C and D).

The City's existing methodology has been employed as part of Rockville's participation in the regional cooperative forecasting effort that the Metropolitan Washington Council of Governments (COG) coordinates. The most recent forecast developed by the City was COG Round 8, the results of which the City submitted to Montgomery County and COG in October 2010. The overall regional forecast was adopted by the COG Board of Directors in January 2010.⁹

The core of the methodology relies, first, on "baseline" data that estimates the current amount of employment, population and households. The baseline comes from both the U.S. Census Bureau and in-house staff work. In preparation for the DCA, MGE and MWCOG Round 8, staff did a comprehensive count of all residential units in the City, and a thorough review of employment-generating square footage (e.g., offices, industrial buildings, etc.) in an attempt to develop a better baseline.

After the baseline was established, growth was estimated based on the amount of development that is projected to occur. In the near term, usually within 10 years, forecasts rely mostly on individual projects that are underway, are approved by the appropriate authority (e.g, Planning Commission, Mayor and Council), or are expected to occur. A key step to this exercise is to project the 5-year period when certain projects will be completed and when the new buildings will be occupied. The City's population (or employment) will only be projected to increase when a building is projected to be occupied.

⁹ This section provides a brief summary of the City's forecasting methodology and its relationship to the COG Cooperative Forecasting efforts. A more-detailed description is provided in Appendix E.

On a regular basis, staff must adjust these projections based on project-specific changes and, especially over the past two years, changes in the market for real estate and the overall economy. Due to the dramatic change in the real estate market over the past 2-3 years, quite a few development projects that were expected to be complete and occupied by now have been delayed, modified or cancelled. As a result, near-term growth projections have been modified downward.

For projection periods beyond 10-15 years into the future, there are very few specific development plans upon which staff can rely in making projections. Staff must rely, instead, on zoning, master plans, and qualitative assessments of development potential. It is fully recognized that forecasts become more speculative the longer into the future one attempts to forecast.

In addition to the lack of specific projects upon which to rely, there are many other factors that will contribute to determining the amount and location of growth in Rockville. They include government policies and investments, as well as market factors.

Government policies and investments at the city, county, state and federal level can and do affect growth in Rockville. The City's Zoning Code, for example, has a significant impact on the amount of growth that can occur; and changes in it could potentially make large changes to the trajectory of growth. The City's Adequate Public Facilities Ordinance (APFO), adopted in 2005, also provides policy that can potentially affect growth in Rockville. The APFO constrains growth if public facilities do not meet Rockville's standards. The impact of the APFO has not been incorporated into these projections because there is no existing methodology to do so. Any growth constraints related to the APFO, such as a local school exceeding capacity, can be relaxed by policies and investments that would once again permit there to be growth.

Rockville is also affected by County and State policies and investments in infrastructure. Particular importance should be placed on transportation investments, which can greatly affect the extent and location of population and employment growth. In this National Capital region, decisions the U.S. government makes regarding federal buildings and functions can have an impact on Rockville.

Perhaps the most important factors affecting growth are those that have impacts on the broader regional and national economy and the resulting market for real estate. Those factors include interest rates, demographic trends, immigration, consumer tastes, and many other factors over which the City of Rockville has virtually no power.

As a final point, which combines both market and policy factors, the City's growth can also be affected by what happens in the City's immediate vicinity. Most importantly, it is unclear at this point how the large amount of projected growth over the next 30-40 years in neighboring portions of unincorporated Montgomery County (White Flint Sector and Gaithersburg West), or in the neighboring City of Gaithersburg, will affect the City's growth; but the impact may very well be large.

For the purposes of the MGE, and in order to generate forecasts, this document assumes that there will be general continuity of policy over the next 30 years, and that there will be sustained economic growth similar to historic patterns over the past two decades. The extent to which this assumption is true over time will have a direct impact on the accuracy of the projections.

Generating Numbers from Development Projections

Household growth projections come from estimating the number of residential units that are expected to be built over the next 30 years, and applying assumptions regarding the number of people that tend to live in certain housing types.¹⁰ Staff then diminishes the estimates of total residential population, both current and future estimates, by applying a vacancy rate to multifamily units.¹¹

Employment growth comes from estimating the amount of square footage of employment space (offices, industrial space, retail, etc.) that is expected to be built, and applying assumptions regarding the number of employees that work in certain types of employment spaces.¹² Staff diminishes these total numbers by applying a vacancy rate. The vacancy rate for 2010 has been elevated based on the difficult economic circumstances. Future vacancy rates are based on historical averages for the past two decades.

Round 8 Forecasts for Rockville – Results of the DCA

The Table, below, provides the Rockville Round 8 estimates of population, households and employment by 10-year increments, for the period 2010 through 2040. Highlights of the changes from 2010 to 2040 are as follows:

- Population is projected to increase by 34%, from 62,476 to 83,929
- Households are projected to increase by 42%, from 24,327 to 34,509
- Employment is projected to increase by 41%, from 74,549 to 105,403

¹⁰ Assumptions were developed in-house based on input from the Metropolitan Washington Council of Governments (COG) and results from Census household size for the City. Rockville assumes that 2.095 people live in each unit multifamily unit (e.g., apartments and condominiums); 2.597 people live in single-family attached homes (e.g., townhouses); and 2.915 people live in single-family detached homes.

¹¹ Vacancy rates are taken from Census 2000 and Census Update Surveys 2005

¹² Based on input provided by COG and Maryland National Park and Planning Commission (MNCPPC). Assumptions are: one employee per 250 square feet in office space; one employee per 400 square feet in retail space; one employee per 450 square feet in industrial space; and one employee per 500 square feet in other space. The number of employees has been investigated for specific cases that do not fit neatly into any of these categories, such as schools.

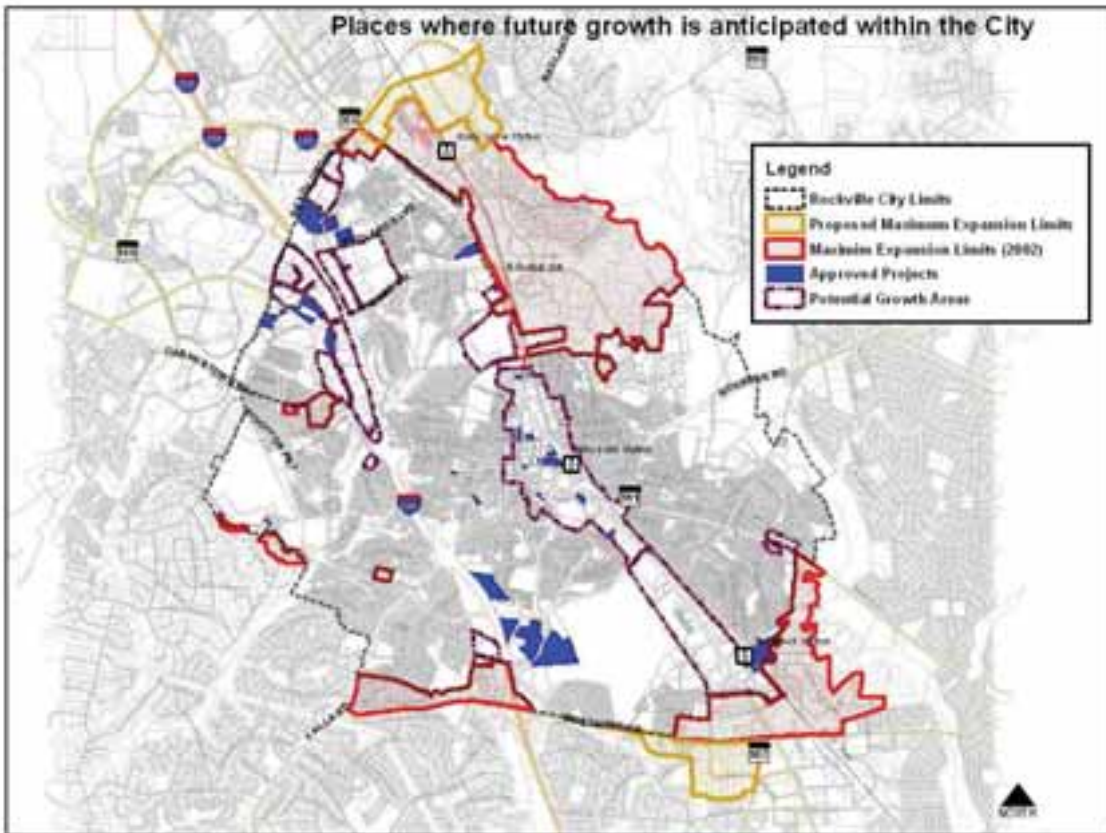
Table 4: Round 8 Forecasts, Rockville

	2010 (est.)	2020	2030	2040	% Change 2010-2040	% Change 2010-2040
Population	62,476	71,874	77,644	83,929	21,453	34%
Household	24,327	28,784	31,509	34,509	10,182	42%
Employment	74,549	91,600	99,403	105,403	30,854	41%

Areas available for growth in Rockville are virtually all infill locations, where projects will involve redevelopment of previously developed sites. At present, these areas are overwhelmingly single-use commercial or single-use office/laboratory spaces, where the zoning and market are likely to support mixed-use redevelopment.

The map, below, identifies locations where this growth is expected. In general, growth will be concentrated along the MD Route 355 and I-270 corridors, with individual sites as exceptions in other locations throughout the City.

Figure 4: Location of Future Rockville Growth



None of these growth areas are amenable to single-family housing, because of both zoning and other site characteristics. As a result, the vast majority of new housing in Rockville is expected to be multifamily apartments or condominiums. As reflected in the table below, multifamily projects are expected to be 98% of all residential development in the City of Rockville over the next 30 years.

Table 5: Residential Forecast by Housing Type, Rockville

Housing Type	Existing (2010)		Forecast (2040)		Change	
	Units #	Population	Units #	Population	Units #	Population
Multifamily	9,496	19,893	19,473	40,795	9,977	20,902
Single Family Attached	3,440	8,934	3,586	9,313	146	379
Single Family Detached	11,391	33,205	11,450	33,377	59	172
Others*		444		444	0	0
Total	24,327	62,476	34,509	83,929	10,182	21,453

*Others include the assisted living category such as the National Lutheran Home, which is classified as group quarters by the census

Between 2010 and 2040, Rockville’s population is estimated to increase from 62,476 to 83,929, an increase of 21,453. The number of households is projected to increase by more than 10,000 from 24,327 to 34,509 from 2010 to 2040. Since the majority of the growth is in multifamily housing, which consistently has, on average, fewer people per household as compared to single-family housing, it is expected that average household size in Rockville will decline over the next 30 years.

The following table presents the estimated existing and projected employment growth in Rockville by type of employment.

Table 6: Round 8 Employment Forecasts, Rockville

	Existing 2010	Proposed 2040	Change
	Jobs	Jobs	Jobs
Office	47,835	71,372	23,537
Retail	12,138	15,025	2,887
Industrial	5,564	6,743	1,179
Others	9,011	12,263	3,252
Total's	74,548	105,403	30,855

The total number of jobs in the City of Rockville also referred to as “at-place employment” is estimated to increase by approximately 31,000 jobs from 2010 to 2040, within the existing boundaries. A large percentage of Rockville’s workforce currently is and expected to be in the office sector.

Most of Rockville’s current employment is along Rockville Pike, Research Boulevard area, and I-270. The industrial jobs are along Gude Drive and Norbeck Road. Over the

next 30 years, employment growth will be concentrated along MD Route 355 and at Tower Oaks, King Farm and Fallsgrove.

7) Impact of Projected Growth

One of the key purposes of the MGE is to explore the impacts of growth on a set of public services and infrastructure, to begin the process of planning for the long-term future of the city. This section makes these linkages.

This section makes linkages only to those categories of impacts from growth that are specified in the Maryland Department of Planning Guidance Document on the MGE.¹³ Specifically listed are schools, libraries, police facilities, fire and emergency services, and recreational land. Examples of areas not required, and therefore not covered in this document, are social services and transportation.

Transportation, in particular, is of great importance to a Comprehensive Master Plan; and there is no question that growth has a significant impact on the demand for transportation resources. Furthermore, the type of expected growth, multifamily and commercial development in a mixed-use redevelopment context, is likely to require a changing emphasis for transportation than was the case when residential growth was predominantly in single-family, single-use neighborhoods. In particular, this type of growth will offer opportunities to expand multi-modal transportation opportunities.

However, the scope and complexity of transportation is far beyond the scope of the MGE. Furthermore, decisions about the direction for transportation in Rockville will require an exploration of the city's values and goals in this regard. The City's plan to engage in broader revisions of the Comprehensive Master Plan beginning in 2011 offers the context for this discussion.

This section also does not attempt to project the impact of growth in either the existing Maximum Expansion Limits (MEL) or the areas that are proposed for MEL expansion, which are discussed in the next section of this document. The City does not have an assertive annexation plan. Instead, the City will respond if a property owner petitions the City to be annexed. Were such a petition to occur, the City would conduct an analysis of the impacts, both benefits and costs, involved in such an annexation, in order to decide whether to respond positively to the petition. There is no need or purpose to conduct a broad-based analysis for the entire MEL, because there is no current expectation that the entire MEL will become part of the City in the foreseeable future. Nonetheless, maps in this section include the existing and proposed expanded MEL.

Public Schools

Rockville Schools and the Montgomery County Public School System

Public schools within Rockville are part of the Montgomery County Public School System (MCPS), and are as follows:

¹³ MDG Guidance document cites page number.

High schools

- Richard Montgomery
- Rockville
- Thomas S. Wootton

Middle Schools

- Julius West
- Robert Frost

Elementary schools

- Beall
- College Gardens
- Fallsmead
- Lakewood
- Maryvale
- Meadow Hall
- Ritchie Park
- Twinbrook

Special Needs Schools

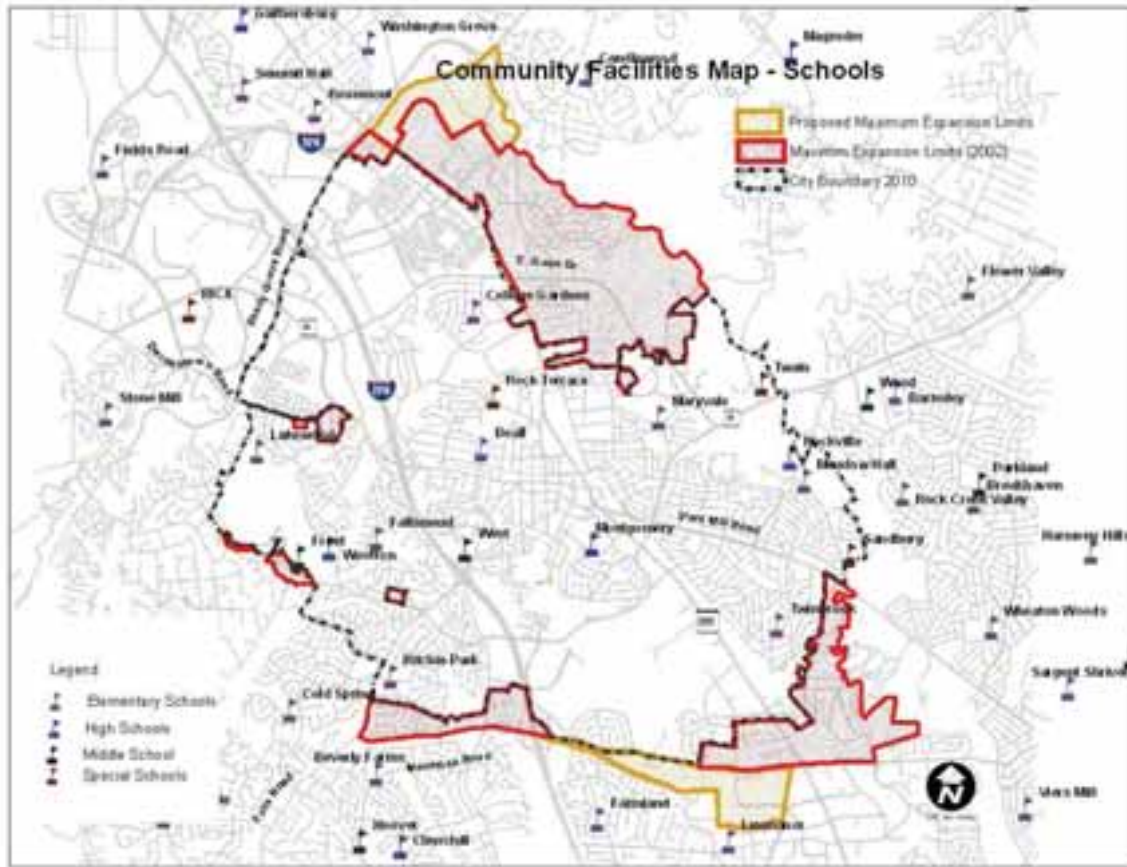
- Carl Sandburg Learning Center
- Rock Terrace School
- Mark Twain School (closed in 2008)

MCPS is the 16th largest school district in the United States.¹⁴ It is organized along High School “clusters”, in which elementary and middle schools are associated with a particular high school and “feed” children into it.

For three reasons, there is not a tight link between the growth in Rockville’s population and the need for school facilities within Rockville. First, high school clusters are not limited by municipal boundaries. Thus, both Wootton and Rockville High Schools draw students from schools that are outside the city limits of Rockville, even though they are in the home “zone” for that school. In addition, students in the northern section of Rockville’s King Farm neighborhood attend schools in Gaithersburg; students in the southernmost portion of Rockville attend schools in North Bethesda; and some middle school students in the eastern portion of Rockville attend Earl Wood Middle School, just outside of the city limits.

¹⁴ <http://montgomeryschoolsmd.org/about/>

Figure 5: Public Schools in the City of Rockville and Vicinity



Secondly, MCPS has many special programs that draw students from beyond their local cluster. Examples of such in schools that are located in Rockville include the International Baccalaureate program at Richard Montgomery High School, the French Immersion program at Maryvale Elementary, and the special needs programs at Carl Sandburg Elementary and Rock Terrace School. MCPS schools also have special programs that attract Rockville residents to schools outside of Rockville. Examples include, but are not limited to, countywide programs for the deaf, highly gifted, language immersion, humanities, and math/science.

Lastly, there is a regional collection of private schools, both secular and parochial, that Rockville students attend. Attendance in private schools fluctuates over time, for various reasons.

Impacts of Growth on School Enrollment

While it is very difficult to link population growth in Rockville to the growth in school enrollment in schools that are located in Rockville, this section provides an estimate of the overall number of student that can be expected to enroll in the County school system based on the projected population growth in Rockville. This document employs the system used by the long range planning staff of MCPS.

The MCPS process for estimating future student enrollment takes into account the number of new housing units that will be built, and standard “Student Generation” factors. These factors vary based on the type of housing unit (single-family, town house, multi-family) and on the region of Montgomery County. Table 7, below, provides the factors that MCPS uses for the southwest region of the county, which includes the three Rockville-based high school clusters, as well as clusters in Bethesda, Potomac and Wheaton (Bethesda-Chevy Chase, Churchill, Einstein, Walter Johnson, Wheaton, Whitman).

Table 7: Student Generation Rates in Southwestern Montgomery County

Housing Type	Factors (Number of students generated per housing unit)			
	Elementary	Middle	High	Total (K-12)
Single Family Detached	0.348	0.129	0.086	0.563
Town House	0.222	0.168	0.098	0.448
Multi-Family	0.068	0.023	0.043	0.134

Source: 2005 Census Update Survey, M-NCPPC Department of Park and Planning

The forecasted total increase of housing units in Rockville from 2010 to 2040 is 10,182. Applying the factors from Table 7, by Housing Type, produces the results in Table 8, which are the estimated increases in students based on growth in housing units.

Table 8: Estimated Increase in MCPS Students in Rockville, 2010-2040

Housing Type	# of Housing Units	Increase in Elementary School Students	Increase in Middle School Students	Increase in High School Students	Total Increase in MCPS Students
Multifamily	9,977	678	229	429	1336
Single Family Attached	146	32	25	14	71
Single Family Detached	59	21	8	5	34
Total's	10,182	731	262	448	1,441

Based on Table 8, the City’s forecasted population growth would result in an additional 1,441 students in the Montgomery County Public School System by 2040.

Higher Education

The City of Rockville does not have responsibility for higher education, but has a great interest and concern about the ability of Montgomery County and the State of Maryland to continue to expand its offerings of colleges and universities consistent with the growth in population. There is one college within the city limits of Rockville, and there are two additional university resources just outside of the city.

Montgomery College’s Rockville Campus is located on MD Route 355 north of Rockville Town Center. This highly diverse and popular campus, which is part of a

broader County community college system, has an enrollment of approximately 15,000 per semester¹⁵. Just across the border from Rockville toward the northwest is the Universities of Maryland at Shady Grove, which is an amalgam of “satellite” programs from universities in other parts of the state. Their offerings do not constitute a complete university. Nearby is the Montgomery County campus of Johns Hopkins University, which offers various academic programs, with a focus on biosciences, engineering, education and business. It also has long-term plans to build a large Life Sciences Center focusing on research and biosciences.

The County and the State must invest long-term resources to expand higher-education opportunities as the populations of Rockville and Montgomery County continue to grow.

Public Libraries

Public Libraries in Rockville are provided by Montgomery County. The Montgomery County Department of Public Libraries (MCPL) system consists of 21 branches serving more than 950,000 county residents. Two library branches are in the City of Rockville; the Rockville Regional Library (65,000 square feet) in Rockville Town Center, and the Twinbrook Library (25,000 square feet) on the east side of the City. Other library branches within five miles of Rockville include Aspen Hill (16,100 square feet), Davis (16,000 square feet), Potomac (16,000 square feet) and Quince Orchard (17,500 square feet). In general, MCPL attempts to have branches be at least three miles apart, though the Rockville and Twinbrook libraries are slightly closer to each other than that standard.

The American Library Association Standard states that there should be 1,000 square feet of library space for each 10,000 in population. The two libraries in Rockville, with a total of approximately 90,000 square feet serving a population of just over 60,000, exceed this standard by approximately 50%. MCPL does not have its own defined square-footage standard for provision of library facilities and services, but uses information such as circulation of holdings to determine if additional facilities or services are needed.

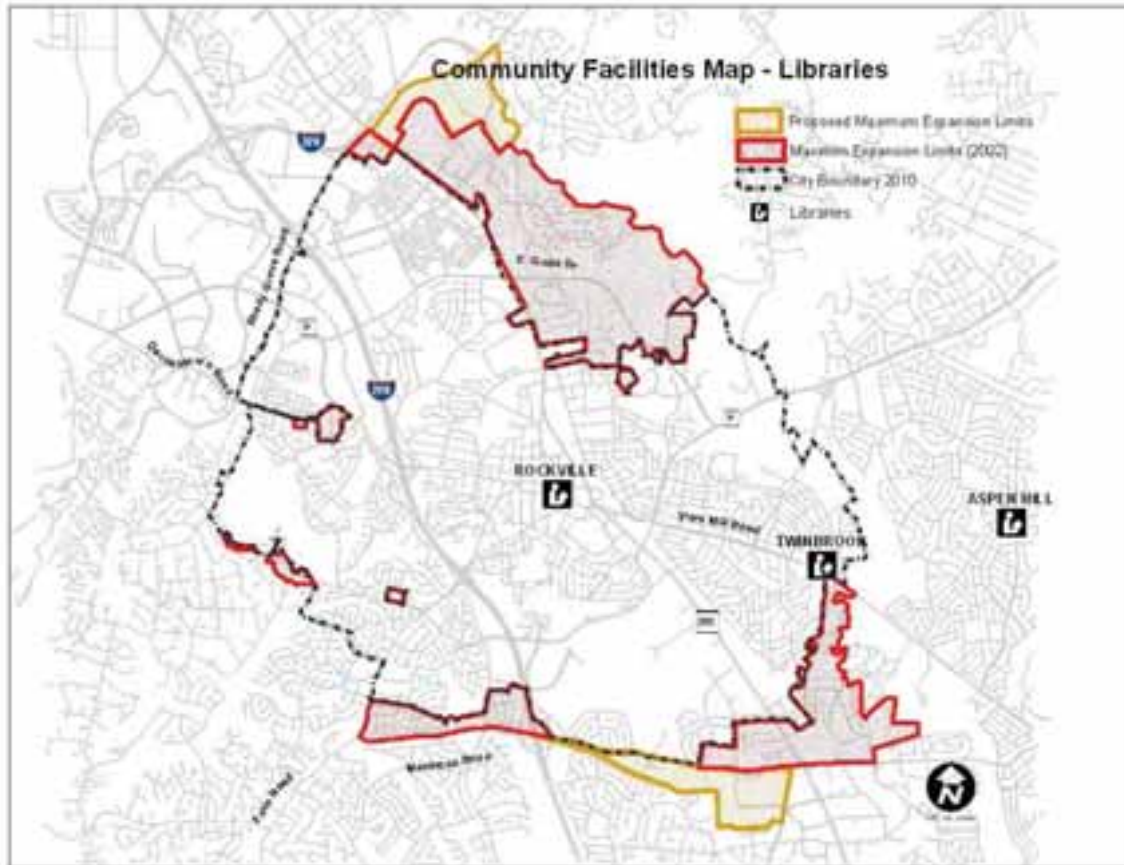
Discussions with MCPL staff indicated their belief that current library services in Rockville would accommodate the needs in Rockville for the foreseeable future, especially considering the recent opening (2007) of the new Rockville Library. As a result, there are no plans for a new library branch to be developed within the City’s boundaries. Preliminary discussions have been held, however, for two potential new library sites in Rockville’s vicinity to accommodate future growth, in the Shady Grove Sector planning area and in the White Flint Sector planning area.

MCPL is also aware of the evolving nature of how people use libraries. With the advent of electronic media and the Internet, it is highly likely that libraries will be changing away from their core historic model of being a collection of printed material toward a different model that has different emphases. At present, circulation of printed material remains quite high, meaning that this evolution has not yet replaced the historic model. This future is unclear, which makes it difficult to project future needs in terms of square

¹⁵ <http://www.montgomerycollege.edu/Departments/rprovost/annualreports/AnnualReport2008.pdf>

footage. During the next 10-20 years, however, it is unlikely that there will be a need for a new library facility to be constructed in Rockville.¹⁶

Figure 6: Public Libraries in Rockville and Vicinity



Police Facilities

The City of Rockville is currently served by the Rockville City Police Department in conjunction with the Montgomery County Police Department (MCPD). County Police District 1 serves Rockville, though the resources of the entire County Department are available if needed. The City has a Memorandum of Understanding with the County outlining priorities and responsibilities.

Rockville Police Department is currently located at in City Hall. In 2008, the City completed acquisition of a former U.S. Post Office property in Rockville Town Center, one block from City Hall, for adaptive reuse as the City Police Department. Completion of the construction is expected in 2011.

As of the date of this report, the Rockville Police Department has 57 sworn officers, serving the estimated 2010 Rockville population of 62,476, for a ratio of 0.91 officers per 1,000 residents. In 2009 the Montgomery County Police Department reported in its

¹⁶ Rockville is appreciative of the assistance provided for this section by Rita Gale, Public Services Administrator in charge of Strategic Management for MCPL.

Performance Plan that it maintains a ratio of 1.2 sworn officers per 1,000 residents.¹⁷ As a result, the City of Rockville has at its disposal, should it be needed, an effective ratio of 2.11 sworn officers per 1,000 residents.

The national standard of the International Association of Chiefs of Police is a ratio of 2.6 officers per 1,000 residents, though deployment based on local needs is more important than meeting that national standard. As compared to large counties in the Washington, DC region, Rockville is relatively well served, especially considering its low level of major crimes. According to the Montgomery County Police Department Performance Plan, Prince George's County Police Department has 1.7 and Fairfax County (VA) Police Department has 1.4 sworn officers per 1,000 residents.

Rockville's projected increase in population of approximately 21,000 residents by 2040 is expected to increase the required number of police officers. Were the Rockville Police Department to maintain its ratio of .91 officers per 1,000 residents, there would be a need for 19 additional sworn officers by 2040. Maintaining the overall City-County effective rate of 2.11 would require the County to add sworn officers at a rate that would maintain its current ratio of 1.2 as the County population grows, while at the same time the City maintained its own proportionate growth.

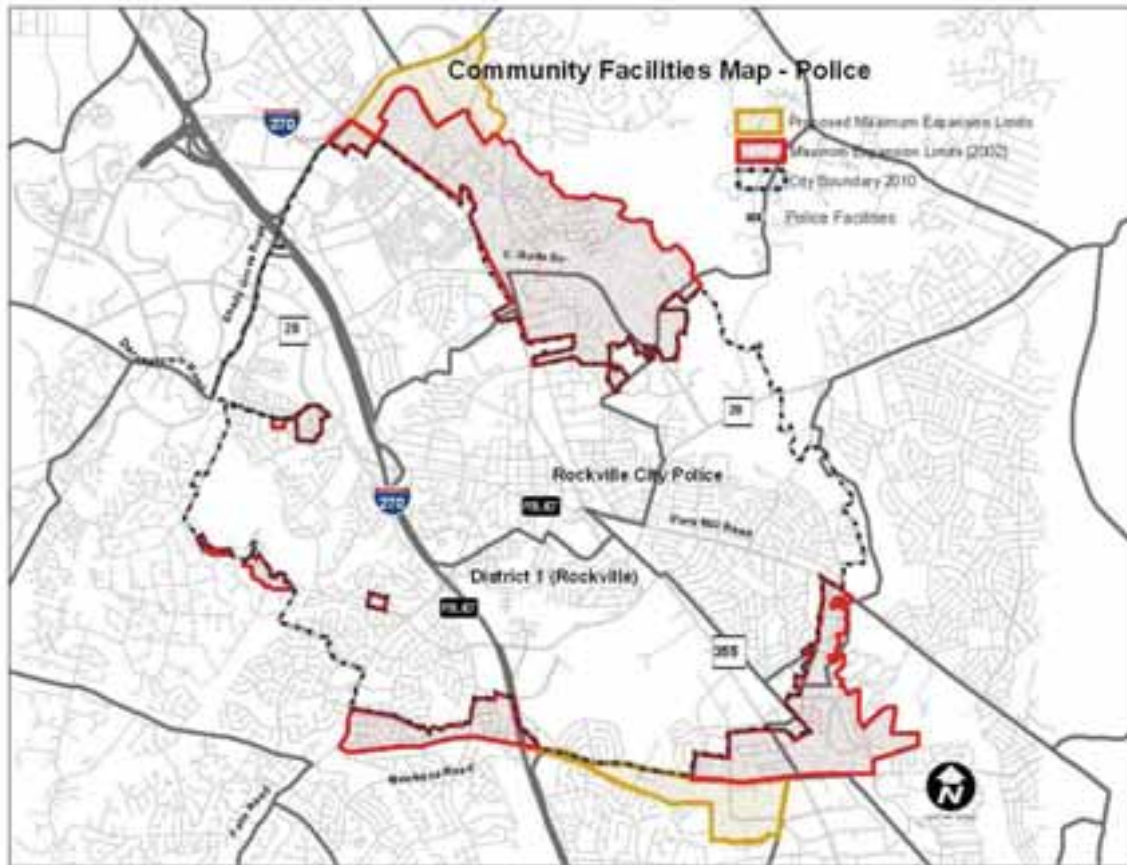
The Rockville Police Department cautions against establishing a planning approach that relies too strictly on formulae of this nature. Many factors will affect staffing needs, and are impossible to predict over a 30-year period. One important consideration is that, while Rockville's past growth has had a predominance of single-family detached housing in residential neighborhoods, much of the recent, and the large majority of future, population growth is expected to occur in multifamily housing in more of a mixed-use context. It is as yet unclear how this change will affect staffing needs over time.

Furthermore, the future geography and demographics of crime cannot be accurately predicted. There have been large swings in crime levels in the last 20 years, both in Maryland and around the country. In addition, technology has helped to increase the efficiency of each police officer in recent years, and this trend is expected to continue.

As a result, while Rockville expects that increased population will generate a need for an increased numbers of police officers, the appropriate levels of staffing for the two police departments will depend upon locally tailored solutions to meet local conditions at that time. Completion of the new headquarters for the Rockville Police Department is expected to provide sufficient space for the department through 2040, even with an increase in staffing proportionate to its current size.

¹⁷ http://www.montgomerycountymd.gov/content/EXEC/stat/pdfs/mcpd_performance_plan_09.pdf, p. 5

Figure 7: Police Facilities in Rockville and Vicinity



Fire and Emergency Medical Services

The Montgomery County Fire and Rescue Services (MCFRS) provides fire and disaster protection, emergency health care, as well as rescue and related services to Rockville. Rockville does not provide this service as part of its municipal government. Since fire and emergency services transcend municipal boundaries and are provided to an area larger than the City itself, service levels are impacted not only by development within the City but also by development throughout the service areas. Over the next 30 years, a great deal of development is projected both within and just outside of the city. As a result, Montgomery County has judged that both fire stations currently within the city need either renovation or replacement; and that a new station is needed just outside of the city.

The two fire stations within Rockville boundaries are Station 3 at 380 Hungerford Drive and Station 23 at 121 Rollins Avenue, though other stations are available to supplement service in Rockville, as needed.

Station 3 is in the center of Rockville and serves mostly Rockville, though it is available to support other County efforts as needed. There is an existing plan to expand and

renovate this fire station, though Montgomery County personnel have expressed their preference for building a new station. City staff has worked in partnership with Fire and Rescue personnel to find a suitable site in or near Rockville Town Center for the best response times for the Station 3 service area. To date, no suitable site has been found at a reasonable cost. This challenge can be viewed as reflective of the general resources challenge of retrofitting and/or expanding existing infrastructure to accommodate the goals of infill development.

Station 23 is near the southern border of the City and serves primarily the southern portion of Rockville plus the high-density unincorporated White Flint sector and the surrounding residential and office districts; though it, too, is available for support countywide. The recently completed revision to Montgomery County's White Flint sector plan is expected to facilitate a large increase in residential and office population over the next three decades. Montgomery County is studying how best to adjust Fire and Emergency Medical Services in response both to these increases and the growth that Rockville is projecting along the city's portion of the Rockville Pike (MD Route 355) corridor. Under consideration is a new and expanded station in a different location, perhaps south of the city, which would enhance services to the broader area.

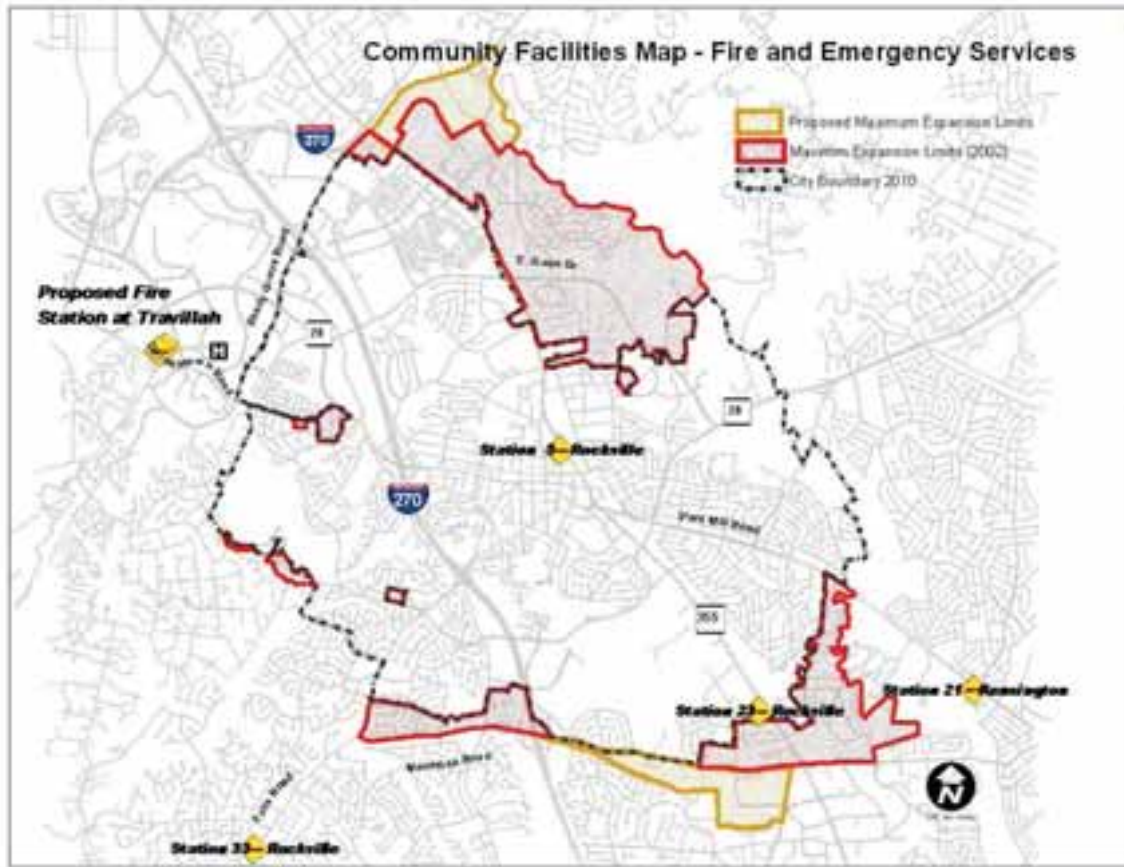
Montgomery County also expects a significant amount of residential and office growth immediately beyond the Shady Grove Road border of Rockville, to the northwest of Rockville. As part of that planning, Montgomery County has proposed, in its FY 09-14 CIP Budget, construction of a new fire service station at 9710 Great Seneca Highway in the Travillah neighborhood. This new station, which would be very close to the city line, would serve nearby Rockville neighborhoods, as well as the existing and new communities in unincorporated Montgomery County.

As a result of this service being Montgomery County's responsibility, and of the amount of expected growth surrounding Rockville being much larger than the expected growth within Rockville, the City does not have a formula for calculating how the projected approximately 21,000 increase in Rockville's population over the next 30 years will affect service needs in terms of either number of stations or engines and equipment. Rockville has provided its projections to Montgomery County and participates in the process of solving targeted problems within its municipal responsibilities.

However, Rockville's authority with respect to land use provides the municipality the ability to ensure that new developments have sufficient fire service before approving the project. Of primary importance for performance measurement is the amount of time it takes to respond to an emergency. Rockville uses its Adequate Public Facilities Ordinance (APFO), which was adopted on November 1, 2005, to ensure that new "higher-risk" developments have sufficient service. The provision states: "Certain higher-risk uses shall be allowed only where a full response from 3 stations within 10 minutes is possible. Such uses would include schools, hospitals, nursing homes, and places of assembly seating more than 500."¹⁸ To date, no project has been denied based on this standard.

¹⁸ City of Rockville Adequate Public Facilities Standards, Adopted November 1, 2005, p. 9.

Figure 8: Fire and Emergency Facilities in Rockville and Vicinity



Recreational Land and Open Space

Existing Conditions

Rockville contains a large amount of public and private recreational land and open space, both within the city limits and in the immediate vicinity. There are 1,199 acres of parks, open space, and recreational land within Rockville, according to the City of Rockville's Parks, Recreation and Open Space (PROS) Plan, which was approved by Mayor and Council on March 15, 2010. This number includes 164 acres for school sites within Rockville.

The City's goal for open space is 18 acres for every 1,000 residents. The City is presently exceeding that goal, with a total of 19 acres per 1,000 residents, based on an estimated population of 62,476 in 2010. Furthermore, most Rockville homes are less than one-quarter mile and/or within a 10-minute walk from a city park or open space.

Table 9: Parks and Open Space in Rockville, 2010

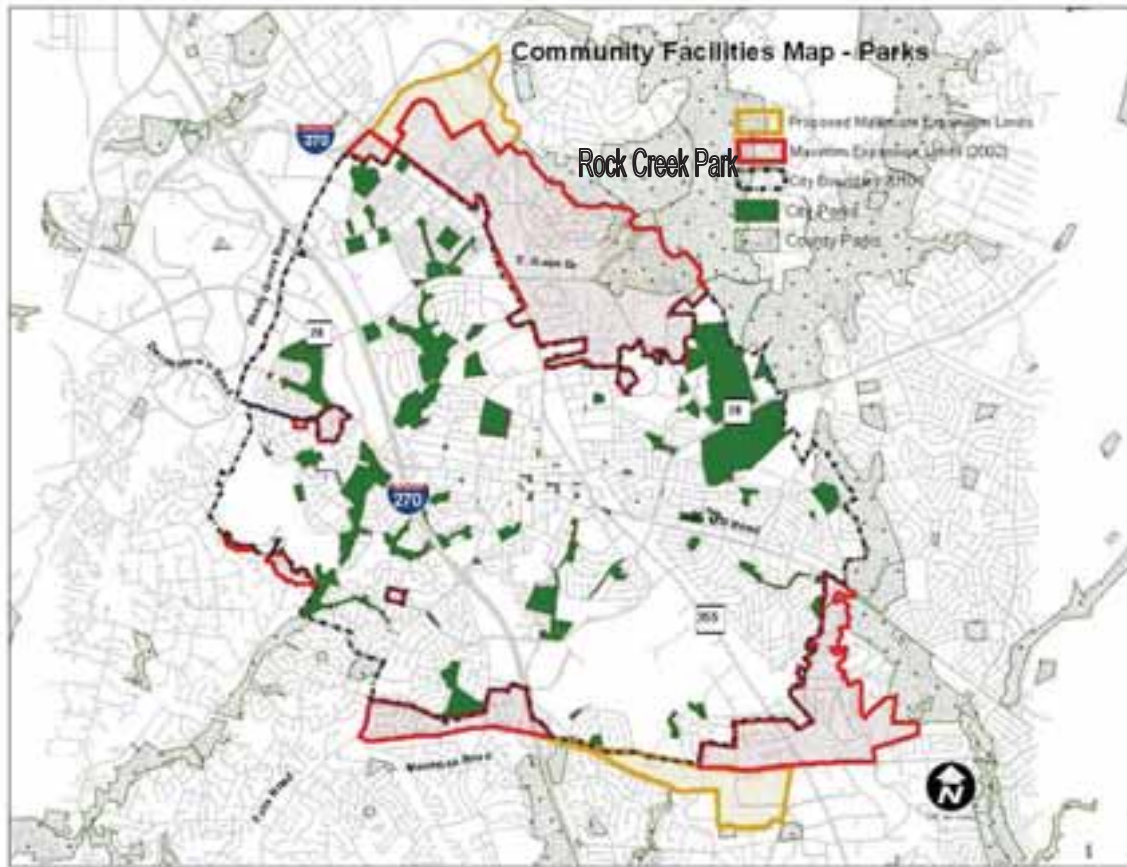
Parks and Open Space	Number of Sites	Acreage
Citywide	14	407
Neighborhood	36	152
Athletic	7	122
Open Space	12	354
School Sites	17	164
Total	86	1199

SOURCE: CITY OF ROCKVILLE'S PARKS, RECREATION AND OPEN SPACE PLAN, 2010

As a practical matter, however, Rockville residents do not consider the jurisdictional boundaries as providing their only local parks and open space resources. There are very large resources of this nature in the stream valleys and forests surrounding Rockville, including the 1754-acre Rock Creek Park abutting the eastern border of the City and stretching south into Washington, DC; the 540-acre Cabin John Regional Park just south of city; and the 438-acre Watts Branch Park, which has a portion in the City but the majority of which continues beyond the city limits to the southwest. There are also many smaller local parks in very close proximity to Rockville, of which Rockville residents take advantage. These resources are owned by the Maryland National Capital Park and Planning Commission, which also has a local service-delivery responsibility. Together, both jurisdictions provide resources that greatly exceed Rockville's target and are able to meet the broader State of Maryland's target ratio of 30 acres of parkland per 1,000 people, with a minimum of 15 acres being owned by the local jurisdiction itself. In addition, the entrance to the 6,300-acre Seneca Creek State Park is 8 miles from downtown Rockville.

The greatest current deficit is in particular areas of the city, identified through the PROS Plan process, as being underserved in terms of local parks within walking distance of homes. These neighborhoods include East Rockville, Twinbrook, portions of Town Center, and residential developments along Rockville Pike.

Figure 9: Parks and Open Space in Rockville and Vicinity



In addition to parks and open spaces, the City also provides and maintains indoor facilities, including the Rockville Municipal Swim Center, and seven activity and community centers. A full listing of these resources can be found in the PROS Plan. In addition, many neighborhoods operate privately owned facilities (e.g., resource centers, swimming pools, ball courts and clubhouses), providing further recreational amenities.

Future Needs

If Rockville's population grows by approximately 21,000 by 2040, as projected, the City would need to add 378 acres to its inventory of parks and open spaces in order to continue to meet the City target of City-owned 18 acres per 1,000 people. This standard is a significant challenge given the scarcity and cost of vacant land in the City. The Parks Recreation and Open Space (PROS) plan recommended that the City would need to add 142 acres of parkland and open space by 2030.¹⁹ There are no current opportunities for large-scale cost-effective acquisition in this mostly built-out City. It is expected that the above-mentioned MNCPPC resources immediately outside of Rockville will continue to service the citizens of Rockville, thereby providing substantial local and regional park resources. It is important to recognize, however, that Montgomery County is also

¹⁹ City of Rockville Parks, Recreation and Open Space Plan, September 2009

projecting significant population growth in unincorporated areas near Rockville. Rockville and MNCPPC will both need to keep track of park usage and resident demands as the population grows and usage patterns change.

The most pressing need in the context of mixed-use redevelopment is expected to be ensuring the availability of open space within walking distance of multifamily homes. Some of the goals can be met by Rockville's requirement, with exceptions, that a proportion of the land area on development parcels be dedicated for open space. However, this approach is not always the most appropriate or strategic way to provide open space. First, not all sites can accommodate this set-aside. Furthermore, assembling larger parcels can frequently provide a far better resource for the community than a series of small plots. As a result, Rockville is working to establish a system by which some developers may contribute a fee to the City, in lieu of providing the open space, to provide some funding for open space acquisition. It is not expected that this source will be sufficient to meet all of the needs.

Another approach is to continue to construct pocket parks and open space throughout the City such as Courthouse Square Park, which has been very successful, and offer opportunities to develop "paper" streets, rights-of way and street corners into usable open spaces.

Rockville is prepared to be innovative, but recognizes that there will be a great challenge to provide open space in the context of growth through infill development. As a result, the City will need additional resources, from the City General Fund and, it is hoped, from the County and State.

The challenge to provide additional neighborhood-scale open space is even greater in the more-established and mostly built-out neighborhoods of East Rockville and Twinbrook, where there are very few realistic opportunities for property acquisition.

Impact on Sensitive Environmental Features

There is no expectation that population and employment growth in Rockville will have a significantly detrimental effect on sensitive environmental features beyond impacts that already exist. As previously noted, the large majority of future development will take the form of redeveloping existing single-use properties in commercial areas; and Rockville has no plan to permit expansion of the extent of development beyond areas that have already been developed.

In fact, a goal that is increasingly codified in Rockville ordinances is that the environmental performance of redevelopment sites can be enhanced through the redevelopment process. The City is committed to developing in an environmentally sustainable manner. In addition to complying with all State regulations, Rockville adopted the "Strategy for a Sustainable Rockville" in October 2007. The Strategy lays out an eleven-point program aimed at incorporating sustainable practices into City policies and programs. A new Zoning Ordinance incorporating sustainable land use

practices was adopted in December 2008, and the City is in the process of developing a building code with greatly enhanced “green” features.

Information on these topics can be found at the Sustainable Rockville Web site, at <http://www.rockvillemd.gov/environment/index.html>.

Of primary importance for Rockville are the three watersheds within the City boundaries: Watts Branch, Rock Creek, and Cabin John Creek. Each watershed has a management plan that is reviewed and updated on a regular basis, which can sometimes result in changes to regulations. Stream-valley parks incorporating natural stream buffers are a feature of many neighborhoods; and the John G. Hayes Forest Preserve preserves 120 acres of forestland and open meadows. Rockville is a gold member partner of the Chesapeake Bay restoration initiative and participates in the Lower Potomac Tributary Team sponsored by the Maryland Department of Natural Resources.

There are no agricultural lands either within the City’s borders, or in the surrounding areas.

In summary, Rockville is very cognizant of the environmental impacts of growth, and is committed to developing and enforcing a set of policies that will minimize the impact of growth on the environment.

Financial Mechanisms to Accommodate Growth

The infrastructure and services required in order to accommodate the projected growth in Rockville will require significant financial resources from a variety of sources. Services and infrastructure in Rockville are funded by the City, Montgomery County and the State of Maryland, depending on the responsibility. This section will discuss in general terms the financial mechanisms that are available to Rockville.

City of Rockville Funds

The City's Operating Budget and Capital Improvements Program (CIP) budget together serve as the annual financial plan for the City. As the City's population grows and new development or redevelopment occurs, the City's revenue and expenditure budgets will likely increase, assuming that tax rates and fees remain in a similar range as they are at present, controlling for inflation.

The City's total budget is divided into twelve operating funds. The City's largest fund is the General Fund, which is the primary operating fund of the City and is used to account for all financial resources except those required to be accounted for in another fund (special revenue fund or enterprise fund). Many of the City's administrative functions are supported through this fund. The major revenue sources for the General Fund are property tax, income tax, hotel tax, tax duplication payments from Montgomery County, and charges for services.

The City strives to develop and maintain a diversified and stable revenue stream to avoid becoming overly dependent on any single type of revenue and to minimize the effects of economic fluctuations on revenues. The major General Fund revenue sources that are directly related to increases in new development and increased population include property tax (both real and personal), income tax (which is included in the category "Revenues from Other Governments" in the Table, below), and charges for services. The City's largest source of General Fund revenue is real property tax. Residential properties make up approximately 60% of real property tax revenue, while commercial properties make up approximately 40%.

Table 10: Sources of General Fund Revenues, FY09

General Fund Revenues	Actual FY09	% of Total
Property Taxes	34,526,050	55%
Licenses and Permits	1,606,198	3%
Revenues from Other Governments	17,801,482	28%
Charges for Services	5,473,186	9%
Fines and Forfeitures	648,477	1%
Use of Money/Property	330,784	1%
Other Revenue	2,451,549	4%
Total	62,837,728	100%

The City's six enterprise funds, Water, Sewer, Refuse, Parking, Stormwater Management, and Red Gate Golf Course, operate and account for their transactions in a way similar to private businesses. On an annual basis, the City sets fees and rates for the enterprise funds at levels that fully cover debt service requirements as well as operations, maintenance, administration and capital improvement costs, except where the City is not the sole provider of the service and competitive rates must be taken into consideration. The main source of revenue for enterprise funds is from charges for services. The revenue from charges for services will increase as a result of increased rates over time, and new properties being added each year. Services with charges include water and sewer, recycling and refuse collection, and storm water management fees. For systems that require capital investments to accommodate growth, a combination of development construction and impact fees, along with long-term fees, provide resources for these investments.

Table 11: Sources of Enterprise Fund Revenues, FY09

Enterprise Fund Revenues	Actual FY09	% of Total
Charges for Services	19,486,364	85%
Other Revenue	2,246,183	10%
Transfers In	1,073,000	5%
Total	22,805,547	100%

The Capital Projects Fund, the primary fund that supports the CIP, is used to account for financial resources used for the acquisition or construction of major capital facilities and general capital construction, including: streets, parks, and public buildings (other than those financed by enterprise funds). The Capital Projects Fund budget is mainly funded from four components over a five-year period: debt, cash ("pay-go" transfer from the General Fund), government grants, and developer contributions.

The City strives to maintain a high reliance on pay-go financing for its capital improvements in order to maintain debt within prudent limits. When issuing debt is prudent or necessary, each debt issue is accompanied by an assessment of the City's capacity to repay the debt. This assessment addresses the effects on the current operating budget, as well as identifies the resources that will be utilized to repay the debt over time. In addition, it is the City's policy that long-term borrowing will not be used to finance current operations or normal maintenance and will only be considered for significant capital and infrastructure improvements.

Table 12: Sources of Capital Projects Fund Revenues, FY09

Capital Projects Fund Revenues	Actual FY09	% of Total
Grants/Gov't Revenue	4,349,929	32%
Use of Money/Property	191,096	1%
Other Revenue	374,110	3%
Transfers In / Pay-go	8,533,695	63%
Total	22,805,547	100%

Montgomery County

Montgomery County has primary responsibility for funding key areas related to growth, such as public schools, libraries, Fire and Emergency Services, portions of Transportation, and many other services beyond the scope of this document (e.g., health, social services).

Funding comes from a similar mix of funds as for the City, from the General Fund, service charges, transfers from other governments (State and Federal), impact fees charged to developers, and other sources. Fire and Emergency Services receives additional human resources through its inclusion of volunteers in its service provision.

Rockville provides growth projections to Montgomery County for it to use in long-term projections for service and infrastructure demands. Those projections are key also inputs to the County's capital improvements program.

State of Maryland

A series of State programs are available to assist Rockville in providing and ensuring services in the context of regional and local growth. They include Program Open Space; Transportation resources for both State Highways and transit; funding for education; infrastructure grants for water protection; and much more.

Rockville will continue to work closely with State counterparts to identify opportunities for State participation.

Private Resources and Public-Private Partnerships

Recent large-scale developments in Rockville have included requirements that the developers deliver new infrastructure along with the private development. Fallsgrove, King Farm and Twinbrook Station all included construction of roads, water, sewer lines, stormwater management facilities, open space, and other infrastructure and amenities. The City has complemented their investments with public investments. In King Farm, the City complemented the new private development with the new Mattie Stepanek Park, which opened in 2008. In Fallsgrove, Rockville also built the Thomas Farm Community Center, which opened in 2009.

As Rockville's growth moves toward redevelopment, it is anticipated that the development community will incur a significant portion of the costs of upgrading or replacing inadequate infrastructure, and will dedicate land for public facilities and open space.

Some of these private resources will also come through the impact taxes that Montgomery County imposes to fund both schools and traffic mitigation. As a municipality within Montgomery County, the City of Rockville does not have the responsibility of funding school construction or fire and rescue facilities.

In summation, the future growth of Rockville should be based on policies that attempt to ensure that growth pays for itself. The City of Rockville can remain financially stable during future growth periods by working with developers, Montgomery County, and the State of Maryland to ensure that all parties carry their appropriate responsibility for continuing the high quality of life in Rockville.

8) Future Land Needs and Boundary Expansion

Article 66B requires that the Municipal Growth Element discuss the potential for expanding municipal boundaries. Once the element has been completed, any plan for annexation must be consistent with the MGE. The City does not, at present, have an annexation plan. Furthermore, State law requires that, in most cases, the property owner be the initiator of any annexation. The Annotated Code of Maryland, Article 23 A, Section 19, prescribes procedures for enlarging municipal boundaries.²⁰

Nonetheless, Rockville has a long history of expanding its boundaries. This section provides a framework for how Rockville will consider potential expansion, organized as follows:

- State-required discussion of future land needs related to projected residential demand.²¹
- Current opportunities for annexation
- The City's existing and recommended new Maximum Expansion Limits

Future Land Needs

At present, the City of Rockville does not have any identified future land needs that require expansion of municipal boundaries. The growth in residential, commercial and other development that is projected can be accommodated within the existing City limits, under the current zoning.

Current Opportunities for Expansion/Annexation

Recently passed State legislation associated with House Bill 220 and Senate Bill 350 permits municipalities with an opportunity to unilaterally annex unincorporated properties if the land proposed for annexation is 5 acres or less and partially within the City boundaries. The City is currently reviewing the small area annexation provisions to consider annexing eligible parcels along Twinbrook Parkway, and along E. Gude Drive and Southlawn Lane.

The City is also reviewing existing stipulations regarding the unincorporated Hectic Hill enclave, which is entirely surrounded by land within Rockville, to determine whether there is an opportunity to annex these properties, as well as both the benefits and costs of doing so.

Rockville's Maximum Expansion Limits

Rockville uses the term Maximum Expansion Limits (MEL) to describe areas outside of, but adjacent to, the City's jurisdictional boundaries where the City would consider annexation should a property owner petition the City to annex the property. A

²⁰ <http://www.mdmunicipal.org/documents/pubdocs/MunicipalAnnexationHandbook.pdf>. Municipalities may annex unincorporated territory contiguous to and adjoining the municipal boundaries, but may not annex land within another incorporated municipality. An annexation also should not create an unincorporated enclave within the City that is surrounded on all sides by property within the municipality.

²¹ <http://www.mdp.state.md.us/PDF/OurProducts/Publications/ModelsGuidelines/mg25.pdf>, p. 7.

property's being part of the City's MEL does *not* mean that the City is targeting that property for annexation.

The concept of Maximum Expansion Limits was an important element of the City's first comprehensive plan in 1960. The purpose was to allow the city to enlarge in an orderly way and guide development, roads, community facilities and utility capacity needed for the population growth that was forecasted at that time. The MEL concept has been a part of every CMP since then.

The 1970 Master Plan established five criteria for expansion²²:

- The boundaries should be at generally equal distances from the center of the City, but the total size would be consistent with the philosophy of a responsive government.
- The outer boundaries should be physically identifiable.
- The MEL should contain natural drainage areas that can be efficiently served with City water and sewer.
- The establishment of reasonable and attainable MEL must recognize those existing conditions that make future annexations to the City improbable.
- The MEL should not divide logical neighborhood limits.

The policy to annex properties that are only capable of being efficiently served by Rockville water and sewer was reversed in the 1993 Master Plan. This change permitted annexation and development of King Farm and Twinbrook Station. City water and sewer serve only a portion of King Farm, and none of Twinbrook Station is so served. However Washington Suburban and Sanitary Commission (WSSC) serve these areas, for water and sewer facilities.

The 2002 Comprehensive Master Plan retained the 1993 Master Plan MEL boundary recommendations. Those limits can be viewed in Figure 10, below, defined by the red boundary lines.

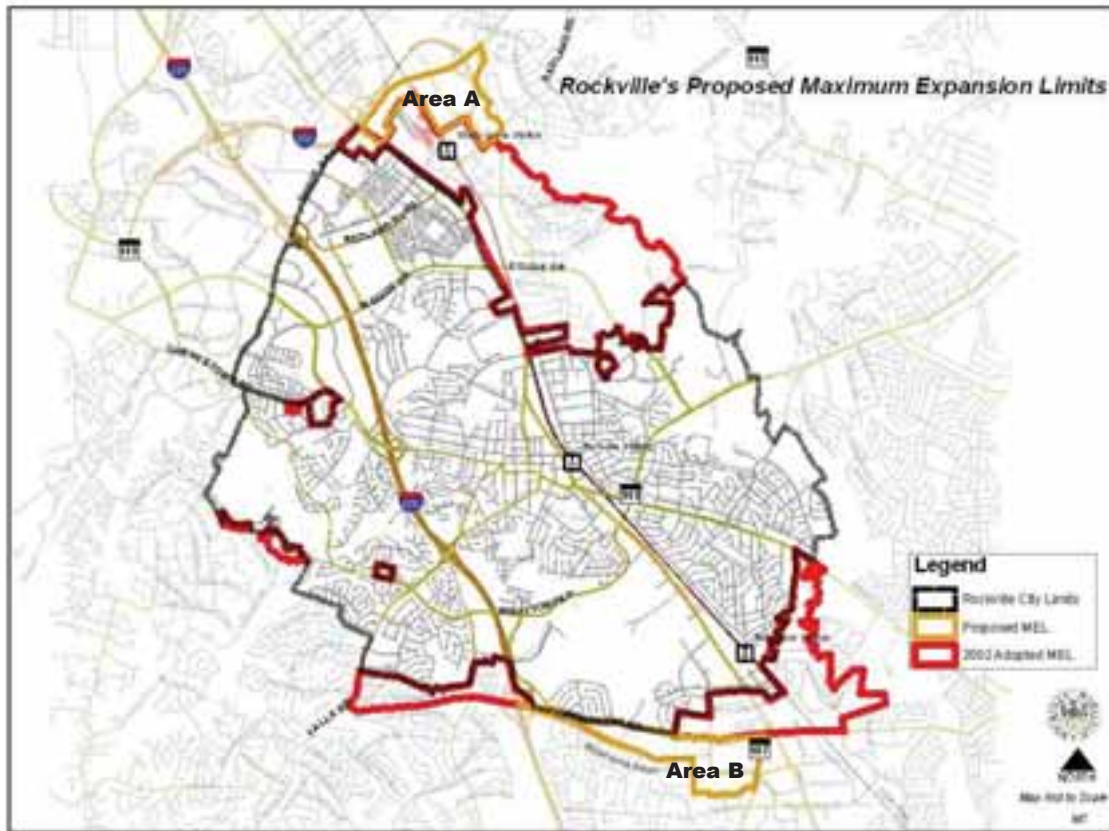
Changes to Maximum Expansion Limits

During development of the MGE, a review was conducted of the existing MEL and areas adjacent to the existing MEL, in terms of potential MEL expansion. Analysis was conducted in terms of the above-listed criteria, but also in terms of the potential fiscal, economic, and other impacts. The result is two areas recommended for MEL expansion.

The areas identified for inclusion in the MEL are indicated as "Area A" and "Area B" in the following map.

²² Approved and Adopted Master Plan, City of Rockville, 1993

Figure 10: Rockville's Existing and Proposed Maximum Expansion Limits



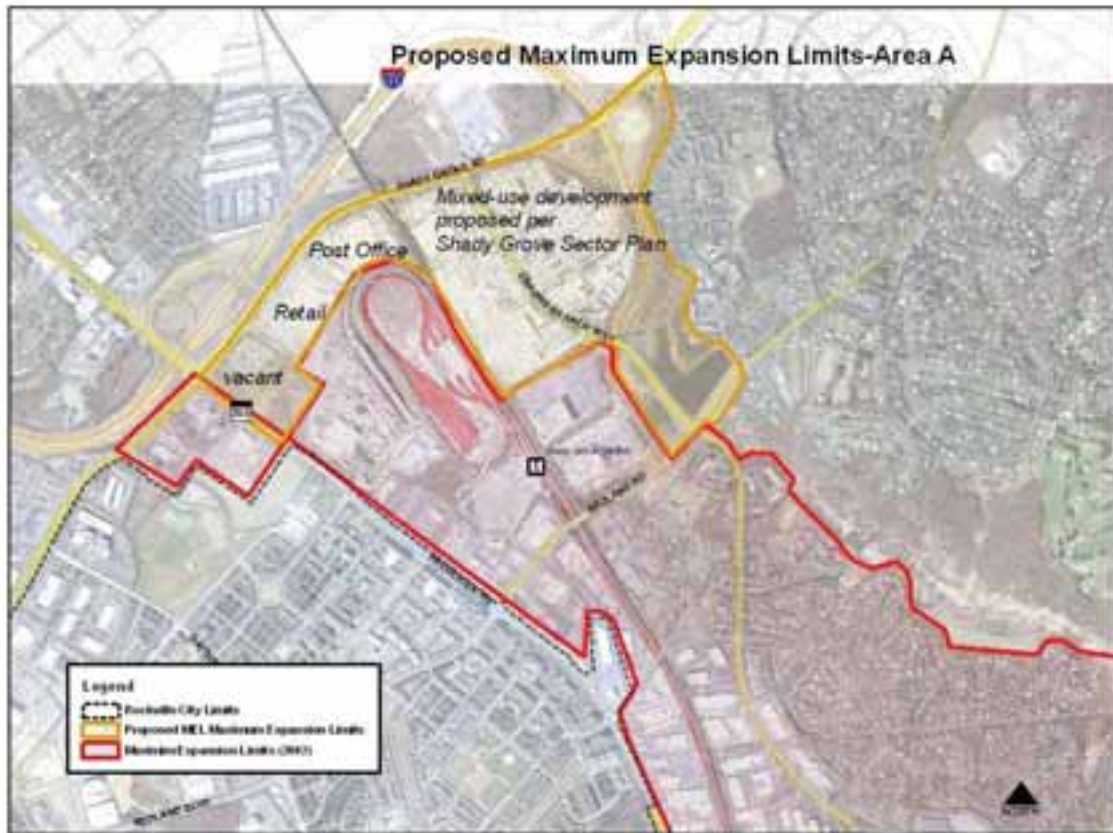
The benefits of including those parcels to the City include positive fiscal impacts, more control over development anticipated in those areas, and allowing for a logical expansion of City boundaries. For the residents within the area, benefits include enhanced local representation, City police protection, City maintenance and snow removal, and access to public utilities.

Once again, it must be emphasized that inclusion of any area within the MEL does not commit the City or any property owner to annexation.

Area A

Area A consolidates the MEL on the south side of Shady Grove Road, and provides a more continuous eastern boundary with the existing MEL and the City line, further to the south. It includes three parcels immediately to the east of MD Route 355, west of the train tracks, and south of Shady Grove Road; and the land around the Shady Grove Metro Station owned mostly by Montgomery County. This entire area is currently covered under Montgomery County's Shady Grove Plan, similar to the status of King Farm before it was annexed by Rockville. Staff knows of no current plan for any of the property owners to petition the City to be annexed. Inclusion of these properties in the MEL would be consistent with the set of criteria that has been used in the past.

Figure 11: Rockville's Proposed MEL - Area A



The primary benefits of including Area A in the MEL include:

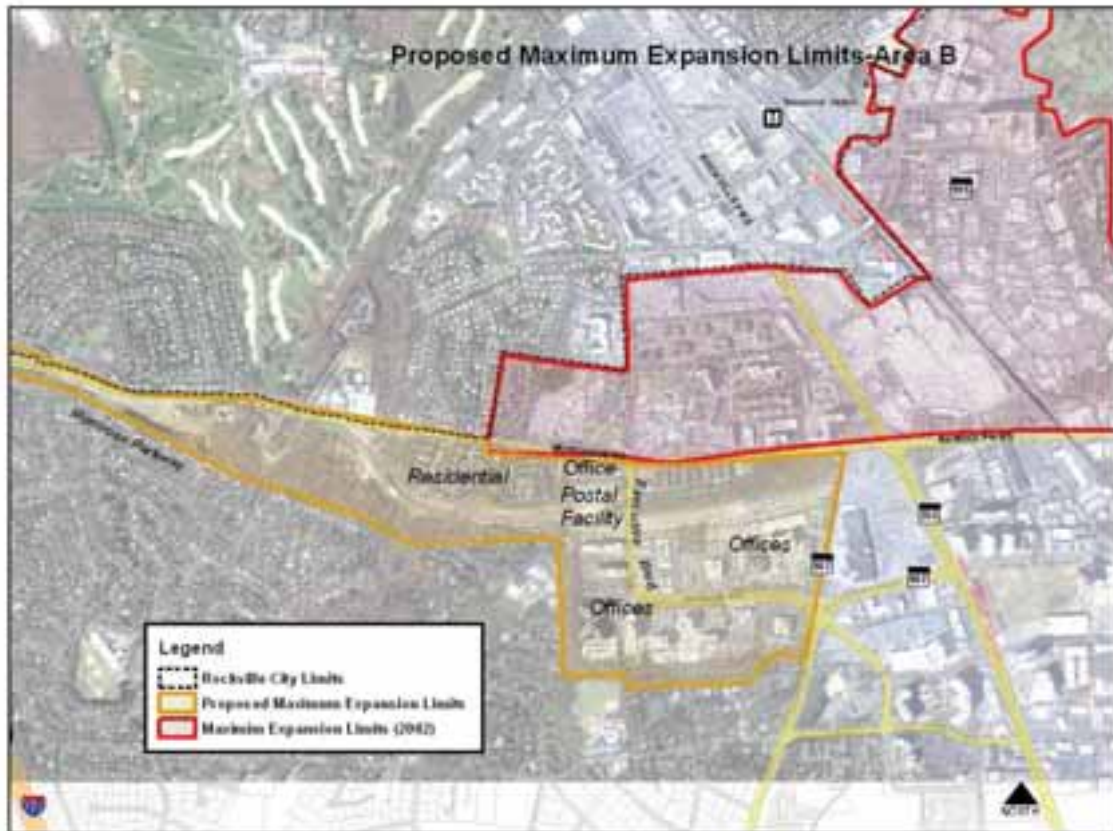
- In combination with the existing MEL, it would consolidate a logical area for potential City expansion. It would consolidate areas that are adjacent to the City and the existing MEL south of Shady Grove Road.
- There are potentially positive fiscal impacts for Rockville, were owners of the redevelopment sites in the Shady Grove Master Plan to petition to become part of Rockville. Rockville would also potentially be able to have a greater influence over development that occurs.

Area B

The proposed new area for the MEL along the southern side of the City is a mix of office, retail and residential uses. The west side of Area B follows the line of the newly constructed Montrose Parkway, then turns to include the US Postal facility along Jefferson Street and the office park along Executive Boulevard. Area B is bounded on the east by Old Georgetown Road, including the proposed extension of the road.

Staff knows of no current interest by property owners to petition Rockville for annexation. Montgomery County Council adopted the comprehensive master plan amendment for this area, North Bethesda/Garret Park, in November of 1992. Staff from MNCPPC-Montgomery has indicated that they may initiate a revision to the plan when the White Flint Sector plan has been completed.

Figure 12: Rockville's Proposed MEL - Area B



The primary benefits of including Area B in the MEL are:

- Annexation of commercial/office parcels primarily along Jefferson and Executive Boulevard would increase the City's tax base, with a likely a positive fiscal impact to the City.
- The City could potentially have more influence and control during the development, if this area were redeveloped as part of the City of Rockville.
- Using the new Montrose Parkway as a boundary allows for a logical expansion of City boundaries, allowing for a better-defined service and delivery area. Montrose Road has served this purpose in the past.
- There are many property owners in this district who already use Rockville as an address, indicating identification with Rockville.

Growth Projections in Rockville's Maximum Expansion Limits (MEL)

The projections for growth outside the City boundaries, but within the City's MEL, were obtained from Montgomery County's Round 7.2 projections.²³ The projected population growth of that MEL land area is for 24,195 people, who would be part of Rockville if

²³ The County's Round 8 numbers for the MEL areas were not available at the time that this document was being prepared.

annexation of the entire area were to occur, as compared to the estimated 10,514 people who live in that area in 2010.

Table 13: Residential Forecasts, Rockville's MEL

Housing Type	Existing (2010)		Forecast (2040)		Change	
	Units #	Population	Units #	Population	Units #	Population
Multifamily	4,180	8,757	15,560	32,598	11,380	23,841
Single Family Attached	258	670	364	945	106	275
Single Family Detached	353	1,087	400	1166	47	79
Totals	4,791	10,514	16,324	34,709	11,533	24,195

Note: Data comes from MNCPPC-Montgomery, Round 7.2 Projections

Just as within the City of Rockville, the large preponderance of growth in households is projected to be in multifamily units. Population growth in Rockville's MEL, including the expansion area, is projected to double from 2010 to 2040.

The table, below, shows the results of combining Rockville and the MEL residential forecasts.

Table 14: Residential Forecasts, Rockville City and MEL

Housing Type	Existing (2010)		Forecast (2040)		Change	
	Units #	Population	Units #	Population	Units #	Population
Multifamily	13,676	28,650	35,033	73,393	21,357	44,743
Single Family Attached	3,698	9,604	3,950	10,258	252	654
Single Family Detached	11,744	34,292	11,850	34,543	106	251
Totals	29,118	72,990	50,833	118,638	21,715	45,648

It is extremely unlikely that Rockville would annex the entire area of the MEL. However City and County estimates indicate that there is potential for substantial growth in the residential sector.

Existing employment and projected growth within the Rockville MEL are shown in the table, below.

Table 15: Employment Forecasts, Rockville's MEL

	Existing 2010	Proposed 2040	Change
	Jobs	Jobs	Jobs
Office	28,198	33,296	5,098
Retail	6,313	7,429	1,116
Industrial	7,062	8,394	1,332
Others	1,467	1,273	-194
Totals	43,040	50,392	7,352

Employment in Rockville’s MEL area is estimated to increase by 7,000 jobs from 2010 to 2040. The northern area of the City’s MEL is within walking distance to Shady Grove Metro and its proximity to I-270, ICC and Metro makes it a very attractive employment center. The south east area of the City’s MEL has good access to the Twinbrook and White Flint Metro stations, access to I-270, and is already an established employment center. (The negative number in employment indicates that relocation of county facilities in the Shady Grove area may result in job losses in the “Others” category.)

The table, below, shows the employment results of combining Rockville and the MEL.

Table 16: Employment Forecasts, Combined Rockville and MEL

	Existing 2010	Proposed 2040	Change
	Jobs	Jobs	Jobs
Office	76,033	104,668	28,635
Retail	18,451	22,454	4,003
Industrial	12,626	15,137	2,511
Others	10,478	13,536	3,058
Totals	117,588	155,795	38,207

If the City were to annex all properties within the MEL, the additional increase in jobs is projected to be approximately 40,000 from 2010 to 2040.

To repeat, however, there is no expectation that Rockville will annex the entire extent of the MEL. As a result, as discussed in Section 6 of this document, measuring the impacts on Rockville’s infrastructure and public services at this point is not a useful exercise.

9) Conclusion

Summary of MGE and DCA Results

By 2040 the population of Rockville is projected to have risen to nearly 84,000 people, living in nearly 35,000 households. Employment is projected to have grown to more than 105,000.

Areas available for growth in Rockville are virtually all infill locations, where projects will involve redevelopment of previously developed sites, mostly along the MD355 and I-270 corridors. At present, these areas are mostly single-use commercial or single-use office/laboratory spaces, where the existing zoning and the future market are likely to support mixed-use development; though the past decade has begun to see changes. None of these growth areas are suitable for large amounts of single-family housing. As a result, the vast majority of new homes in Rockville are projected to be multi-family apartments and condominiums.

Rockville maintains prudent budgeting and investment policies and has adjusted quite well, historically, to its projected growth; but Rockville does not control all of the services and facilities that will be needed. Montgomery County and the State of Maryland are also important service providers in accommodating growth. Rockville, Montgomery County, and Maryland will, at minimum, need to be prepared to provide resources for schools, higher education, recreational facilities, police personnel, facilities for fire/emergency service, and transportation infrastructure. Rockville and Montgomery County will also need to maintain policies by which developers provide appropriate levels of infrastructure, or resources that help to fund such investments, as part of their projects.

The projected growth in Rockville can be accommodated within Rockville's existing municipal boundaries. Therefore, there is no demand-generated need for Rockville to expand its municipal boundaries. However, there may be positive benefits to opportunistic expansion, if an owner adjacent to Rockville expresses the desire to become part of the City. Furthermore, there may be benefits to expanding Rockville's Maximum Expansion Limits (MEL), in order to open the possibility for the positive fiscal benefits and some control over future development in areas that already affect Rockville. The document recommends expanding the MEL to include the broader area around the Shady Grove Metro Station (Area A), and certain areas immediately south of the City boundary in the area of the new Montrose Parkway and a portion of Executive Boulevard (Area B). Expanding the MEL to these areas does not constitute an annexation plan.

Next Steps

Once adopted by the Mayor and Council, the Municipal Growth Element will become part of the City's Comprehensive Master Plan (CMP). Based on the recently completed 6-year review of the CMP, the City plans to initiate a broader revision of the CMP over the next two-three years. The Municipal Growth Element and Development Capacity

Analysis will serve as key data and analysis for that broader effort and will assist the community as it revisits its goals for Rockville into the future.

Appendices

Appendix A: Sources

Maryland Department of Planning, Estimating Residential Development Capacity: A Guidebook for Analysis and Implementation in Maryland, August 2005

City of Gaithersburg, City of Gaithersburg, A Master Plan Element, Adopted April 6, 2009

City of Rockville, Adequate Public Facilities Standards, Rockville Maryland, Adopted November 1, 2005”

City of Rockville, Parks, Recreation and Open Space Plan Adopted March 2010

Maryland-National Capital Parks and Planning Commission, Approved and Adopted Shady Grove Master Plan, March 2006

City of Rockville, Approved and Adopted Master Plan, October 1993

City of Rockville, Comprehensive Master Plan, Approved and Adopted, 2002

City of Annapolis, Annapolis Comprehensive Plan; Chapter 5-Municipal Growth and Community Facilities
http://www.ci.annapolis.md.us/upload/images/government/depts/pl_zon/compplan/Ch%205%20Municipal%20Growth%20&%20Comm%20Fac.pdf

Maryland Department of Planning, Managing Maryland’s Growth: Writing the Municipal Growth Element; Models and Guidelines Series.
<http://www.mdp.state.md.us/pdf/OurWork/mg26supp.pdf>

The Maryland Municipal League, Municipal Annexation Handbook
<http://www.md-municipal.org/documents/pubdocs/MunicipalAnnexationHandbook.pdf>



Martin O'Malley
Governor
Anthony G. Brown
Lt. Governor

Richard Elbertson Hall
Secretary
Matthew J. Pauer
Deputy Secretary

February 3, 2010

Susan Swift
Director
Community Planning and Development Services
City of Rockville
111 Maryland Avenue
Rockville, Maryland 20850

Dear Ms. Swift,

I am in receipt of your January 29, 2010 letter requesting an additional six month extension to complete the City's Water Resources and Municipal Growth Elements.

Your letter indicates that you have made significant progress toward completing these elements and are bringing them forward for review through the public hearing process, however, adoption will not occur prior to April 1, 2010.

Based on the above, your request is approved. The City of Rockville now has until October 1, 2010 to adopt its WRE and MGE. As referenced in my previous correspondence, MDP and MDE staff are available to help with any questions or needs you might have.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard Josephson", with a long horizontal line extending to the right.

Richard Josephson
Director, Planning Services

cc: Craig Simoneau, Director, Rockville DPW
Mark Charles, Rockville DPW
David B. Levy, CPDS
Mamisha Tewari, CPDS
Cynthia Kebba, CPDS
Ann Wallas, CPDS
Peter G. Conrad, Director, MDP Local Planning Assistance
Jason Dubow, MDP Water Resources Planner
Melissa Appler, MDP Land Use Analysis
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 Scott Oliver

CITY CLERK
 Cheri F. Finkbeiner

CITY ATTORNEY
 Denise Haag Duvall

Appendix C: Letter to MDP on DCA Methodology

May 6, 2009

Richard Josephson, Director of Planning Services
 Maryland Department of Planning
 301 W. Preston Street
 Baltimore, MD 21201-2365

Re: City of Rockville's proposed methodology for conducting
 Development Capacity Analysis

Dear Mr. Josephson:

The purpose of the letter is to inform and receive feedback from the Maryland Department of Planning (MDP) about the City of Rockville's proposed methodology for preparing our Development Capacity Analysis. A letter of this nature was recommended by Peter Conrad, MDP's Director of Local Government Assistance, a few weeks ago, and confirmed in a conversation on May 4, 2009, based on Rockville's particular circumstances. As you know, the Development Capacity Analysis is a key input to the development of the new State-required Municipal Growth Element and Water Resources Element for the Comprehensive Master Plan.

Brief Description of Rockville

The City of Rockville is the County seat of Montgomery County and occupies 13.5 square miles within the metropolitan Washington DC area. Rockville's population is estimated at 62,119 for 2009. The City is located 12 miles northwest of the nation's capital. A major portion of the I-270 corridor is within the City's corporate limits. Two Metro rail stations, Rockville and Twinbrook, are within the city limits; and a third, Shady Grove, is just north of the city limits. The Rockville station also has MARC and Amtrak stops.

There is very limited vacant land that is zoned for development within the city limits or within its existing Maximum Expansion Limits for which there is any near-term prospect for development. Unless the context changes dramatically, all future development in Rockville or in its immediate surroundings will be in the context of redevelopment and/or adding density and additional uses to sites that currently have lower-density development.

Background To Rockville's Proposed Approach

As discussed by telephone with Mr. Conrad, guidance documents produced by MDP regarding how to prepare the Development Capacity Analysis focus on estimating how much growth will occur on previously undeveloped parcels. The documents referenced are "Estimating Residential Development Capacity: A Guidebook for Analysis and Implementation in Maryland" and "Managing Maryland's Growth: Writing the Municipal Growth Element; Models and Guidelines Series." We understand that, at present, there is no specific guidance for how to manage redevelopment scenarios.

As a result, the City of Rockville proposes to submit for its Development Capacity Analysis the following methodology, which produces forecasts of growth over the next 30 years, and supplement with projections to calculate capacity as detailed in the methodology. The forecasts and projections are prepared in cooperation with other local governments as a part of regional effort coordinated by the Metropolitan Washington Council of Governments (MWCOG). Table 1 below summarizes the estimates and forecasts of population, households and employment for the period of 2000-2040 that were prepared for the MWCOG transportation model. Table 1 numbers are for Round 7.2. We are currently working with MWCOG on Round 8, which is scheduled to be completed in fall of 2009.

Table 1. Round 7.2 Forecasts-City of Rockville, Maryland

	2000	2005	2010	2015	2020	2025	2030	2035	2040
Population*	47,388	59,556	62,129	66,837	70,627	73,988	76,792	80,336	83,479
Households*	17,193	22,485	23,688	25,915	27,724	29,314	30,789	32,481	33,981
Employment**	68,739	76,597	79,060	85,140	92,024	98,314	100,793	103,793	106,793

*Baseline population and household numbers are from Census 2000

**Baseline employment numbers are developed in-house.

Round 7.2 was adopted by the COG Board in October 2008

The forecasts and projections are prepared in a manner that is as consistent as possible with market conditions and projections, planned transportation improvements, adopted land use plans and zoning requirements.

Proposed Methodology for Estimating Development

Rockville proposes to use the projections from Round 8 as a base for the capacity analysis. The City uses a "bottom up" approach that incorporates the following steps.

Step 1 - Identify parcels within the current City boundaries that have development potential, which include:

- "Pipeline" parcels that already have development approvals.
- Underdeveloped parcels that have been identified using GIS parcel data, aerial photography, master plans, analysis of assessment values, site visits, and in-house expertise.

Step 2 - Estimate development on the identified parcels:

- Zoning calculations are performed to determine the yield of households and commercial/institutional square footage, with a 75% yield rate assumed.
- Valuation analysis is conducted on select parcels to determine the improvements-to-land ratio. If the ratio is below one (meaning that the improvements are assessed as less valuable than the land) the property is considered to be "underutilized" and is more likely to be developed over time than properties with higher ratios. Specific knowledge about the redevelopment potential of a site, however, may lead to the inclusion of that site even where the ratio is more than one.
- Where a neighborhood or an area master plan exists and provides relevant guidance, that guidance is used for development projections.

Step 3 - Identify annexation parcels within the Maximum Expansion Limits:

- The same analysis is conducted as described in Steps 1-3 for parcels outside of the City of Rockville's current boundaries, but within Rockville's Maximum Expansion Limits.

Estimating population and employment growth

- Population projections are derived from the number of new housing units that are projected to be completed, in addition to the existing "base," for each 5-year increment. Then, we apply a household-size factor for each housing type, as developed by the Washington Metropolitan Council of Governments (MWCOC). For the City of Rockville, a multifamily unit is assumed to have 2.095 people, Single Family Attached Units are assumed to have 2.597 people, and Single-Family Detached Units are assumed to have 2.915 people.
- Employment projections are derived from the square footage of commercial and institutional space that are projected to be completed, in addition to the existing "base," for each 5-year increment. The total number of employees is then derived based on an assumed average space occupied per employee, as developed by Metropolitan Washington Council of Governments (COG). The average amount of space per employee is 250 square feet for office uses, 400 square feet for retail, 450 square feet for industrial, and 500 square feet for other uses. Assumptions regarding vacancy rates have also been included, based on economic conditions and public reports.

Rockville intends to use the following assumptions as a basis for the analysis:

- The base numbers for population, households and employment will be used from our existing forecasting process.
- The time frame for analysis is through 2040.
- Environmentally constrained areas are assumed to be unavailable for development. Such areas include open spaces identified as parks by Rockville's Zoning Ordinance, parcels with easements, protected land, historic districts, and built-out areas.
- Recently developed buildings (<10 years old) are not expected to redevelop, or generate additional capacity, and are therefore not accounted for in the analysis.
- The City is, by and large, built out. With very few exceptions, new population and employment growth is expected to come from redevelopment projects.
- Forecasts of future potential development are based on the City's new Zoning Ordinance, adopted in December of 2008.
- For sites where redevelopment is projected with a mix of uses (e.g., residential and commercial), projected density of each use is based on market trends.
- Redevelopment is assumed not to be likely on properties where existing development is at or near the maximum capacity as prescribed by the Zoning Ordinance.
- The City's Adequate Public Facilities Ordinance (APFO) is incorporated into the analysis to the degree possible.



Martin O'Malley
Governor
Anthony G. Brown
Lt. Governor

Richard Eberhart Hall
Secretary
Matthew J. Finner
Deputy Secretary

May 27, 2009

David B. Levy
Chief of Long Range Planning and Redevelopment
City of Rockville
111 Maryland Avenue
Rockville, Maryland 21201-2365

Re: City of Rockville's proposed methodology for conducting Development Capacity Analysis

Dear Mr. Levy,

Thank you for your letter requesting MDP's comments on your proposed methodology for conducting a Development Capacity Analysis for the City of Rockville.

As your letter states, there is a limited amount of vacant land in Rockville to accommodate future development. It is anticipated that most future development will be on redeveloped sites and/or by increasing the density of development and adding uses to zoning for existing developed sites.

Your proposed methodology uses the Round 8 MWCOG projections for population, households and employment growth as a base for the development capacity analysis. A three step process includes 1) identifying pipeline development and parcels that are underdeveloped, 2) estimating development potential/yield on the identified parcels by looking at zoning, conducting a valuation analysis that determines whether the parcel(s) is underdeveloped, and looking at neighborhood or area master plans for guidance on future development, and 3) conducting the above analysis for parcels located outside the City's current boundaries but identified within its expansion limits.

Population, housing and employment projections are derived from the amount of development that is estimated to occur. Assumptions are made with regard to the base year, the year for which projections are made (2040), areas not susceptible to development due to environmental and other constraints, zoning, APF requirements, and other factors.

Appendix D: Letter from MDP Approving DCA Methodology

Mr. David Levy
May 27, 2009
Page 2 of 2

After reviewing your proposed methodology with MDP staff, we would concur with your approach. The City of Rockville is a mostly built out City with limited development potential on vacant land and will rely on redevelopment to accommodate most of its future housing and employment needs. We would welcome the opportunity to work with you as you move forward with your analysis. The process you have identified could well serve as a model for other jurisdictions that face similar circumstances as Rockville.

Thank you for the opportunity to comment. Please don't hesitate to contact me should you have any questions.

Sincerely,

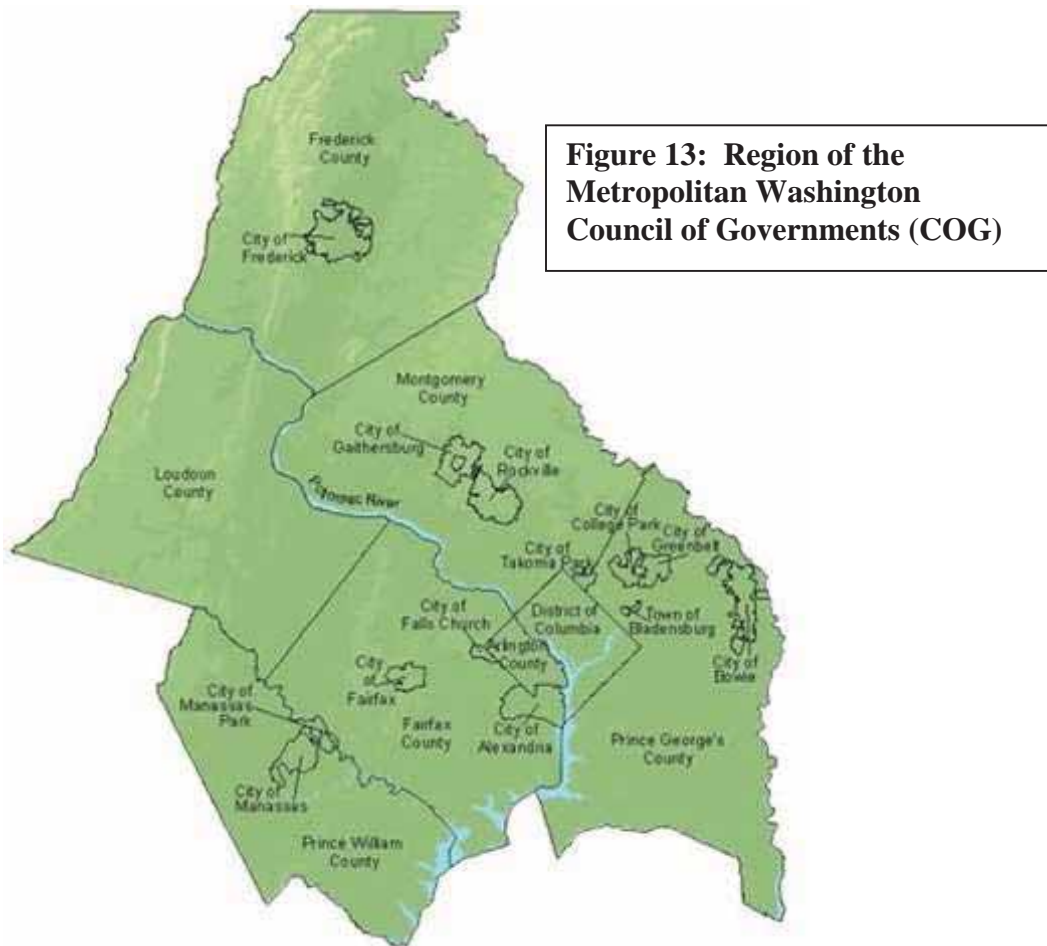
Rich Josephson
Director, Planning Services

cc: Melissa Appler, MDP
Stephanie Martins, MDP

Appendix E: Rockville's Forecasting Methodology

The process for preparing the Development Capacity Analysis, as approved by the Maryland Department of Planning (see Appendices C and D), rests on the process for growth forecasting currently employed by the City of Rockville's Department of Community Planning and Development Services (CPDS). This Appendix provides more detail on the City's process of preparing projections.

Rockville generates forecasts for city employment, population and households as part of Cooperative Forecasting, a process by which the Metropolitan Washington Council of Governments (MWCOC) coordinates forecasts by local governments throughout the COG region.²⁴ The COG region can be seen in the map, below.



²⁴ The jurisdictions included in the Cooperative Forecasts for the region are: Washington, DC; the Virginia Counties of Fairfax, Arlington, Loudoun, Prince William, and Stafford; the Virginia Cities of Alexandria, Falls Church, Fairfax, Manassas and Manassas Park; the Maryland Counties of Montgomery, Prince George's, Calvert, Charles and Frederick.

COG's Cooperative Forecasts provide key data for the COG transportation model, which is developed to determine the region's conformity with the EPA air quality regulations. The forecasts are also used by COG to conduct regional land use analyses. Representatives from each jurisdiction prepare their forecasts independently, but a COG forecasting group convenes monthly to discuss methodologies and assumptions. This group is a subcommittee to the COG Planning Directors Technical Advisory Committee. The cooperative forecasts are a major component of COG's work, and the forecasts are used by public and private entities for various purposes.

The Cooperative Forecasting Process

For every new COG effort to forecast population, households and employment, two parallel processes are conducted: 1) COG produces forecasts for the region as a whole, and 2) COG member jurisdictions produce their local forecasts. The jurisdictions transmit their forecasts to COG, which sums the jurisdictional forecasts and compares the jurisdictional totals to the Regional forecasts. Rockville and Gaithersburg, the only Montgomery County municipalities that participate in COG forecasting, coordinate with Montgomery County in the submission of forecasts.

As a control to the jurisdictional forecasts, COG requires that the sum of the jurisdictions forecast be within three percent of the COG regional forecasts. If the sum of the jurisdictional forecasts does not fall within three percent of the COG Regional Forecasts, the forecasts are reconciled, which sometimes involves jurisdictions being asked to adjust their own forecasts. After reconciliation and adoption by various COG committees, the COG Board of Directors adopts the sum of the jurisdictional forecasts as the official COG cooperative forecasts for the region.

Major "rounds" of cooperative forecasts (e.g., Round 6, Round 7, Round 8) generally are produced about every three to four years when new data from the US Census Bureau or other sources is available. *Minor* rounds (e.g., Round 6.1, Round 7.1) are produced annually or bi-annually, in which jurisdictions make adjustments to forecast series taking into account revised land use plans or pipeline projects, changes to underlying assumptions, or new data.

The forecast used for the Development Capacity Analysis is Round 8, which is the ongoing almost-completed COG Round. The forecast previous to Round 8 was Round 7.2, which was adopted by the COG Board in June 2009. The Round 7.2 forecast had a 2005 base year and forecasts were in five-year intervals through 2040. It was the first forecast to go beyond 2030.

Round 8 was conducted in 2009 and 2010 and also worked off of a base year of 2005. A new and updated econometric/demographic model has produced the 5-year Regional control totals through 2040. This econometric model was developed with the help of John McClain, Deputy Director of the Center for Regional Analysis at George Mason University.

All COG forecasts are organized by Traffic Analysis Zones (TAZs), which is the standard approach for assembling data for traffic projections. Prior to Round 8, COG

coordinated a process to create a new set of TAZ boundaries throughout the region. Staff from CPDS and DPW's Traffic and Transportation Division provided key input to the restructured traffic zones in Rockville. Rockville now has 30 TAZs, which is an increase from the 24 that previously were in Rockville. Across the region, the number of TAZs increased from 2,000 to 3,600. Staff then revised Rockville's 2005 base year estimates to reflect the restructured traffic zones, to facilitate comparisons across years.

Rockville submitted its Round 8 forecast to Montgomery County and COG in October 2009, and the reconciliation process is underway. Both Montgomery County and COG staff have accepted Rockville's totals, though various COG committees and subcommittees continue to review the forecasts. Round 8 is scheduled for presentation to the COG Board of Directors in July 2010.

How Rockville's Forecasts are Prepared

The "Baseline"

In general, forecasts of population, households and employment start with "baseline" data from a prior year, and then project forward based on expected development in the city. As the forecasts were conducted in 2009, the first 5-year period for Round 8 was 2005-2010. As a result, all participating jurisdictions needed to establish a "base" for 2005, off of which forecasting could be conducted.

In preparation for Round 8, Rockville City staff conducted an intensive effort to verify the 2005 base of households and commercial/institutional square footage in the city. Every housing unit was counted and the non-residential square feet were updated through the City's Geographic Information System, the State Department of Assessments and Taxation and other sources.

Whereas the DCA projection period for this document is 2010-2040, the City's Round 8 Cooperative Forecast period is for 2005-2040. For the DCA, City staff has used the same numbers for 2010, 2015, 2020, 2025, 2030, 2035 and 2040 as were used for Round 8.

Development Projections

City staff uses three types of expected development projects for the projections: 1) projects currently in progress; 2) projects approved for development by the appropriate authority (e.g., City Council or the Planning Commission), which are known as "pipeline projections;" and 3) estimates of future development based on existing zoning, master plans, and staff assessment. In general, there is more confidence in the nearer-term projections, as they are based on "real" projects. Staff has less confidence in the longer-term projections. Nonetheless, it would be a mistake to conclude that no growth would occur, especially considering that Montgomery County and the entire COG region projects growth in the longer term.

The population estimates are derived, for each individual assumed development, by multiplying the number of residential units by the average household size, taking into

account differences for housing type. Average household sizes used in Rockville's projections are: 2.095 people in a multifamily unit, 2.597 people in a Single-Family Attached Unit, and 2.915 for a Single-Family Detached Unit. These averages are consistent with Montgomery County's and COG's assumptions for this portion of the region.

Assuming a vacancy rate for multifamily units diminishes the population totals. A vacancy rate of 3.5% has been attributed to the 2005 base for multifamily units, based on an extrapolation of Census 2000 data. A vacancy rate of 5% is assumed for the 2005-2010 period, based on the difficult 2009 market conditions, and in-house knowledge of the vacancy rates in new developments in Rockville. For periods beyond 2010, vacancy rates are not assigned, which is consistent with the methodology deployed by Montgomery County.

The number of jobs (employment) is derived, for each individual assumed development, by multiplying the amount of square feet the average space (in square feet) an employee occupies per a type of non-residential space. This approach, also, is consistent with that of Montgomery County. The assumptions for space are: 250 square feet for an office employee, 400 square feet for a retail employee, 450 square feet for an industrial employee, and 500 for other uses. Specialized knowledge is also used for buildings where staff has specific knowledge, such as for schools or City government buildings.

The number of Office jobs has been reduced by assumed vacancy rates that come from data developed by the CoStar Group. The average office vacancy rate in the City of Rockville was 8% based on a review of annual Costar data from 1993-2006. An 8% office vacancy rate has therefore been assumed for all projection periods except for 2005-2010, for which market conditions led staff to assume a 15% office vacancy rate. Consistent with Montgomery County, the current methodology does not at present account for vacancies in retail and or "other" non-residential uses.

The following other key assumptions have been used in generating projections for Round 8:

- Projects that are approved for development by the approving authority (e.g., City Council, Planning Commission, staff) will move forward, sooner or later.
- Calculations of projected uses and densities in the longer term are based on the 2008 adopted zoning ordinance. No assumption is made that zoning will change in the future.
- Uses discussed in adopted master plans, such as those for Town Center and East Rockville, are considered as part of the forecasting process.
- It is normal for larger projects to take more than one year to be fully occupied by either the residential or non-residential occupants, after completion of the construction. Therefore, increases in jobs and population for larger projects are assigned to more than one year.
- Staff has projected moderate growth in the latter parts of the 30-year forecasting periods, under the assumption of continued demand for housing and employment

in the greater Washington, DC region, limited in Rockville by the scarcity of available undeveloped land.

- No change of use is anticipated for the very large Lakewood, Woodmont, or Redgate golf courses.

Forecast Results

Table 17 summarizes the Round 8 estimates and forecasts of population, households and employment for the period of **2005 through 2040**.

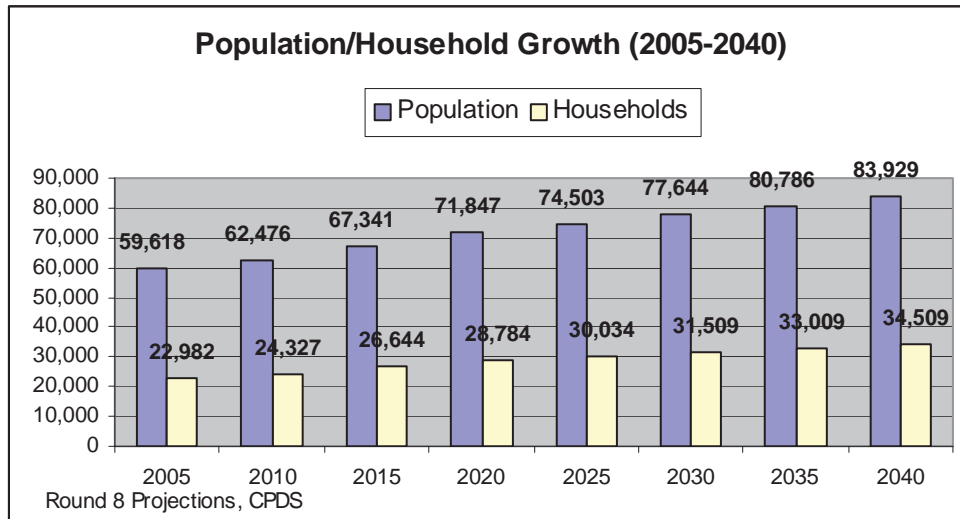
Table 17: Round 8 Forecasts, Rockville

	2005	2010	2015	2020	2025	2030	2035	2040	Change 2005-2040	Percentage Change 2000-2040
Population	59,618	62,476	67,341	71,874	74,503	77,644	80,786	83,929	24,311	40.8%
Households	22,982*	24,327	26,644	28,784	30,034	31,509	33,009	34,509	11,527	50.2%
Employment	76,597	74,549	83,596	91,600	96,783	99,403	102,403	105,403	28,806	37.6%

* The detailed count of residential units for the 2005 base determined that there were 23,736 households in the City in 2005. Diminishing by the assumed 3.5% vacancy in multifamily units results in 22,982 households.

Population and Household growth is displayed graphically, below.

Figure 14: Population/Household Growth, 2005-2040



Appendix F: Rockville Land Use Categories

Land Use	Distinguishing Features
Low-density residential	Under 3 dwelling units per acre or less
Medium-density residential	3 – 25 dwelling units per acre
High-density residential	More than 25 dwelling units per acre
Undeveloped land	Parks, forest preserve, stream valleys, golf courses
Commercial – Retail and wholesale services	Low to medium-density retail, wholesale, service, office, laboratory etc.
Mixed Use Commercial	Higher density retail, office, service and residential uses in areas served by public transit
Industrial	Light industrial, office, laboratory, services and limited retail etc.
Institutional	Government and community facilities including offices, courts, schools, recreation centers etc.

Appendix G: Rockville Zoning Districts

Name of Zone	Type of Zone	Distinguishing Feature
R-400 Residential Estate	Residential Single unit Dwellings (detached and semi-detached)	40,000 sq ft minimum lot area
R-200 Suburban Residential		20,000 sq ft minimum lot area
R-150 Low Density Residential		15,000 sq ft minimum lot area
R-90 Single unit Detached Dwelling, Restricted Residential		9,000 sq ft minimum lot area
R-75 Single unit Detached Dwelling, Residential		7,500 sq ft minimum lot area
R-60 Single unit Detached Dwelling, Residential		6,000 (or 5,000) sq ft minimum lot area
R-40 Single unit Detached Dwelling, Residential		4,000 sq ft minimum lot area
RMD-10 Residential Medium Density	Residential single unit (detached, semi-detached and attached)	20,000 sq ft minimum tract area; allows single-unit detached, semi-detached, and townhouses up to 10 du/acre
RMD-15 Residential Medium Density	Residential single unit and multiple unit dwellings	1-acre minimum tract area; allows detached, attached, and multi-unit residential dwellings up to 15 du/acre
RMD-25 Residential Medium Density	Residential single unit and multiple unit dwellings	2-acre minimum tract area; allows detached, attached, and multi-unit residential dwellings up to 25 du/acre
MXC Mixed Use Commercial	Mixed Use	Low-density retail, service, office and residential uses within or in close proximity to single-unit residential uses
PD Planned Development	Planned Developments	Prior to March 16, 2009, Planned Developments that allowed a variety of development standards and types of uses were approved. Please see Zoning Ordinance section 25-14-07 for details on individual PDs
I-L Industrial Light	Industrial	Lower impact industrial zone allowing live-work units
I-H Industrial Heavy		Higher impact industrial zone
PARK (“PZ”)	Park	Placed on all City parks and recreation areas to provide for open space, recreational, and other compatible uses
MXT Mixed Use Transition	Mixed Use	Low-density multi-unit, attached and townhouse residential development, may include other neighborhood-serving uses for areas located between moderate or high-density development and single-unit detached residential neighborhoods
MXNC Mixed Use Neighborhood Commercial		Low to moderate density retail, service, office and residential in areas that are in close proximity to single-unit detached residential. Not intended for major employment.
MXB Mixed Use Business		Retail, service, light industrial, office and residential uses at a range of densities in areas convenient to both high-density mixed use and single-unit residential areas.
MXE Mixed Use Employment		Medium density office, light industrial, retail and residential. Mix of uses, including live-work/work-live is encouraged.
MXCD Mixed Use Corridor District		Medium density retail, office and residential uses in areas along major highways. Flexible site requirements.
MXTD Mixed Use Transit District		High-density retail office and residential in areas near Metro stations.