

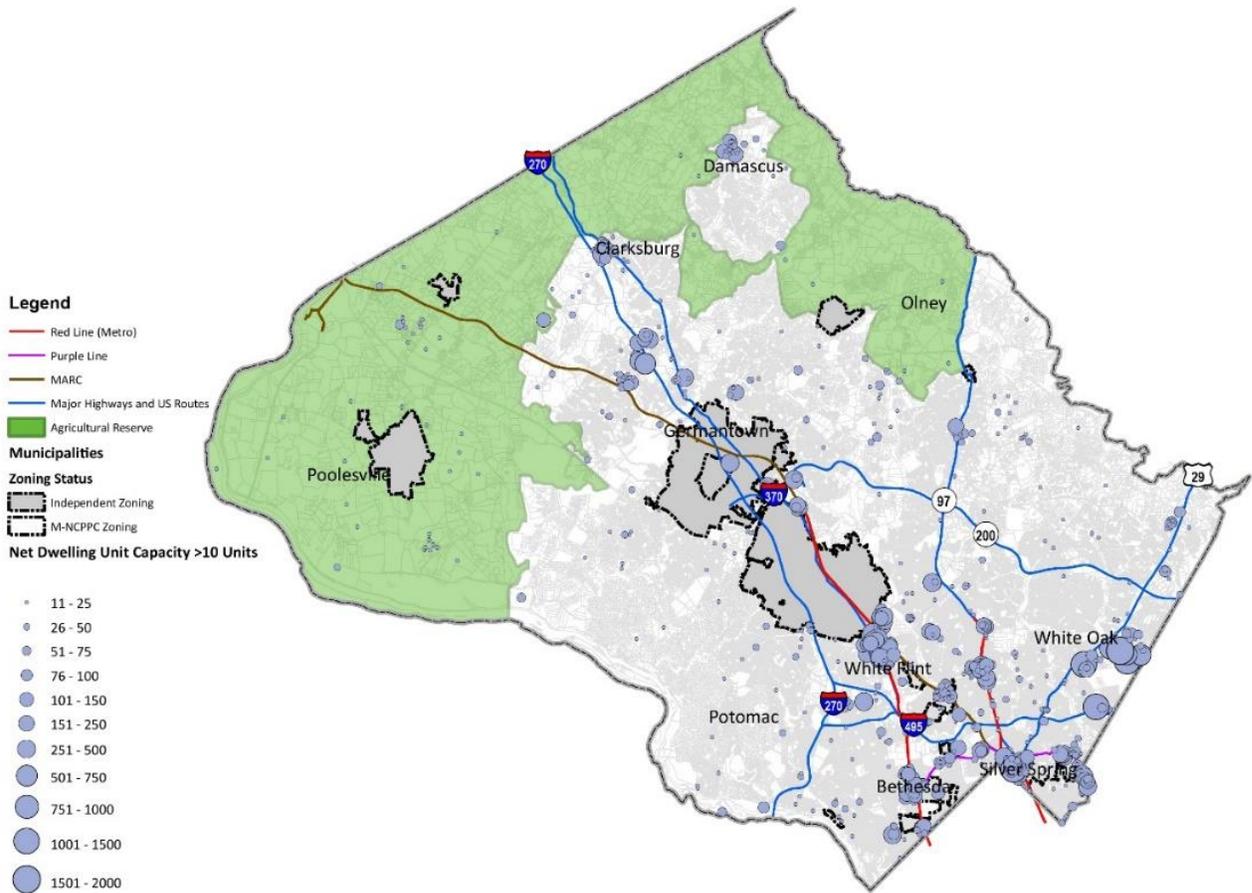
Residential Development Capacity Analysis

<https://mcatlas.org/rdca>

January 2021 DRAFT

The Residential Development Capacity Analysis (RDCA) is an estimate of the total potential residential development that may be built in Montgomery County, MD under a certain set of assumptions and constraints (see attachment 1: methodology). These assumptions include applicable market trends, zoning rules and existing policy decisions. These assumptions, further, do not include Municipalities that govern their own zoning. The RDCA will serve as a baseline measure that aims to estimate current residential capacity in Montgomery County in dwelling units.

Map 1.) Residential Development Capacity Greater than 10 Units



The analysis and results of the RDCA are meant to provide an estimate of the available residential development options that can accommodate demand from future population growth. While this analysis provides an estimate of the number of dwelling units permitted to be built under existing

zoning capacity, this estimate is only meant to be advisory. The RDCA is not meant to speak to an individual parcel's ability to develop or redevelop.

Zoning is not a guarantee of future residential development and is subject to a variety of factors that can impede the number of units built. To the extent possible, the RDCA tries to incorporate relevant factors to estimate likely capacity with the recognition that each parcel has unique physical and market conditions that will greatly influence capacity.

Top 5 Takeaways

1. While Montgomery County, MD has theoretical capacity for over 65,000 housing units on 3,733 parcels, most of the capacity is concentrated near transit, and along the original corridor, the I-270 corridor. The greatest volume of capacity is on sites zoned for high density housing in the Commercial Residential (CR) family of zones, which represent less than 5 percent of the county's total land area.
2. Most residential capacity is tied up on the small sites – on sites less than 5 acres, highlighting Montgomery County's development pattern shifting from greenfield development and toward infill development and compact form.
3. Montgomery County has a diminished availability of available land for redevelopment or development, with the potentially available parcels representing only 15 percent of the county's land.
4. Rather than extend sprawl through the extension of low-density residential development in the Agriculture Reserve, findings demonstrate that the county can prioritize agriculture and rural open space and also build more housing, by reevaluating previously made policy decisions, like the preservation of single-family zoning near our accessible single-family neighborhoods.
5. There are many barriers to building housing, including assembling land, building on difficult sites, the increased development costs on infill sites, and neighborhood opposition. These variables are unable to be fully quantified but are important to consider when discussing future capacity. These barriers will be more pronounced in the future as the county continues to build out.

Methodology and Assumptions

The Residential Development Capacity Analysis (RDCA) uses a detailed parcel-level approach, where each parcel's development capacity was measured against a set of constraints and assumptions to provide an estimate of residential capacity, defined as the number of dwelling units that may be built in the county based on zoning and a certain set of assumptions. While the analysis creates a high-level residential capacity estimate, its detailed parcel level approach allows for a more granular look at residential capacity in smaller areas of Montgomery County in the future. This also allows us, in the future, to model scenarios and understand the implications of zoning changes in specific areas of the county. By looking at both county-wide and smaller areas, we can apply a more historical lens to find areas of the county that have excess or unrealized capacity and aim to understand potential reasons and/or causes.

The RDCA's methodology is included as Attachment 1 below. The methodology details the set of assumptions and constraints that each parcel was measured against. These include:

Environmental Constraints

Environmental constraints may exist due to government policies that protect land or factors that limit the development potential of a site. These areas include areas protected under existing laws, regulations, and guidelines; preserved and conserved natural areas; parkland; agricultural easements; and already-developed properties in agricultural areas.

The zoning development potential of any given parcel is based on the size of the entire parcel. That potential, however, can only be realized on the environmentally unconstrained portion of that parcel. For our analysis, we eliminated parcels where this is not feasible. Parcels were flagged when a its remaining unconstrained area was less than 0.25 acres and where that unconstrained area was less than one-third of the parcel's entire area. Otherwise, the parcel was not flagged for this condition which means that it's development potential was realized from the full parcel size based on its zoning capability.

Man-made Constraints

Constraints that are man-made, such as transportation and utility infrastructure, may impede the ability for a site to reach its development potential and were removed from the consideration for capacity.

Man-made Assumptions

To the extent possible, trends and market forces on realized density may impact the final calculation of capacity. Qualifiers that may influence redevelopment or development potential should be incorporated to further understand the full extent of capacity and the likelihood of redevelopment.

The RDCA aims to find the number of potential new dwelling units that could be accommodated in the county under existing regulations and a continuation of recent market trends. In reality, regulations and market trends can change, and thus, there are many factors that can impede the potential for residential development.

Factors that Can Affect Residential Development or Feasibility

- **Market forces:** While long-range master-planning may zone specific properties to allow certain heights, densities or uses, market forces related to development costs and future rent revenue may limit the heights and densities achievable on a site. The RDCA generally does not account for market variations in different sub areas of the county that may influence the likelihood of development (example: market conditions in Bethesda are different than market conditions in Aspen Hill). Housing market conditions in different sub areas of the county (example: rent growth, vacancy) play a vital role in determining the feasibility for residential development.
 - Market forces include the cost of construction for high-rise steel and concrete vs. mid-rise wood frame. The higher cost of high-rise steel or concrete construction may be

prohibitive for a project, and a developer may choose to proceed with a less dense low- or mid-rise project that leaves allowable zoned height and density unrealized.

- Long-term leases are another market force that are beyond the scope of this analysis. A lease obligation with another party may inhibit the ability of the property owner to redevelop their asset, even if the property fits the assumptions and qualifiers established in the RDCA for identifying capacity.
- **Public policy decisions:** Zoning does not occur in isolation. Other county policies can have an effect on capacity, including affordable housing requirements, master plan requirements, or other public policy decisions.
- **Development pattern and infrastructure costs:** Montgomery County is a county with a diminishing availability of vacant developable land. Most development in the future will be in the form of infill or redevelopment, which is likely to be more costly and complex than greenfield development, making it harder to estimate the likelihood of development. Given the diminishing availability of land, many of the sites left for development or redevelopment may have significant infrastructure costs that will likely affect not only realized capacity, but the market feasibility of development.
- **Development trends:** The RDCA extrapolates current and past development trends to estimate future growth. These trends may change over time with corresponding implications for the ability of a property to redevelop or develop in the future. An example of a future trend that may impact capacity is the introduction of alternative construction types like mass timber or modular that may influence achievable heights and densities as well as the cost of construction.
 - The RDCA only assumes development of three types of housing: single unit detached housing, single unit attached in townhouse form, or a multi-unit apartment structure. The county's current initiatives to look for opportunities to build Missing Middle housing implies that there may be future zoning changes that enable other types of multi-unit structures.
- **Demographic and life trends:** The changing demographics of Montgomery County may influence the type of product built in the future. These demographic shifts include household formation and size, as well as resident age, income, and race and ethnicity.
- **Life span of a master plan:** Master or sector plans generally have a life span of 20-30 years, and the rezoning process is partly based on assumptions about future market conditions. While the master-planning process is based on the best available information, it can be highly speculative. Conditions can change over the life span of a master plan that may impede, improve or alter the ability for allowable density to be realized.
- **Master-planned height limits:** Properties may have master-planned height limits that may impede a parcel's ability to achieve full density.
- **Parcel-level conditions:** The existing condition of buildings is an important factor in determining redevelopment potential. The condition and age of existing uses vary as does the potential for such uses to be discontinued and replaced with housing.
- **Potential for assemblage:** In the development process, property owners may choose to assemble adjacent parcels for increased development area and, in doing so, may increase the

likelihood of development. The RDCA makes no assumption about the potential for future assemblage.

- **Competing priorities:** While the RDCA analysis is aimed at estimating future residential capacity, the county's availability of land also affects the county's ability to meet other important community objectives, such as preserving open space or building community resources like schools and parks. It is likely that there are times when parcels with residential capacity will be used to meet important community objectives beyond housing.
- **Development incentives:** The RDCA does not account for regulatory concessions or financial incentives that encourage and facilitate additional or more intense residential development (example: impact tax waivers).
- **[Bethesda Downtown Plan](#):** In the Commercial Residential (CR) or Commercial Residential Town (CRT) zones in downtown Bethesda, a development may exceed the mapped Floor Area Ratio (FAR) on a site if the Planning Board approves a sketch or site plan that includes the allocation of gross floor area from Bethesda Overlay Zone (BOZ) Density, or FAR Averaging. For the purposes of the RDCA, only mapped density was included for calculating residential capacity.
- **Accessory dwelling units:** Many parcels in several residential detached zones have the ability to add a secondary, subordinate dwelling unit, also known as an accessory dwelling unit (ADU). While this is theoretically possible, the relaxation of the zoning code to allow more ADUs was enacted at the beginning of 2020 and past trends have shown only modest amounts of ADUs being built in the county. The RDCA did not assume ADUs would be a significant source of residential capacity in the future and did not include them in the calculation of capacity.
- **Size of multi-unit buildings:** Generally, most building managers prefer to keep multifamily buildings at a manageable size for operational efficiency, between 300-500 units. While a property may have zoning capacity to build more units, it may be operationally cost-prohibitive to expand the building size for an incremental number of units. The RDCA, thus, calculates the parcel's maximum allowable capacity, and does not account for properties with capacity for greater numbers of units that may not realize that allowable density due to these operational considerations.
- **Unit size:** Unit estimates in the FAR-based zones are based on average-unit size factors. Property owners may elect to build smaller or larger units than the factor used, which can influence the capacity estimate. See Table 4 in Attachment 1 for factors used.
- **Municipality Zoning:** Zoning for some municipalities within the County are maintained independently and thus parcels under independent zoning were not included for purposes of counting zoned capacity. These include Rockville, Gaithersburg, Poolesville, Laytonsville, Barnesville, Brookeville and Washington Grove.
- **Pipeline:** The RDCA assumes the number of dwelling units for projects that have been approved by the Planning Board and are in the Development Pipeline to be realized. However, due to changes in demand or market conditions, projects may not materialize or may be significantly altered, which requires additional review and approval from the Planning Board. Additionally, the RDCA did not include the Development Pipelines of municipalities with independent zoning, listed above.

- Outliers:** The RDCA attempts to estimate the available capacity based on a detailed methodology. There are parcels to which the RDCA assigns little capacity due to identified constraints detailed in this methodology. However, it is possible that the owners of some of those parcels successfully overcome those constraints and redevelop. The RDCA is not meant to speak to a specific parcel’s ability or likelihood to redevelop or develop, but instead provide a high-level advisory estimate of available capacity.

Results

Map 2.) Residential Development Capacity by Number of Units per Parcel

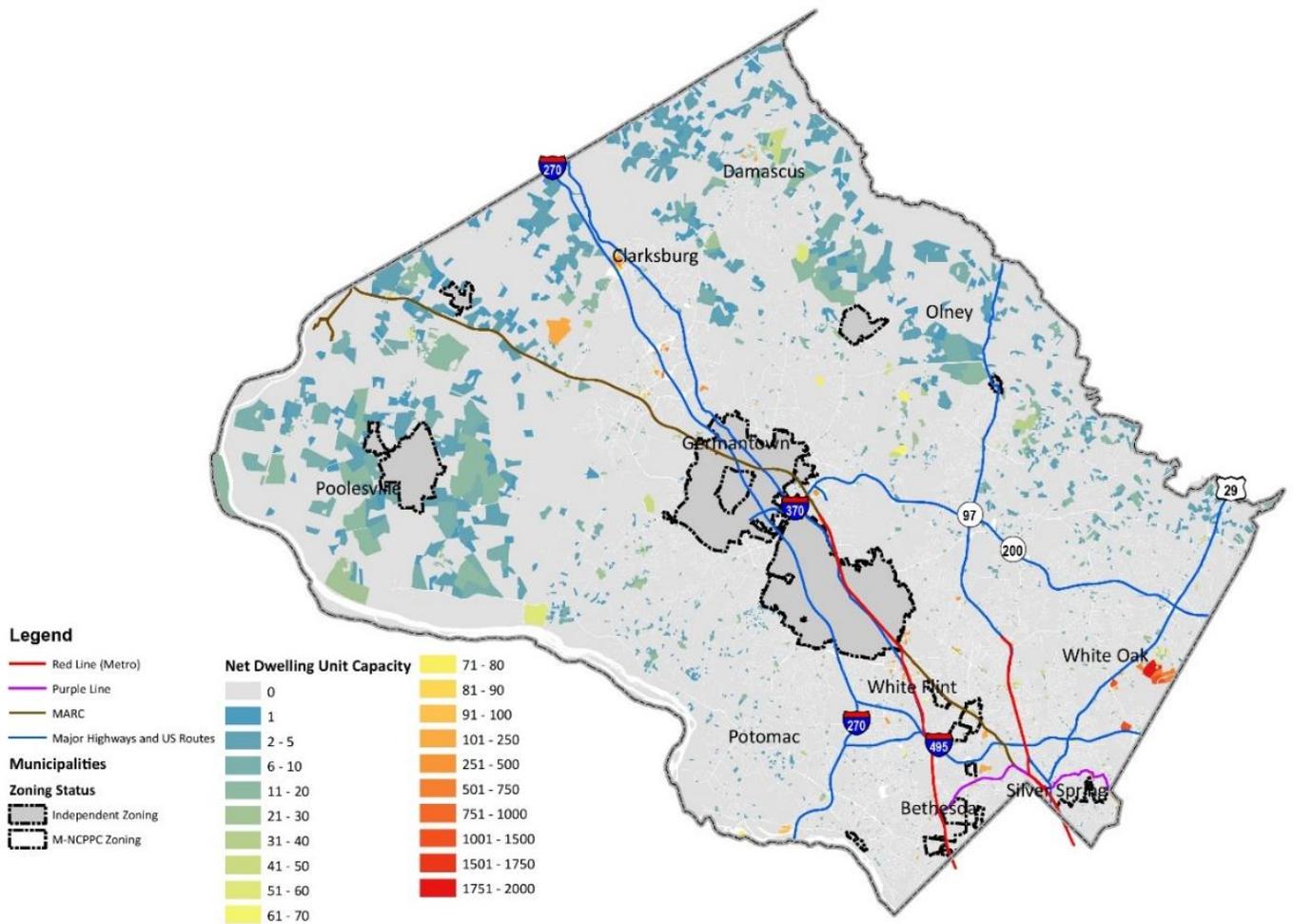


Table 1.) Residential Capacity Analysis Results

Residential Capacity Analysis Results ¹	
Remaining parcels with development or redevelopment potential	3,733

¹ Only parcels under the zoning authority of M-NCPPC had their residential capacity calculated.

Total additional existing residential capacity (in units)	66,569
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The results of the RDCA show an evolution and modernization of the county’s original wedges and corridors concept. While the results show there is capacity throughout the county, the capacity is concentrated down county near transit, and along the original corridor, the I-270 corridor, as shown in Map 1.

The patterns of capacity visualized are also the result of public policy decisions including master plans, transit planning, infrastructure funding, single-family zoning, and the creation of the Agricultural Reserve. The RDCA is not meant to place any value judgement on these decisions but to visualize the relationship between public policy decisions and zoning capacity, as we cannot separate zoning from these public policy decisions. As noted above (in “Factors”), zoning does not occur in a vacuum and is influenced greatly by myriad of factors, including policy decisions.

The policy implications of the RDCA are intertwined with the recommendations of [Thrive Montgomery 2050](#). The recommendations of [Thrive Montgomery 2050](#) were formed under the findings of the RDCA – that Montgomery County is a county of diminishing land where our future will be dominated by infill development on smaller, more complicated and constrained sites. The results of the RDCA also set the stage for the future development context of the county, where only 15 percent of the land is available for development, but the available capacity exceeds 65,000 units. Decreasing availability of developable land will further reinforce the county’s need to carefully balance priorities in the future. Housing, especially affordable housing, continues to be a priority of the county, but the creation of housing also requires infrastructure and services like schools, parks, and commercial retail.

Capacity Analysis

Montgomery County is a large county of more than 300,000 acres, over which its developable residential capacity is not evenly distributed. As mentioned previously, policy decisions and existing infrastructure and services have helped focus existing and potential capacity downcounty and along existing corridors. Representing 85% of Montgomery County’s land area, 98% of parcels in Montgomery county are carrying capacity for 0 dwelling units.

Table 2.) Capacity by Number of Units for Parcels with Residential Capacity

Parcel Net Capacity	Parcel Count	Percent of Developable Parcels	Net Capacity Sum (Units)	Net Capacity Percent	Average Units of Capacity per Developable Parcel
1-24 units	3,204	86%	16,442	25%	5
25-99 Units	408	11%	18,523	28%	45
100 to 500 Units	111	3%	22,038	33%	199
More than 500 Units	10	0.3%	9,566	14%	957
Total Developable Parcels	3,733	100%	66,569	100%	18

As shown in Table 2, most of the parcels in Montgomery County with residential capacity only have small amounts of residential capacity available – 86 percent of these parcels have capacity for a net of fewer than 24 units, with 18 units being the average number of units available per parcel. The net capacity of all 3,204 parcels with capacity fewer than 24 units is only 25 percent of the county’s total residential capacity. While only three percent of parcels have capacity from 100 to 500 units, these parcels represent 33 percent of total net capacity. Sites carrying large amounts of capacity (more 500 units) are less than one percent of all parcels (0.3 percent), but these ten sites contain 14 percent of the all the net capacity.

Table 3.) Capacity by Size of Parcel

Parcel Size	Parcel Count	Percent of Parcels in Size Range	Sum of Net Capacity	Percent of Capacity
0-1 Acre	1,926	52%	21,104	32%
1-5 Acres	950	25%	24,436	37%
5.01-25 Acres	419	11%	11,746	18%
25.01-50 Acres	216	6%	4,297	6%
50.01-100 Acres	117	3%	1,978	3%
Over 100.01 Acres	105	3%	3,008	5%
Total	3,733	100%	66,569	100%

As shown in Table 3, most parcels with residential capacity are on sites smaller than five acres (77 percent of developable parcels), with those 2,876 parcels containing capacity for over 45,000 units, or 69 percent of the total capacity. Furthermore, 52 percent of the parcels with capacity are less than one acre, and these sites hold 32 percent of all the capacity.

Only six percent of all parcels with excess capacity are over 50 acres, and those large parcels only contain only eight percent of the total capacity.

Table 4.) Capacity by Zone²

Zone family	Parcel Count	Percent of Parcels	Sum of Net Capacity	Percent of Capacity	Developable Acres	Percent of Developable Acres
AR	346	9%	1,066	2%	30,622	72%
CR	885	24%	52,871	79%	1,240	3%
Residential Detached	1,962	53%	9,491	14%	5,383	13%

² Please refer to the Zoning Table (Table 11) in the Methodology for which zones are included in each category.

Residential Multifamily	238	6%	1,815	3%	83	0.2%
Rural Residential	262	7%	965	1%	5,319	12%
Residential Townhouse	11	0.3%	70	0.1%	7	0.0%
Other	29	1%	291	0.4%	45	0.1%
Grand Total	3,733	100%	66,569	100%	42,700	100%

Not surprisingly, most capacity in Montgomery County is available in the Commercial/Residential (CR) family of zones. These zones, while only 24 percent of developable parcels and only three percent of the county’s developable land area, contain almost 80 percent of the residential capacity in the county, as shown in Table 4.

The Residential Detached Zones, or Single-Family Zones, represent a significant portion of developable parcels in the county at 53 percent, with most of the capacity in these zones coming from existing houses on large lots that could potentially subdivide to add an additional dwelling unit. As a result, these parcels represent only 14 percent of the total capacity. While this type of development is not common in Montgomery County, it does happen and could happen more regularly with loosened lot size requirements, as proposed in [Thrive Montgomery 2050](#). Of note, no other zoning category contains a significant portion of available capacity or developable parcels.

While each parcel in the county was measured against the constraints and assumptions in terms of likelihood of redevelopment, only parcels that are under M-NCPPC zoning were considered for capacity.

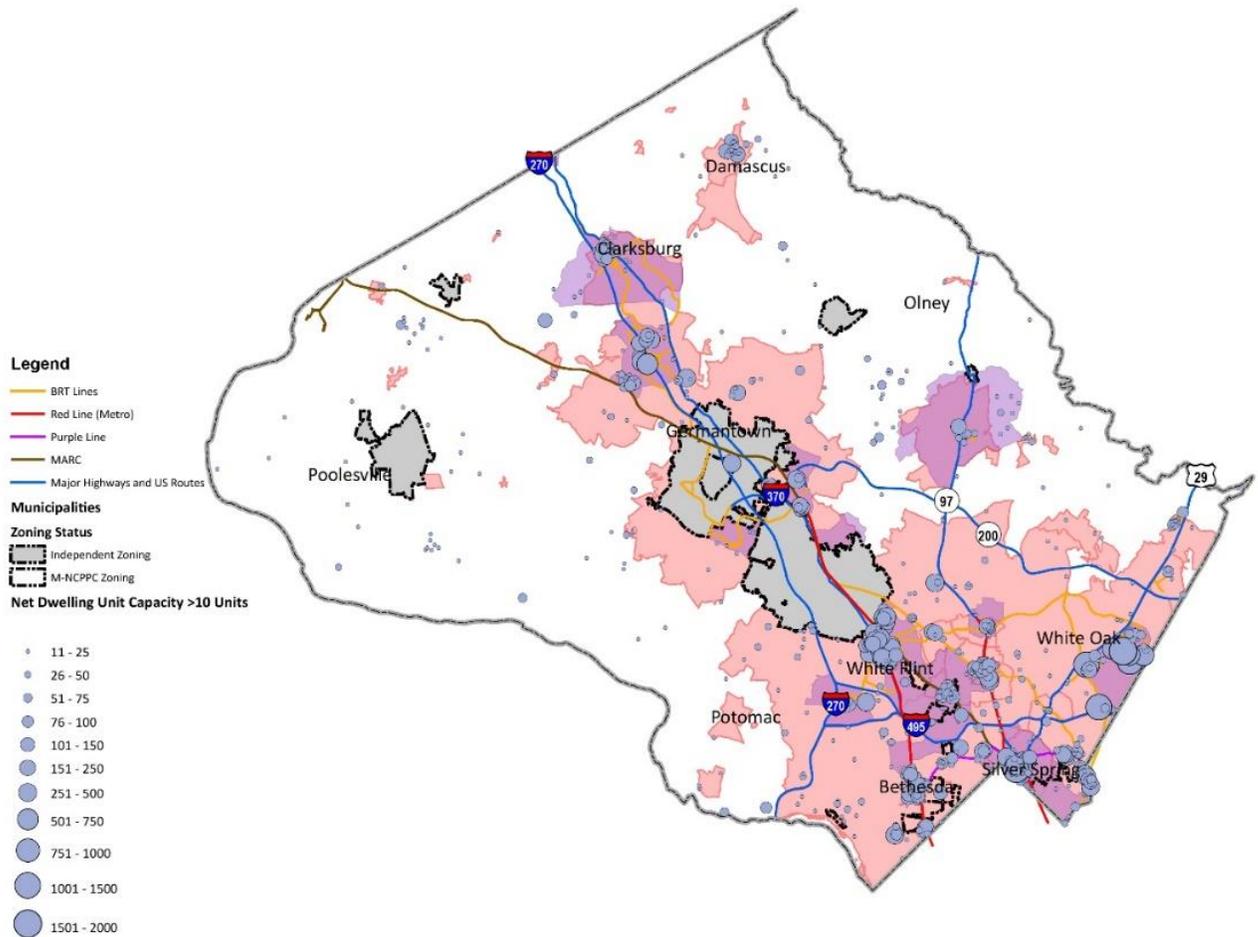
Table 5.) Capacity by Geography

	Parcel Count	Percent of Parcels	Sum of Net Capacity	Percent of Capacity
Activity Centers	1,129	12%	43,112	65%
Priority Funding Areas	2,461	25%	61,449	92%
Downcounty	1,068	11%	20,403	31%
Mid-county	828	9%	31,708	48%
Up-county	1,837	19%	14,458	22%
WMATA Red Line Stations Half-Mile	687	7%	25,179	38%
Purple Line Stations Half-Mile	590	5%	15,179	23%
MARC Stations Quarter- Mile	279	3%	10,469	16%
BRT Route Quarter-Mile	936	10%	34,478	52%

As mentioned earlier, capacity is not spread evenly throughout the county. By looking at various geographies, as shown in Table 5, we can similarly identify areas of capacity under existing zoning.

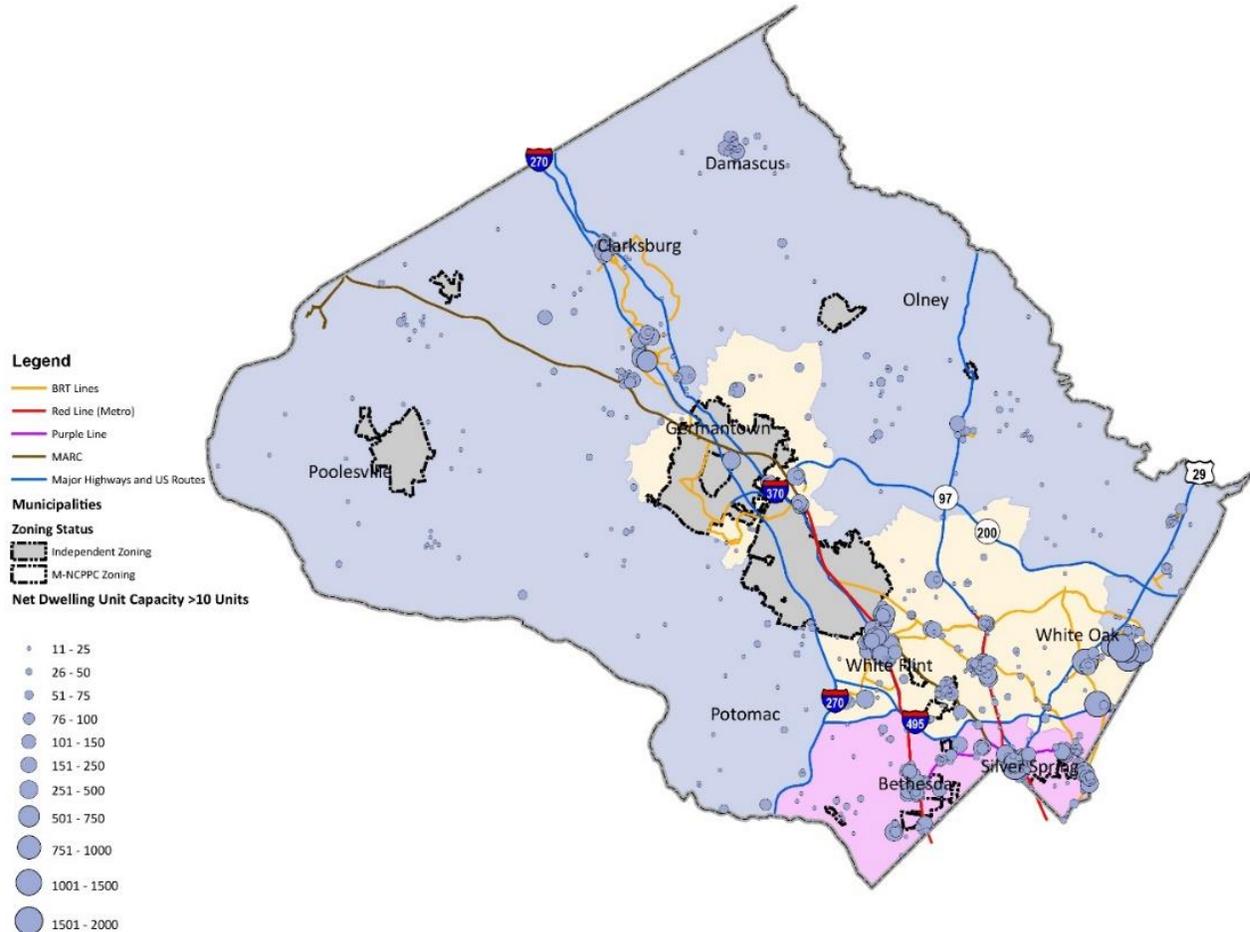
- **Activity centers** are targeted for the majority of the region’s future growth and play a central role in achieving the MWCOG housing goals. Activity centers include existing urban centers, priority growth areas, traditional towns, and transit hubs. These areas contain a significant proportion of the county’s development capacity, holding 65 percent of the total developable dwelling units under existing zoning.
- Maryland’s **Priority Funding Areas (PFA)** are existing communities and places where local governments want state investment to support future growth. These areas contain 92 percent of Montgomery County’s residential development capacity.
- For the purposes of master planning and development review, and quantified below, Montgomery Planning has **three planning regions**, downcounty, mid-county, and up-county. Each region has its own characteristics. Downcounty is below the Capital Beltway and most of the urbanized areas in Montgomery County, including Bethesda and Silver Spring. Mid-county includes areas above the Beltway in emerging Activity Centers like White Flint and Wheaton. Up-county comprises the Agricultural Reserve and areas like Clarksburg and Olney. While downcounty continues to have strong potential for accommodating future housing needs, the planning regions by capacity best illustrate the shifting development pattern of Montgomery County, as established downcounty areas buildout, capacity is pushed further up the WMATA Red Line and along corridors to places within the mid-county region like White Flint, Germantown, and White Oak. Through continued recognition of ongoing conservation in the Agricultural Reserve, capacity in the up-county is primarily limited to town centers like Clarksburg and Damascus.
- Also helpful is seeing how they align with countywide strategies of leveraging **transit (both rail and Bus Rapid Transit (BRT))** as well as geographic districts established and targeted for increased development. Again, Table 5 shows a summary of where developable dwelling units and parcels are located within a half-mile distance of Red Line and the Purple Line Light Rail stations (disaggregated by station in Tables 7 and 8) as well as a quarter-mile of MARC Rail stations and one quarter-mile along the BRT corridors (disaggregated by Route in Table 9).

Map 3.) Capacity by Geography (Activity Centers and Priority Funding Areas)



Looking at geographic districts established and targeted for increased development, shown in the above Table 5 and Maps 3 and 4, 65 percent of developable dwelling units are within Activity Centers and 92 percent within Priority Funding Areas (PFA) (unsurprising given that nearly the whole county, not including the Agricultural Reserve, is in the PFA). Additionally, we can observe developable dwelling units and their positioning spatially in the county. Nearly one-third of developable dwelling units are downcounty (below the beltway), where there is already the most density in the county and almost 50 percent in the Mid-county area, largely along the I-270 corridor, the original planned corridor in the county.

Map 4.) Capacity by Geography (Planning Regions)



Thirty-eight percent of developed dwelling units are within a half-mile of WMATA Red Line stations, 17 percent are within a half-mile of Purple Line stations, and 52 percent are within a quarter-mile of BRT corridors. As shown in Table 6, the majority of developable capacity is downcounty, largely in the commercial business districts (CBD) of Silver Spring (5,630), Bethesda (4,948), and Wheaton (5,236), as well as non-CBD stations surrounding Twinbrook (2,169) and White Flint (4,504).

Looking at Purple Line stations, in Table 7, a similar story plays out, with the two Silver Spring stations as well as Bethesda containing the largest amount of net developable capacity, at 5,642 and 3,977, respectively. These two stations combine for over 40 percent of the available capacity.

A few things to note: For the Red Line, Purple Line, and BRT analyses below, net developable capacity and parcel counts, due to the buffered distance methodology, can count parcels multiple times if they fall within multiple buffers. See Table 5 above for aggregated numbers. Additionally, some stations share ½ mile or ¼ mile proximity to a municipality with independent zoning and have, thus, had their capacity reduced or removed. These are notated with asterisks (*). Finally, parcels were only included if their centroid was within the given one-half mile or one-quarter mile distance buffer.

Table 6.) Capacity by Metro Station

Station Name	Parcels	Net Dwelling Unit Capacity
Shady Grove	13	881
Rockville*	85	N/A
Twinbrook*	25	2,169
White Flint	43	4,504
Grosvenor-Strathmore³	2	69
Medical Center	10	149
Bethesda	153	4,948
Friendship Heights	16	636
Takoma	27	87
Silver Spring	134	5,630
Forest Glen⁴	26	109
Wheaton	137	5,236
Glenmont	16	758
WMATA Red Line Half-Mile	687	25,176

Table 7.) Capacity by Purple Line Station

Station Name	Parcels	Net Dwelling Unit Capacity
Bethesda Purple Line Station	107	3,977
Connecticut Avenue Purple Line Station	15	412
Dale Drive Purple Line Station	23	270
Long Branch Purple Line Station	120	2,278
Lyttonsville Purple Line Station	11	619
Manchester Place Purple Line Station	47	1,633
Piney Branch Road Purple Line Station	75	2,163
Sliver Spring	134	5,630
Silver Spring Library Purple Line Station	122	4,950
Takoma/Langley Transit Center	32	1,862
Woodside Purple Line Station	38	1,498

³ Capacity for the recently completed Grosvenor-Strathmore Minor Master Plan amendment was included in the Pipeline Numbers/Existing Dwelling Units under the submitted plan for Strathmore Square.

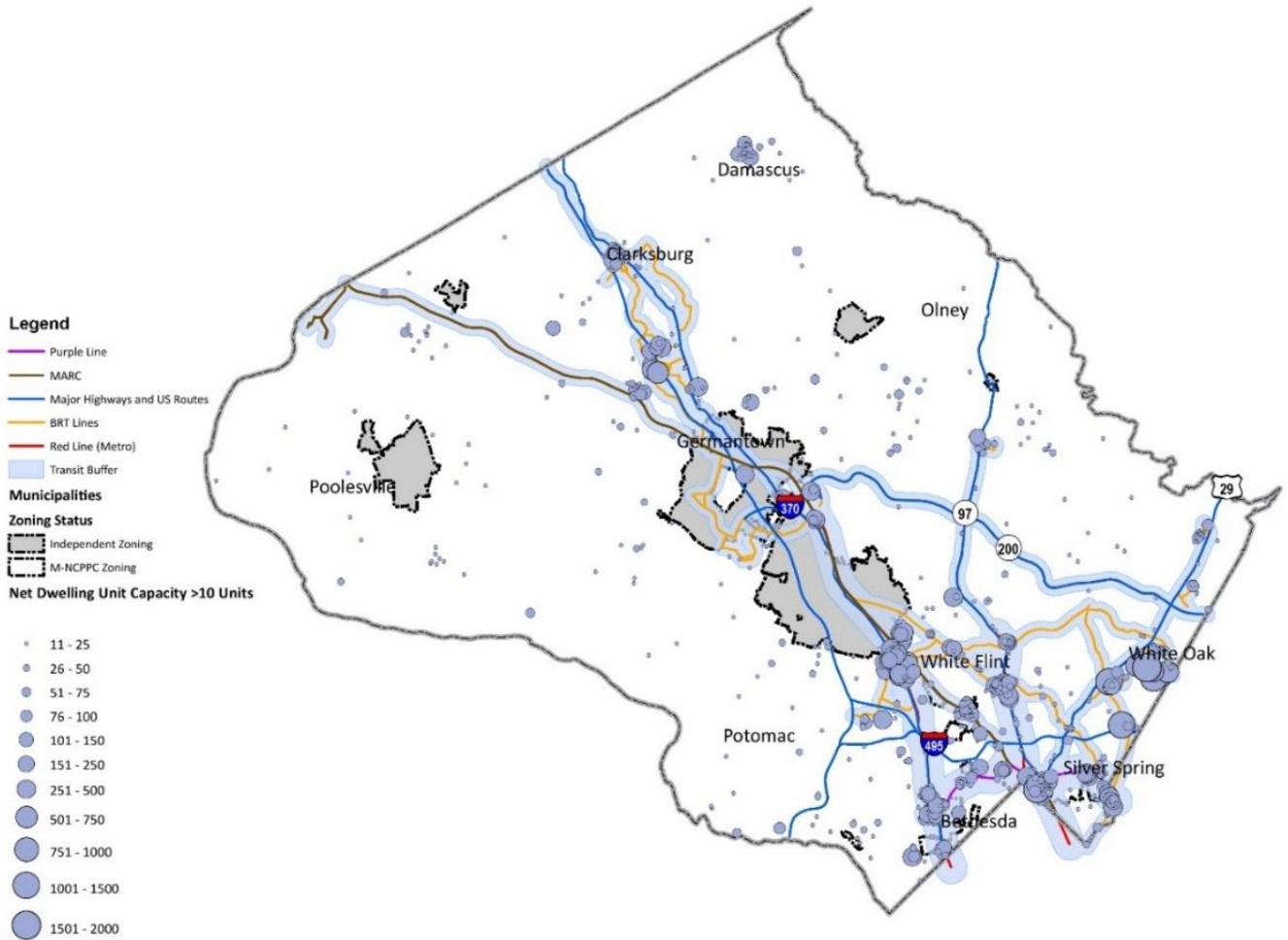
⁴ Zoning analysis for the RDCA was completed before the Sectional Map Amendment for the Forest Glen Montgomery Hills Plan was finalized, where additional capacity was added.

Table 8.) Capacity by BRT Corridor

BRT Corridor Name	Parcels	Net Dwelling Unit Capacity
Corridor 1 (Georgia Ave North)	187	6,151
Corridor 2 (Georgia Ave South)	259	8,620
Corridor 3 (MD 355 North)*	74	2,445
Corridor 4 (MD 355 South)*	202	9,566
Corridor 5 (New Hampshire Avenue)	89	5,306
Corridor 6 (North Bethesda Transitway)	9	548
Corridor 7 (Randolph Road)	74	4,698
Corridor 8 (University Boulevard)	188	6,459
Corridor 9 (US 29)	173	7,189
Corridor 10 (Veirs Mill Road)*	135	4,718

As shown in Table 5, and with routes broken down in Table 8 and visualized in Map 5, more than 50 percent of dwelling unit capacity is within a quarter mile of Corridor BRT routes. By design, they are more prominent in the downcounty and mid-county regions. That said, similar to the above discussion regarding capacity in the Agricultural Reserve, not all locations on these lines are equally likely to develop. The most likely scenario would be for parcels at strategic and synergistic nodes, major cross streets or nearer stops that have proximate retail or office, for example, to develop before those in the middle of large blocks or surrounded by single-family, non-CR zoned parcels.

Map 5.) Capacity by Transit buffer (1/2 Mile Red Line and Purple Line, 1/4 Mile MARC and BRT)



Relationship Between Single-Family Zoning, Agricultural Reserve, and Capacity

Thrive Montgomery 2050 recommends the continuation of previously made policy decisions, including the conservation of the Agricultural Reserve, and reevaluating other earlier policy decisions like the preservation of single-family zoning near transit. The focus of the RDCA, as well as the goals, policies, and actions of the [Affordability & Attainability](#) chapter of Thrive Montgomery 2050, is to look for opportunities to increase housing production. Zoning capacity is an essential tool to achieve this goal. The central vision of [Thrive Montgomery 2050](#) is creating vibrant corridors lined with diverse uses. Our corridors are our vehicles of change to achieve this vision and represent the natural next step in the modernization of [Wedges and Corridors](#) by allowing modest increases in density along these corridors.

The findings of the RDCA highlight the need to reexamine the long-standing county policy of exclusive single-family zoning.⁵ As the county continues to march toward being built out, with only 15 percent of its land available for development or redevelopment, over one-third of the county's land has been set aside for single-family zoning. An introduction of gentle, modest density in our transit-accessible, high-opportunity neighborhoods can help fill our housing need. Even with a capacity for over 65,000 units, most of the county's capacity is tied up on small parcels zoned for high density where the land values make it very difficult to build anything but high-density housing. Our single-family zones near transit represent an opportunity for an introduction of new housing types beyond high density. Gentle density like duplexes, triplexes, or quadplexes can provide new options for existing, and new residents, to find homes at both the right size and price point for their needs, and help Montgomery County grow its housing supply.

While the findings of the RDCA highlight the need to revisit single-family zoning, it also reflects a continued commitment to the county's Agricultural Reserve, which was established in 1980 to preserve farming, farmland and rural open space. As shown in Map 2, there are 346 parcels that are theoretically developable in the Agricultural Reserve, or around eight percent of the total developable parcels. These 346 parcels total over 30,000 acres, or over 72 percent of the county's developable acres. However, these parcels are generally only available at a low density, potentially yielding around 1,000 units, or approximately 2 percent of our available residential capacity.

Perhaps more important than the limited number of dwelling units that these parcels could theoretically provide is Montgomery County's commitment to the Agricultural Reserve. Decades of county planning and policies, including the 1964 Wedges and Corridors Plan, 1980 Agriculture and Rural Open Space Functional Master Plan and, most recently, [Thrive Montgomery 2050](#), demonstrate that the county seeks to prioritize agriculture and rural open space, rather than the extension of low-density residential development in the Agricultural Reserve.

With a county capacity total of over 65,000 units, and the significant amount of capacity available near existing or planned transit infrastructure, the findings of the RDCA confirm a continuation of our existing plans and policies calling to direct growth near transit and the continued conservation of the Agricultural Reserve, most recently reaffirmed in [Thrive Montgomery 2050](#).

Residential Capacity & Regional Housing Goals

Embedded in the goals, policies, and actions of [Thrive Montgomery 2050](#) is a road map to achieve Montgomery County's housing goals. A 2019 County Council resolution supported the Metropolitan Washington Council of Governments' (MWCOC) collaborative action to address the area's housing production and affordability challenges. The county is one of the jurisdictions in the D.C. metropolitan area aiming to create an additional 75,000 housing units in the region, beyond the number of units that the most recently completed regional forecast anticipates by 2030.

⁵ In Montgomery County, the Zoning Code refers to single-family zones as Residential Detached Zones. These zones include the RE-2, RE-2C, RE-1, R-200, R-90, R-60 and R-40 zones. The development standards of these zones vary (i.e. usable area, setbacks, lot coverage), but the predominant use in the Residential Detached Zones is a single-family detached dwelling unit.

This collective action was the culmination of a year-long effort by local planning and housing directors and MWCOG to determine: 1) how much additional housing is needed to address the area's current shortage and whether the region could produce more; 2) where the new housing should be located to optimize and balance its proximity to jobs; and 3) how much new housing should cost to ensure it is priced for those who need it.

At the recommendation of the region's planning directors, MWCOG adopted a strategy of distributing the needed 75,000 additional housing units based on each jurisdiction's percentage of forecasted household growth between 2020 and 2030. Montgomery County's share of the additional 75,000 housing units is 10,000 units. Planning directors and COG staff proposed locating 75 percent of units in Activity Centers and near high-capacity transit and ensuring that 75 percent of units are affordable for low- and middle-income residents.

Zoned capacity in Montgomery County is sufficient to meet not only the forecasted number of units but the county's share of the additional housing units needed to meet its housing goals; that is, there is enough land in Montgomery County currently zoned to accommodate the additional 10,000 units required to meet our COG Housing Goals. Additionally, while the quantity of units may be accommodated, the transit accessibility and affordability of future units is only partially dependent on zoning capacity.

Conclusion

Estimating residential zoning capacity is a speculative exercise that ignores many of the factors that determine whether housing gets built. The challenges of building housing, including assembling land, building on difficult sites, zoning and demand mismatches, the increased cost of infill redevelopment, and neighborhood opposition can lead to delays, reductions in project size, or even the halting of new housing. These challenges are important variables that are unable to be fully quantified in this analysis and will only be more pronounced in the future as the county continues to buildout and confirm that zoning is only one part of a complicated equation required to build housing.

The RDCA is one tool to present a scenario of what residential development will likely occur and where it will occur over the long term, given the current zoning. The RDCA shows where housing *can* go. And in Montgomery County, it shows our continued march toward urbanism and compact form. The results of the RDCA highlight areas where higher-density housing is allowed. These areas, like Bethesda, Silver Spring, White Flint, Wheaton, and White Oak, hold almost all of the county's residential capacity but comprise fewer than five percent of the county's total acreage. In the future, as Montgomery County plans to accommodate over 200,000 new residents over the next thirty years, per the MWCOG Cooperative Forecast Round 9, we will need to look at new areas that are appropriate for more housing, including our transit-accessible single-family neighborhoods.

Zoning is a constraint that limits the amount of housing that can be built on a given parcel, but it can also be a tool to create opportunity and access to neighborhoods that have historically been cut off from anything other than a single-family detached unit. Making room for new residents is essential to achieving not only our housing goals, but our equity, economic development, and environmental goals.

ATTACHMENT 1: METHODOLOGY

The Residential Development Capacity Analysis' methodology is detailed below. It explains the set of constraints and assumptions against which each parcel was measured. The final product identifies remaining parcels with development or redevelopment potential and their total capacity for additional residential units.

STEP 1: Existing Dwelling Unit Count

The State of Maryland Department of Assessment & Taxation (SDAT) dwelling unit counts are taken for the whole county. The analysis uses a parcel snapshot from December 2019.

Summary of Residential Development Capacity Analysis Methodology

- 1) Establish the existing dwelling unit count.
- 2) Add current development pipeline to the existing dwelling unit count to account for parcels currently approved for development.
- 3) Apply attributes to all parcels to enable identification of environmental or man-made factors that constrain the development potential.
- 4) Filter remaining parcels for environmental or man-made constraints to determine remaining additional residential development capacity.
- 5) Determine the residential development potential allowed by the existing zoning for all remaining parcels in the county.

Table 1.) Existing Dwelling Units

Existing Dwelling Units	382,027 units
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STEP 2: Existing Pipeline in December 2019 Pipeline

Development approvals from M-NCPPC as well as those from municipalities within the county (Gaithersburg, Rockville, etc.) and maintained in a GIS pipeline layer by Montgomery Planning were incorporated into the existing dwelling units of the county. These projects are residential, commercial, or mixed. Constituent parcels to a development plan get these values.

Parcels not affiliated with a pipeline approval contain NULL in this field in the Pipeline field. Some parcels are coded with a zero in this field, which means that the parcel is part of a project that has not had its parcel subdivided or assembled within the GIS layer. These parcels may also include HOA open space, or stormwater management lots used to derive density for a project. When they are approved, they can no longer be used to derive additional density. As they can no longer support any additional density, those parcels with 0 in the pipeline field are removed from the additional zoning potential calculations.

Table 2.) Existing Dwelling Units + Pipeline

Pipeline Dwelling Units	+42,520 units
Existing (Table 7) + Pipeline Dwelling Units	424,547 units

STEP 3: Attributes added to all parcels

The following attributes were added to all parcels to support the determination of whether environmental or man-made factors constrain development on each parcel.

Table 3.) Attributes Added to All Parcels

Attribute Type	Description
Square Footage of Surface Parking	GIS surface parking lot layer, apportioned to each parcel
Government Ownership	MCPS, Montgomery County, M-NCPPC, WSSC, MC-HOC, State of Maryland, US Government
Square Footage of Environmental Constraint	floodplains, wetlands, stream valley buffers
Agricultural Easements	State Ag Easements, TDRs, and BLTs
Water and Sewer Categories (From MC DEP)	S 0-10, W 0-10
Multifamily Building Year Built	MD DHCA-licensed rental database has accurate year built for our MF buildings
Pipeline of Development	Number of residential approved units apportioned to each parcel

Please refer to Attachment 3 for a full data description of all the parcel attributes

STEP 4: Filter Parcels by Constraints

Environmental Constraints:

The following environmental constraints were reviewed for each parcel to determine the buildable area of a parcel. While sites that are environmentally constrained may pull density off their entire site, only sites that have a developable portion greater than a contiguous 0.25 acres were assessed for development capacity.

- Green Infrastructure “Regulated Areas”
- Federal Parkland (and other federal land)
- State Parkland (and other state land)
- M-NCPPC Parkland (existing and proposed)
- Best Natural Areas
- Biodiversity Areas
- Stream Valley Parks
- Neighborhood Conservation Parks
- Managed Open Natural Areas within these parks, such as meadows
- Other M-NCPPC Parkland
 - Some of this parkland may have some future additional recreational facilities added, but no residential, commercial, or industrial development, regardless of the underlying zoning.
- Category 1 Forest Conservation Easements including:
 - Category 1
 - Offsite (Category 1)
 - Bank (Category 1)
- 100-year floodplains (to cover residual 100-Year floodplain areas not included in 1 above)
- Wetlands (includes mapped wetlands in GIS, not a complete layer)

- WSSC Lands (used for source water protection)
- Agricultural Easements
 - RLP
 - MET
 - MALPF
 - AEP
 - BLT (Building Lot Termination)
- Already Developed Land in Agricultural Areas
 - This includes properties that are already developed in the AR, RC, RNC, and R agricultural zones. Developed properties were determined by identifying those that have a plat that has a preliminary or pre-preliminary plan associated with it. These properties are included in this mapping exercise because they typically have significant remaining open space that is no longer developable. For example, in the AR zone remaining agricultural land is preserved under TDR easements, in the RC and RNC zones, land is preserved under cluster zone easements. Similarly, a significant amount of agricultural land is typically preserved when R zone properties develop.
- Environmental Constraints not in Protected Lands Layer:
 - Slopes > 25%

Man-Made Constraints:

Constraints that are man-made, such as infrastructure, may impede the ability for a site to reach its development potential.

- Transportation Infrastructure
 - Square footage of surface parking on each parcel
 - Metro and rail lines (include parking lots)
 - State and federal roads and highways
 - Right-of-way
 - Rustic roads
- Utility Sites (WSSC, Transmission Lines, Utility easements)

Man-Made Assumptions:

To the extent possible, trends and market impacts on realized density may impact the final calculation of capacity. Qualifiers that may influence redevelopment potential were incorporated to further understand the likelihood of redevelopment.

- Removed commercial (retail/office) newer than 50 years (built after 1970) from capacity
- Private institutional uses including hospitals, private schools, assisted living, jails/correctional institutions were removed
- Government-owned parcels were removed
 - Government ownership was added to each parcel
- Year qualifier
 - In absence of year built, an Improved Assessed Value qualifier was added to get at redevelopment potential
- Historic preservation

- Remove cemeteries from capacity
- Golf courses
 - Based on discussions with regulatory Planning staff on development potential, golf courses were evaluated on an individual basis.
 - Bethesda CC, Burning Tree CC, Chevy Chase CC, Columbia CC, Congressional CC, Kenwood CC, Little Bennett Golf Course, Needwood Golf Course, Northwest Park Golf Course, Sligo Creek Golf Course, TPC At Avenel Golf Course were removed from the capacity analysis.
- Residential
 - MD DHCA-licensed rental data was added to each parcel add additional year-built information
 - Remove all single unit detached and attached parcels that have achieved max lot coverage in small lot and large lot zones from capacity
 - Remove parcels with multifamily structures older than 50 years **without** zoning capacity, defined as having three times the existing number of units
 - Remove multiple-owner buildings (condos)

STEP 5: Zoning

Lastly, the analysis process adjusted the estimation of the total number of units that could be physically built by identifying the portion of those units that would be allowed under the existing zoning standards. The zoning yield estimated the number of residential units allowed based on allowable densities associated with specific zoning blocks. Zoning for some municipalities within the County are maintained independently and thus parcels under independent zoning were not included for purposes of counting zoned capacity. These include: Rockville, Gaithersburg, Poolesville, Laytonsville, Barnesville, Brookeville and Washington Grove.

Zoning Assumptions:

- **Type of Development:**
 - Assumes Standard Method densities and 12.5% MPDUs
 - Unless:
 - Within planning areas with a requirement to provide 15 percent MPDUs (assumes MPDU Optional Method +22% bonus density)
 - Within Bethesda Downtown Plan Area (assumes max residential value in C/R + no bonus density)
- **C/R Family of Zones (FAR-based zones):**
 - Assumes Maximum Residential (R Value) and Optional Method
 - The formula for CR Zone: $(\text{Shape_Area} * R \text{ (Residential) value}) / 1250 \text{ square feet} = \text{Potential_Units}$
- **Employment Zones** (GR, NR, LSC EOF) assume office (no residential)
- **Residential (Units-Per-Acre Zones):**
 - The formula for residential zones was:
 - $\text{Total Acreage} = \text{Shape_Area} / 43,560$ (1 acre = 43,560 square feet)

- Total Acreage * Allowable units-per-acre for Standard Method/MPDU Optional Method of development = Potential_UnitsResidential capacity were calculated using unit size factors for FAR-based zones

Table 4.) Unit Size/Type Assumptions

Unit Size/Type Assumptions		
	Type	Unit Size Factor
Multi-unit apartment	Apartment (A)	1,250 SF
Single unit attached	Townhouse (TH)	2,400 SF
Single unit detached	Detached Housing (DH)	3,200 SF

Table 5.) Zoning

Zone	Unit Type Assumption	(Units-Per-Acre)	MPDU 15% Requirement Areas Unit Type Assumption	MPDU 15% Requirement Areas (assumes 22% bonus density) (Units-Per-Acre)
Rural Residential Zones				
AR	DH	1 unit per 25 acres	DH	
R	DH	1 unit per 5 acres	DH	
RC	DH	1 unit per 5 acres	DH	1 unit per 5 acres
RNC	DH	1 unit per 5 acres	DH	1.22
Residential Detached Zones				
RE-2	DH	½ unit per acre	DH	
RE-2C	DH	½ unit per acre	DH	0.48
RE-1	DH	1.09	DH	1.22
R-200	DH	2.18	TH	2.66
R-90	DH	4.84	TH	5.90
R-60	DH	7.26	TH	8.86
R-40	DH	7.26	TH	8.86
Townhouse Zones				
TLD	TH	9.07	TH	11.07
TMD	TH	12.10	TH	14.76
THD	TH	15.02	TH	18.32
Residential Multi-Unit Zones				
R-30	A	14.50	A	17.69
R-20	A	21.70	A	26.47
R-10	A	43.50	A	53.07
Commercial/Residential Zones				
CR	A	FAR	A	FAR + 22% Bonus
CRT	A	FAR	A	FAR + 22% Bonus
CRN	A	FAR	A	FAR + 22% Bonus
Zones Retained				
RT-6.0	TH	6.0	TH	7.32
RT-8.0	TH	8.0	TH	9.76
RT-10.0	TH	10.0	TH	12.20
RT-12.5	TH	12.5	TH	15.25
RT-15.0	TH	15.0	TH	18.30

PD	Case-By-Case Basis	Case-By-Case Basis	Case-By-Case Basis	Case-By-Case Basis
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ATTACHMENT 2: RESIDENTIAL DEVELOPMENT CAPACITY ANALYSIS OUTPUT

Below is the summary output of the above described. Parcels can fall under more than one constraint, and thus can be double counted. Staff attempted to address this by creating two columns, “qualifying parcels” and “additional parcels removed.” Qualifying parcels are the number of parcels that qualify for removal based on logic, and additional parcels removed is the net number of parcels removed. Additionally, staff created an additional attribute, “RMVD_REASON,” to track what constraint, or constraints, were applicable per parcel.

Table 1.) Residential Development Capacity Analysis Process with Logic

Category	Logic	Constraint	Qualifying Parcels	Additional Parcels Removed	Net Parcels Remaining
Pipeline	PIPELINE_UNITS is not null	Assumption	2,235	2,235	308,138
HOA	NEW_LANDUSECODE = '740' or LANDUSECODE_QC = '740' or LANDUSE_CODE = '740'	Assumption	8,093	7,922	300,216
Public Ownership	PublicOwnership IN('WSSC', 'WMATA', 'Montgomery County', 'MNCPPC', 'MC Board of Education', 'Maryland State', 'Federal')	Assumption	6,038	5,749	294,467
Ag Easement	AG_easementFlag in ('BLT', 'AgEasemnt')	Environmental	279	268	294,199
Utilities	PUBLICUSE_TYPE IN ('POTOMAC ELECTRIC - Operating Property', 'ASHINGTON GAS LIGHT - Operating Property', 'CSX TRANSPORTATION - Operating Property', 'TRANSCO GAS PIPE - Operating Property', 'BELL ATLANTIC - MARYLAND - Operating Property') or NEW_LANDUSECODE in ('470', '480')	Man-Made	1,087	556	293,643
Environmentally Constrained	Properties that are more than 33% environmentally regulated, unless the unregulated portion is a quarter acre or more. (SHAPE_Area -	Environmental	28,414	23,354	270,289

	Env_Const_Sqft) / SHAPE_Area < .33 And (SHAPE_Area - Env_Const_Sqft) < (43560/4)				
Commercial Built After 1970	LU_CATEGORY IN('Office', 'Retail') and YEAR_BUILT > 1970	Assumption	1,337	1,289	269,000
Multifamily with No Zoning Capacity	(NEW_LANDUSECODE in ('113', '117', '119', '118') or LU_CATEGORY = 'Multi-Family') and (DU_Zoned_Potential < (RES_DWELLU*3))	Assumption	1,358	1,343	267,657
Residential Condos	ACCT like 'C%' and LU_CATEGORY not in ('Institutional/Communit y Facility', 'Office', 'Research and Development', 'Retail')	Assumption	1,019	576	267,081
Single-Unit Dwelling Units	ZONING_SCHEDULE IN ('MC_Regular', 'MPDUrequired') and LONGZONE IN ('THD', 'TLD', 'TMD', 'RURAL', 'Rural', 'RT-8.0', 'RT-6.0', 'RT-15.0', 'RT-12.5', 'RT-10.0', 'RNC', 'RE-2C', 'RE-2', 'RE-1', 'RC', 'R- 90', 'R-60', 'R-200') and (NEW_LANDUSECODE in ('111', '116', '114') or LU_CATEGORY IN ('Cooperative', 'Single Family Attached', 'Single Family Detached'))	Assumption	191,523	187,779	79,302
Single-unit Dwelling Units (municipalities)	ZONING_SCHEDULE NOT IN('MC_Regular', 'MPDUrequired') and NEW_LANDUSECODE in ('111', '116', '114')	Assumption	27,032	26,644	52,548
Burial Sites	BurialSite = 'Buri*'	Assumption	222	147	52,511
Private Institutional Uses	PUBLICUSE_TYPE IN('ASSISTED LIVING (AMBULATORY)', 'HOSPITAL', 'JAIL/CORRECTIONAL FACILITIES', 'NURSING HOME', 'SCHOOL') or NEW_LANDUSECODE IN	Assumption	800	225	52,286

	('672', '674', '675', '681', '682', '731', '711')				
Improvements (Non-retail improvements where assessed value is more than twice assessed value of the land)	IMPROV_ASSMT > (LAND_ASSMT*2) and NEW_LANDUSECODE not like '5%'	Assumption	18,131	3,845	48,441
Employment Zones	LONGZONE like 'EOF%' or LONGZONE like 'GR%' or LONGZONE like 'NR%' or LONGZONE like 'IM%' or LONGZONE like 'IH%' or LONGZONE like 'IL%' or LONGZONE like 'I-3%' or LONGZONE like 'I-1%' or LONGZONE like 'LSC%'	Assumption	2,680	1,321	47,120
CR zones that Net Fewer than 10 Units	NET_DU_CAPACITY <=10 and LONGZONE like 'CR%'	Assumption	2,815	1,469	45,651
PD-Zoned Parcels with Existing Single-Family Use	ZONING_SCHEDULE IN ('MC_Regular', 'MPDUrequired') and LONGZONE like 'PD%' and (NEW_LANDUSECODE in ('111', '116', '114') or LU_CATEGORY IN ('Cooperative', 'Single Family Attached', 'Single Family Detached'))	Assumption	8,583	6,899	38,752
Parks Land Use Code QC	LANDUSECODE_QC = '761'	Assumption	44,634	20,239	18,513
Golf Courses	(Bethesda CC, Burning Tree CC, Chevy Chase CC, Columbia CC, Congressional CC, Kenwood CC, Little Bennett Golf Course, Needwood Golf Course, Northwest Park Golf Course, Sligo Creek Golf Course, TPC At Avenel Golf Course) GOLF_KEEPS = 'NoRedev'	Assumption	31	9	18,504

Developable Parcels with No Residential Capacity	NET_DU_CAPACITY < 1 or NET_DU_CAPACITY is null	Assumption	273,207	14,154	4,350
Removed Remaining Parcels within Municipalities	ZONING_SCHEDULE = 'MC_Regular' OR ZONING_SCHEDULE = 'MPDUrequired'	Assumption	617	617	3,733
PARCELS WITH RESIDENTIAL CAPACITY in the MARYLAND- WASHINGTON REGIONAL DISTRICT COUNCIL					3,733

Table 2.) Residential Development Capacity Analysis Results

Residential Development Capacity Analysis Results	
Remaining parcels with development or redevelopment potential	3,733
Total additional existing residential capacity (in units) based on current zoning and other assumptions	66,569

ATTACHMENT 3: DATA DICTIONARY

Data dictionary for the resulting GIS layer displaying our Residential Development Capacity Analysis. The fields listed below are from the layer in our web application displaying this data. When zoomed in, you can see the parcel level data. And when you click on one of those parcels these fields are exposed on a per parcel basis.

Table 1.) Data Dictionary

DCA_REMOVED	This is the resulting judgement as to whether this parcel is likely to redevelop or not based on the rules listed in the Methodology document. It either says Develop or Remove.
RMVD_REASON	If a parcel is removed, this field lists the flagging reasons why it was removed. There can be one or more reasons a parcel is removed. If DCA_REMOVED=DEVELOP this field is blank.
RES_DWELLU	This field displays the existing dwelling unit count as currently listed by the State Assessments office (SDAT).
ZONED_POTENTIAL	This field lists the maximum possible dwelling unit count possible for the parcel based on its zoning and parcel size. The zone is listed in the LONGZONE field.
NET_DU_CAPACITY	This field represents how many dwelling units more than are already existing on a parcel. NET_DU_CAPACITY = ZONED_POTENTIAL - RES_DWELLU
Env_Const_Sqft	Environmental constraints is a GIS layer containing multiple inputs such as floodplains, stream valley buffers, conservation easements and more. This field represents the intersection of that layer with this parcel and lists the amount of SQFT of this constraint within that parcel.
PublicOwnership	This field flags properties that are PRIVATE or otherwise publicly owned (State, Federal, County, WMATA)
LONGZONE	This is the zoning on the parcel. Since zoning can come from Montgomery County or one of the municipalities with zoning authority, the zoning standard applied here is designated by the ZONING_SCHEDULE field.
PUBLICUSE_TYPE	SDAT listed data which lists a use type for public properties.
PIPELINE_UNITS	If a parcel is already under an existing development approval it is considered to be already in the 'Pipeline of Development'. This field list how many dwelling units were approved for the parcel. Otherwise it is blank (null). Parcels in the pipeline are exempt from calculation of additional ZONED_POTENTIAL.
LANDUSECODE	This field represents the county landuse code in use on existing parcels. The system is provided by SDAT but was originally defined by MNCPPC in the early 1980s. This field has corrections applied to it as part of this analysis. These corrections come where LANDUSE_QC entries were filled in. Various developability decisions (DCA_REMOVED) are based in part by this field.
ACCT	This is the SDAT TAX ID for a parcel.
LAND_ASSMT	The Land assessment for a parcel by SDAT. Developability decisions (DCA_REMOVED) are based in part by this field.
PREF_ASSMT	SDAT assessment value for agricultural parcels.
IMPROV_ASSMT	SDAT assessment value for built items on a parcel (buildings etc.). Vacant land parcels list zero for improvement assessment.

EXEMPT_CODE	SDAT provided field designating a reason for a parcel that is tax exempt. Most taxed parcels list blank (null) in this field. The number refers to if it was state federal, parks, schools owned or other tax-exempt entity.
LU_CATEGORY	This is the MNCPPC category description given to a parcel based on its specific LANDUSE_CODE.
AZCODE_NAME	SDAT landuse category description for its statewide landuse coding system. This system is not useful as it is an overly simplified system designed to work for all jurisdictions in Maryland.
ConstrctCode	SDAT attribute that describes structure types. This is used in their IMPROV_ASSESSMENT determination workflow.
DWELL TYPE	SDAT dwelling attribute for improvement assessment workflow.
TRANSFER_DATE	SDAT recorded date of most recent parcel sale.
SALES_PRICE	SDAT recorded sales price of most recent parcel sale.
LEGAL_DESC	SDAT recorded legal description. Found on deed.
HOUSENO	SDAT primary premise address house number for the parcel. SDAT only lists one premise address per parcel even though there can be multiple addresses on a parcel.
ADDR_DIR	SDAT primary premise address house number suffix for the parcel. SDAT only lists one premise address per parcel even though there can be multiple addresses on a parcel.
STREET	SDAT primary premise address street name for the parcel. SDAT only lists one premise address per parcel even though there can be multiple addresses on a parcel.
STREET TYPE	SDAT primary premise address street type for the parcel (ST, AVE, RD, CT, etc.). SDAT only lists one premise address per parcel even though there can be multiple addresses on a parcel.
CITY	SDAT primary premise address CITY for the parcel. SDAT only lists one premise address per parcel even though there can be multiple addresses on a parcel.
ADDR_ZIP	SDAT primary premise address CITY for the parcel. SDAT only lists one premise address per parcel even though there can be multiple addresses on a parcel.
OWNERS_NAME	SDAT recorded owner name.
GR_FLR_AREA	SDAT recorded gross floor area on parcel. Informs their improvement assessment value.
NO_DWELLINGS	SDAT recorded number of units. This is the same as RES_DWELLU if a parcel is residential. However, SDAT also uses this field to denote parking units, storage units, and more where the LANDUSE_CODE is not a residential code.
DWELLINGTYPE	NoData1
YEAR_BUILT	SDAT recorded build year for a building on a parcel. RDCA uses this field as part of the developability criteria.
DWELLING_GRADE	SDAT attribute. Not used in this analysis.
PLAT_LINK	If a parcel has a plat (many parcels are not platted which is a requirement for building permits) this field lists a link to the State Archive web viewer for that plat.
BING3D	MNCPPC GIS provides a BING isometric link for each parcel here. BING doesn't provide this view for all parts of the county, so where that's the case it is merely a normal 2d map.
STREETVIEW	MNCPPC GIS provides a streetview link for each parcel here.
NONRES_DWELLU	Where SDAT lists a landuse code that is not parking nor residential, their NO_DWELLINGS value is shown here.

PARKING_UNITS	Where SDAT lists a parking landuse code, their NO_DWELLINGS value is shown here.
SQFT_RESIDENTIAL	
SQFT_OFFICE	
SQFT_RETAIL	
SQFT_INDUSTRIAL	
SQFT_OTHER	
LAND_ASSMT_RES	
IMPROV_ASSMT_RES	
LANDASMT_NORES	
YEARBUILT_QC	MNCPPC staff populated corrections the SDAT listed year built which we derived from COSTAR for multifamily and commercial buildings.
Shape.AREA	Size of parcel (in square feet)
AG_easementFlag	Parcel under an Agricultural easement are flagged in this field, all others are blank(null). This field makes up one of the criteria for removing developability flag in DCA_REMOVED.
LANDUSECODE_QC	MNCPPC field recording where staff has recorded a correction to the SDAT LANDUSE_CODE.
ZONE1	Zoning on a parcel. It's the same as LONGZONE listed above. Used in concert with the ZONING_SCHEDULE to determine a parcel's ZONED_POTENTIAL for maximum possible dwelling units.
R_VALUE	This field contains the R value (residential FAR) for parcels using one of the County's new CRT, CRN, or CR zones which individually record a maximum residential FAR within the LONGZONE attribute.
ZONING_SCHEDULE	This field lists what zoning authority a parcel falls within. For Montgomery county we list two schedules MC_REGULAR and MC_MPDU required which contain small differences per zone. Zoning for some municipalities within the County are maintained independently and thus parcels under independent zoning were not included for purposes of counting zoned capacity. These include: Rockville, Gaithersburg, Poolesville, Laytonsville, Barnesville, Brookeville and Washington Grove.