

CHAPTER 2

POPULATION, EMPLOYMENT, AND LAND USE

This chapter describes the Montgomery County's population, employment, and land-use practices. These factors provide information for projecting solid waste quantities and planning the future needs of the solid waste management system. Population, consumption, and employment trends also assist with estimating the amount and composition of waste generated. Land use practices and conditions influence solid waste planning and may place constraints on the location of solid waste facilities. This chapter is organized as follows:

- 2.1 Population trends
- 2.2 Municipalities and Subsidiary Plans
- 2.3 Employment trends and federal facilities within the County
- 2.4 Comprehensive Land Use Plan
- 2.5 Zoning requirements related to solid waste management activities

Appendix A defines acronyms and solid waste terms used in this chapter and throughout this document.

2.1 Population Trends

Montgomery County is the largest County in Maryland. It has retained its status as the second-largest County in the Washington, D.C. metropolitan region and is now the 45th largest County in the United States. According to County Demographic Trends,¹ the County is growing at a smaller rate than in previous decades. Montgomery County was still growing in the 2010s, but lost population from 2020 to 2022 because of increased net domestic out-migration from the County. A similar trend occurred with Washington, D.C. and the inner suburban jurisdictions such as Prince George's County (MD) and Fairfax County (VA). The COVID-19 Pandemic allowed more people to work remotely and live further out in Frederick County (MD), Loudoun County (VA), etc.

- The population is aging, with 21% of the County expected to be over 65 by 2045. Younger residents are more likely to be people of color, while older residents are more likely to be White.
- The County is one of the most highly educated counties in the US; ranked 7th for the percentage of the population with graduate degrees. Yet significant disparities in income and educational attainment persist.
- The median household incomes of Black and Hispanic households are less than 65% of the median household incomes of White and Asian households.

¹ Montgomery County Demographic Trends, Presentation to the Montgomery Planning Board December 7, 2023

- Only 28% of Hispanics and 47% of Blacks have at least a Bachelor of Arts (BA).
- While two-thirds of residents own their homes, housing tenure varies significantly by race.
- Commuting patterns and how people work are still undergoing major shifts.

At 28%, the percentage of people working from home is significantly higher than pre-pandemic levels.² Significant changes are expected due to the Federal return-to-work policies imposed by the new government starting February 2025.

The most recent growth forecasts are contained in the Round 10 Cooperative Forecasts, prepared by Montgomery County's Planning Department, The Maryland-National Capital Park Planning Commission (M-NCPPC). M-NCPPC projections in **Table 2.1** suggest a slow-growth population averaging approximately 0.65 percent per year for the planning period 2025-2034. The Round 10 forecast was recently completed, and new numbers show that over the next 30 years, the County is projected to experience growth in population, households, and jobs. However, the growth rate is estimated to be slower than previous forecasts, reflecting the County's status as a populous, maturing suburb.

Table 2.1 Population Projections of Montgomery County, Maryland 2023-2035

Year	Estimated Population
2023	1,074,300
2024	1,078,600
2025	1,083,000
2026	1,090,000
2027	1,097,000
2028	1,104,000
2029	1,111,000
2030	1,118,000
2031	1,125,200
2032	1,132,400
2033	1,139,600
2034	1,146,700
2035	1,153,900

Source: Round 10 Cooperative Forecast, Research & Strategic Projects, Montgomery Planning, M-NCPPC. Original forecast data in five-year increments: 2025, 2030, and 2035. Intermediate years were interpolated. Years are calendar years. Numbers are rounded to the nearest hundred.

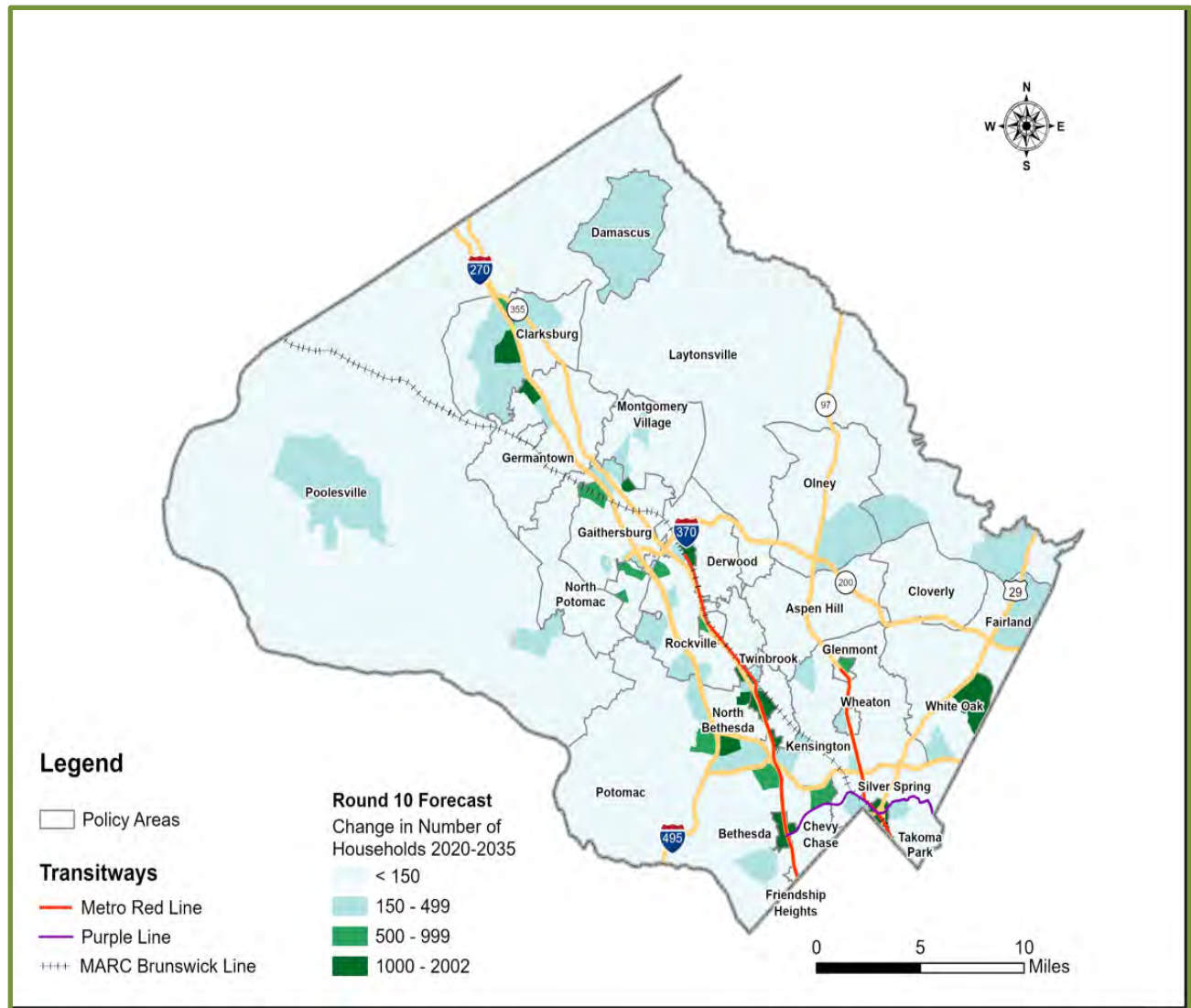
According to the projections, an increase in population of about 84,000 residents is expected during the 2022 to 2035 planning period. A total increase of 47,800 households is anticipated between 2020 and 2035 (**Table 2.2**). The areas with the largest number of household increases (**Figure 2.1**) are Bethesda (5,000), North Bethesda (4,500), and Silver Spring (3,500). Shady Grove, White Flint, and Twinbrook are the three areas with high percentage increments of households.

Table 2.2 Household Growth Montgomery County, Maryland 2020-2035

Policy Area	Households		Households Growth	
	2020	2035	Change	% Change
Bethesda CBD	8,600	13,600	5,000	58%
North Bethesda	14,400	18,900	4,500	31%
Silver Spring CBD	10,600	14,100	3,500	33%
Gaithersburg City	25,900	29,200	3,300	13%
White Flint	4,000	7,100	3,100	78%
Clarksburg	8,700	11,600	2,900	34%
Rockville City	21,800	24,200	2,400	11%
Bethesda/Chevy Chase	28,000	30,400	2,400	8%
Germantown West	21,900	23,800	1,900	9%
Shady Grove Metro Station	1,100	2,900	1,800	154%
White Oak	7,200	8,800	1,600	23%
R&D Village	6,100	7,600	1,500	25%
Twinbrook	2,200	3,700	1,500	68%
Silver Spring/Takoma Park	29,500	30,900	1,400	5%
Potomac	17,300	18,700	1,400	8%
Kensington/Wheaton	34,000	35,200	1,200	4%
Grosvenor	3,500	4,600	1,100	31%
Rockville Town Center	3,900	4,900	1,000	26%
Rural West	7,300	8,200	900	12%
Wheaton CBD	3,600	4,300	700	19%
Montgomery Village/Airpark	18,600	19,400	800	4%
Rural East	11,500	12,200	700	6%
Glenmont	1,100	1,700	600	55%
Fairland/Colesville	21,300	21,800	500	2%
Damascus	3,900	4,300	400	10%
Olney	11,900	12,300	400	3%
Germantown East	8,300	8,700	400	5%
North Potomac	8,800	9,000	200	2%
Aspen Hill	24,800	25,000	200	1%
Derwood	5,800	6,000	200	3%
Germantown Town Center	1,700	1,800	100	6%
Cloverly	5,300	5,400	100	1%
Friendship Heights	4,000	4,100	100	1%
Grand Total	386,600	434,400	47,800	12%

Source: Numbers for households and absolute change rounded to the nearest hundred. Numbers for absolute change and percent change are calculated from unrounded numbers. Details may not be summed up to totals due to rounding. Forecasts are prepared as part of the Cooperative Forecasting Process of the Metropolitan Washington Council of Governments (www.mwcog.org). Projections for areas within the Cities of Gaithersburg and Rockville are based on the forecasts prepared by each City under the Cooperative Forecasting Process—source: Round 10 Cooperative Forecast, Research & Strategic Projects, Montgomery Planning, M-NCPPC.

Figure 2.1 Household Growth Projection for 2020 – 2035
Montgomery County



2.2 Municipalities

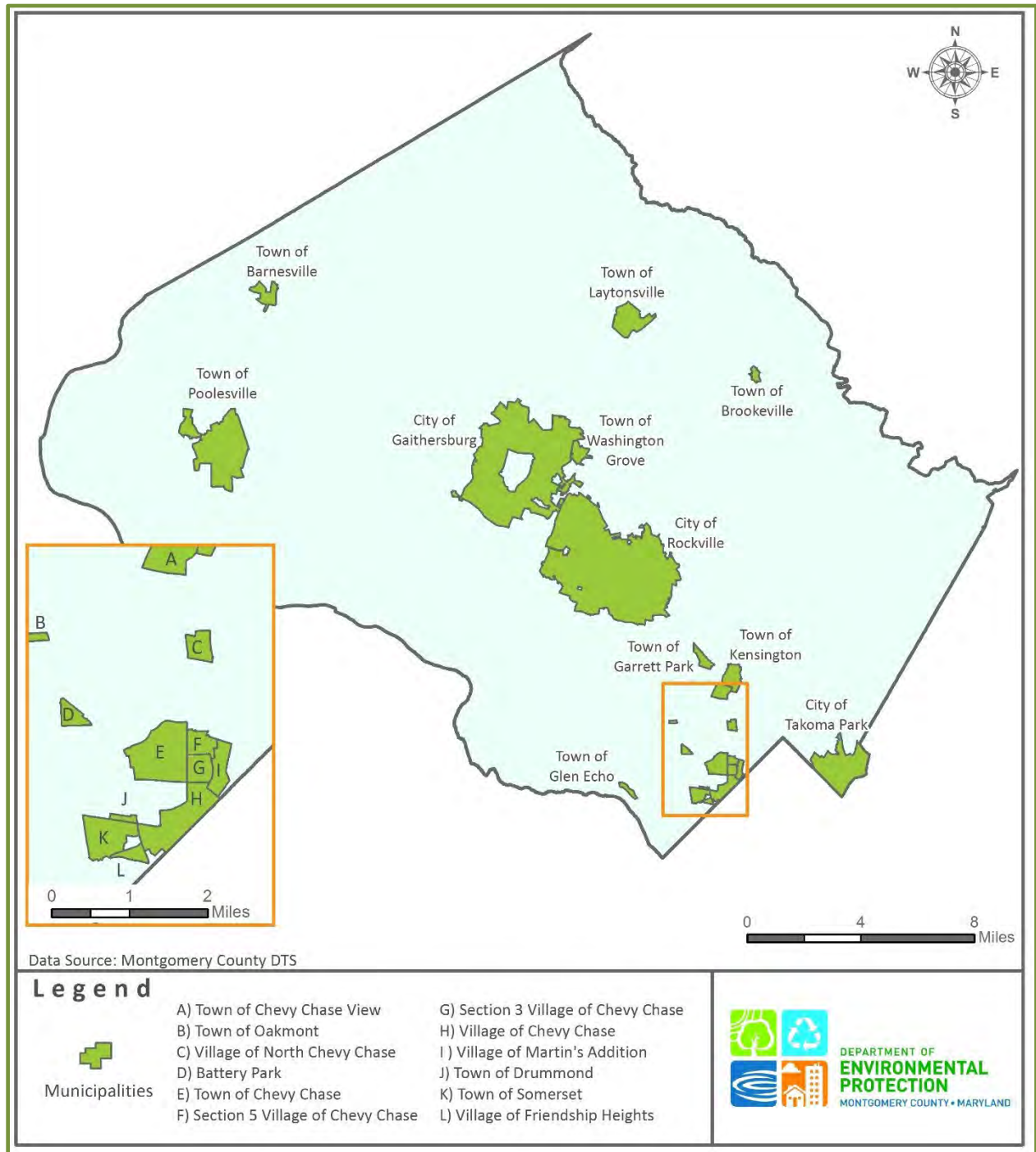
Title 26.03.03.02B of COMAR requires that *"each County plan shall include all or part of the subsidiary plans of the towns, municipal corporations, sanitary districts, privately owned facilities, and local, state and federal agencies having existing, planned or programmed development with the County to the extent that these inclusions shall promote public health, safety, and welfare."* The County has received no subsidiary solid waste management plans for inclusion in this SWMP. **Table 2.3** lists municipalities in Montgomery County and their (estimated) populations for 2022. The municipalities do not have separate solid waste plans. Chapter 3 describes their solid waste management practices. **Figure 2.2** depicts a map of Montgomery County and the location of its 19 incorporated areas. Approximately 174,000 residents reside within these incorporated municipalities, an estimated decrease from the 177,000 reported in 2019.

Table 2.3 Population of Incorporated Municipalities in Montgomery County

Incorporated Municipality	Population Est. (2022)
Barnesville Town	140
Brookeville Town	163
Chevy Chase Town	2,855
Chevy Chase Section Five Village	663
Chevy Chase Section Three Village	788
Chevy Chase View Town	991
Chevy Chase Village Town	2,019
Gaithersburg City	68,952
Garrett Park Town	978
Glen Echo Town	275
Kensington Town	2,099
Laytonsville Town	569
Martin's Additions Village	928
North Chevy Chase Village	676
Poolesville Town	5,688
Rockville City	66,924
Somerset Town	1,171
Takoma Park City	17,390
Washington Grove Town	497

Source: U.S. Census Bureau, Population Division, Population Estimate Program (Release date: May 2023).
Compiled by Research & Strategic Projects, Montgomery Planning, M-NCPPC (1/22/2024).

Figure 2.2 Map of Montgomery County Including Municipalities



2.3 Employment Trends and Federal Facilities within the County

Similar to areas across the United States, the Washington, D.C. metropolitan region's economy suffered from the COVID-19 pandemic, which presented challenges and uncertainty for the forecasting process. However, local jurisdictions have seen jobs recover near or above pre-pandemic levels and anticipate continued growth. From 2020 to 2050, Washington, D.C. metropolitan region's employment is forecasted to grow by 31%, population by 25%, and households by 32%.

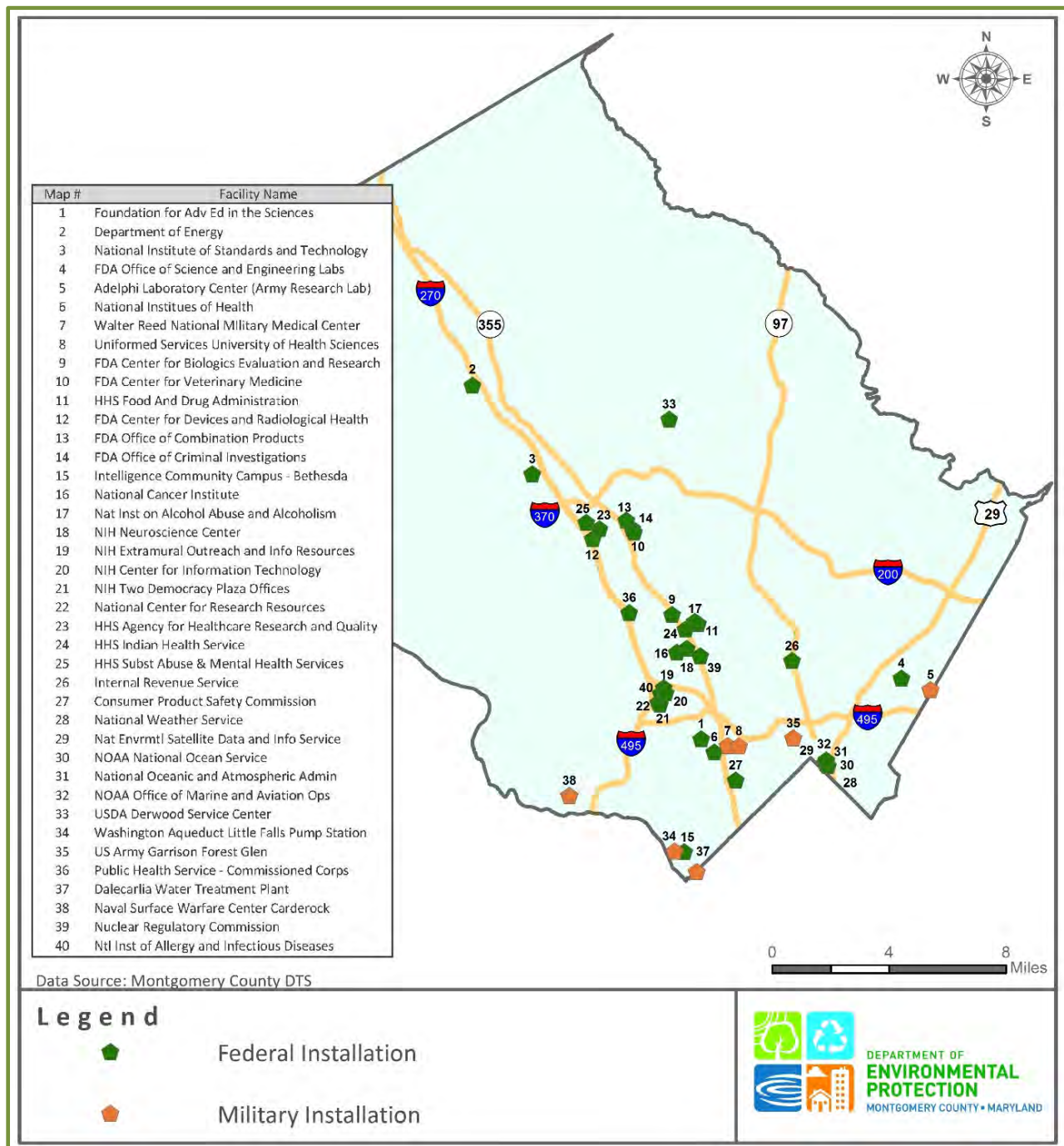
The projections presented within this SWMP are based on the Round 10 forecast, the first round completed since the COVID-19 pandemic. Governments, the private sector, and other entities use these projections for a wide range of local and regional planning activities, such as transportation, water, and air quality modeling, analyzing the effects of growth and demand for public facilities such as this SWMP.

The County's employment distribution between the private and public sectors has generally remained the same since the 1990s. The County is a major federal employment hub and a robust private-sector employment center. The federal government is the top employer in Montgomery County, followed by the National Institutes of Health (17,580 employees), U.S. Food and Drug Administration (13,855 employees), and Naval Support Activity (12,000 employees). **Figure 2.3** shows the locations of federal installations in the County.

The fastest growth has been in education, health and social services, professional management, and scientific services within the private sector. Montgomery County's private sector industries generate \$75.1 billion in economic output in information technology, telecommunications, biotechnology, software development, aerospace engineering, professional services, and government or federal contractors. The leading private employers include Adventist Healthcare, Choice Hotels, Emergent BioSolutions, GEICO, Giant Food, HMSHost, Kaiser Permanente, Lockheed Martin, Marriott International, MedImmune, Supernus, Verizon, and WeddingWire.

The areas forecasted to experience the most significant job growth are already major employment centers concentrated along major transportation corridors such as the WMATA Red Line, Interstate 270, and U.S. 29. These areas include downtown Bethesda, downtown Silver Spring, White Flint/North Bethesda, the Great Seneca Science Corridor, White Oak, and Germantown, which are part of the Corridor-Focused Growth area and include large and medium activity centers as identified in the county's General Plan, [Thrive Montgomery 2050](#) (Thrive).

Figure 2.3 Map of Montgomery County Including Federal Installations



M-NCPPC forecasts at-place employment (the number of positions located in the County) to grow at an annual rate of approximately one percent per year from 2023 to 2025 and then fall to less than one percent until the year 2035, resulting in a projected employment increase of only, 57,100 in the year 2035. **Table 2.4** shows the M-NCPPC "Round 10" projections for at-place employment.

Table 2.4 At-Place Employment, Montgomery County, Maryland 2023-2035

Year	Estimated County Employment
2023	511,200
2024	517,000
2025	522,900
2026	527,400
2027	532,000
2028	536,500
2029	541,100
2030	545,600
2031	550,200
2032	554,700
2033	559,200
2034	563,800
2035	568,300

Source: Round 10 Cooperative Forecast, Research & Strategic Projects, Montgomery Planning, M-NCPPC. Original forecast data in five-year increments: 2025, 2030, and 2035. Intermediate years were interpolated. Years are calendar years. Numbers are rounded to the nearest hundred.

2.4 Comprehensive Land Use Plan

Land use policies directly affect solid waste generation and management in terms of the quantity and type of waste generated and the properties on which solid waste management facilities may be located.

In December 2019, the Montgomery County Council adopted the Racial Equity and Social Justice Act ³, which, among its requirements, directs the Planning Board to consider racial equity and social justice as part of master plans. Thrive Montgomery 2050 (Thrive) ⁴, is the latest approved and adopted version of the Comprehensive Land Use Plan. It establishes goals, priorities, and recommendations for guiding short and long-range land use planning in Montgomery County. The three overarching objectives of Thrive are to achieve Economic Competitiveness, Racial Equity and Social Justice, and Environmental Health and Resilience. Thrive also commits the Montgomery County Planning Department to implementing the actions in the Climate Action Plan⁵ under its authority. All County master plans include recommendations that respond to the priorities and goals established in Thrive.

Montgomery Planning developed the Community Equity Index (CEI)⁶, a tool for identifying marginalized populations and analyzing racial equity and social justice issues to support ongoing and future planning efforts. About 30% of the County's population lives in disadvantaged tracts. The severity of the tract's disadvantage increases as the color on the map moves from light orange to orange to red.

The CEI is a composite measure of equity-related indicators that helps users understand socio-economic conditions that drive advantages and disadvantages across the county. The index measures the extent to which each neighborhood in the County, represented by U.S. census tracts, is representative of the overall socio-economic composition of the County. Tracts that show up on the map as light orange, dark orange, or red are socio-economically disadvantaged compared to the county overall. They have, on average, lower incomes, lower levels of education, more difficulty speaking English, and are more likely to rent their housing.

Places that are socio-economically disadvantaged have historically tended to be subject to more locally undesirable land uses. Therefore, special consideration is taken when evaluating sitting locations for new solid waste facilities. As shown in **Figure 2.4** the majority of facilities in Montgomery County are located in a "Proportionate" (neither advantage nor disadvantage) index. The County has invested in mitigating impacts in its solid waste facilities currently open or closed (i.e., Oaks and Gude Landfill).

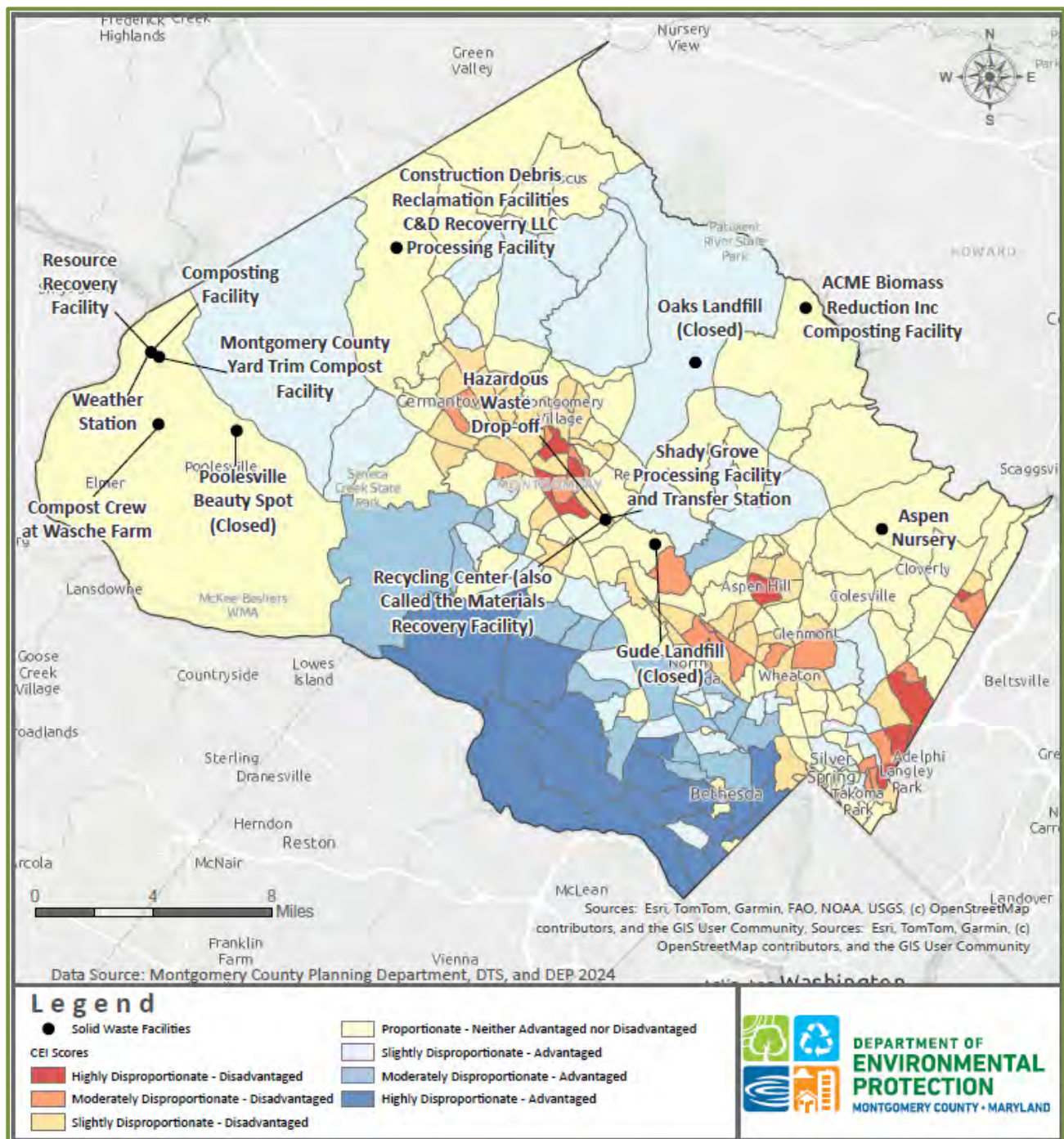
³ Bill No. 27-19

⁴ <https://montgomeryplanning.org/wp-content/uploads/2023/06/THRIVE-Approved-Adopted-Final.pdf>

⁵ [Montgomery County Climate Action Plan](#)

⁶ <https://montgomeryplanning.org/planning/equity-agenda-for-planning/community-equity-index-analysis/>

Figure 2.4 Solid Waste Facilities and the Community Equity Index



2.5 Zoning Requirements Related to Solid Waste Management Activities

Chapter 59⁷ of the County Code defines zoning requirements and establishes zones designating agricultural, residential, commercial, industrial, or a mixture of uses at specified densities. Specific uses are allowed by conditional use approved on a case-by-case basis by the Hearing Examiner. The Hearing Examiner reviews and holds public hearings on applications for conditional uses.

The Zoning Ordinance allows a landfill, incinerator, or transfer station as a conditional use in the Industrial Heavy (IH) Zone. Recycling collection and processing are allowed as a permitted use in the IH Zone, on the other hand in the Light Industrial (IL) and Moderate Industrial (IM) zones it is allowed with the following limitations:

- Recycling of construction and demolition debris is prohibited unless the use was lawfully existing on October 29, 2014.
- The recycling of automobiles is also prohibited.

2.5.1 Agricultural Preservation

The County's diverse agricultural industry, which has 540 farms and 350 horticultural enterprises, produces more than \$287 million in economic contributions from agricultural products and operations. Most Montgomery County farms are family-run operations, many dating back several generations. Together, they employ more than 10,000 residents. Of the County's 540 farms, 42% are farmed as a primary occupation.⁸

Agricultural activities occupy about one-third of Montgomery County's 316,800 acres of land. Over half of the 93,000-acre Agriculture Reserve is preserved through transferable development rights or easement purchase initiatives.

The County and the State of Maryland have programs for the preservation of agricultural land. Both the State and the County have established agricultural easements using property deeds that carry restrictions to limit non-agricultural use of the property while also providing right-to-farm protection. As of the adoption date of the new Zoning Code in 2014, the Rural Density Transfer (RDT) Zone has been renamed to the Agricultural Reserve (AR) Zone. Property owned in the AR zone may trade Transferable Development Rights (TDRs) from their agricultural zone to redirect development to certain non-agricultural sections of the County. Development in the AR zone is limited to one dwelling per 25 acres. Historically, most landfill-candidate sites have been located within AR-zoned areas.

⁷ [Chapter 59: Zoning Code.pdf](#)

⁸ Montgomery County, Office of Agriculture, Agricultural Fact Sheet May 2016

2.5.2 Transportation Considerations for Solid Waste Activities

Solid waste collection vehicles must service all areas of the County. They must safely navigate a wide range of road surfaces and conditions to minimize noise, odor, and litter disturbances to the community.

Chapter 48 of the County Code and regulations administered by DEP regulate the operation of solid waste vehicles to address potential nuisance and safety issues. County regulations require that solid waste collection and transfer vehicles must be inspected and registered. Loads of solid waste must be contained or covered during transportation to minimize litter. Collection of solid waste cannot occur before 7:00 a.m. near residential neighborhoods. State and local transportation laws and regulations impose other safety conditions and require review by M-NCPPC under the Adequate Public Facilities Ordinance. In such cases, M-NCPPC may recommend improvements to the transportation network.

The County has a policy to minimize solid waste-related traffic on County roads. In the 1980s, the County constructed the Transfer Station to reduce the number of vehicle trips going directly to the Oaks Landfill. In 1995, the County established a rail haul system to transport solid waste from the Transfer Station to the RRF to reduce substantial waste truck traffic through communities. In 2017, the County entered a long-term contract through the NMWDA with Republic Service, Inc. for the beneficial reuse of RRF ash (and this contract is now administered through the County). Transportation of the ash from the RRF is accomplished by rail. A small amount of bypass waste and non-processible waste is transported from the transfer station via truck to various disposal locations. The solid waste facilities within the County with overlay of the Community Equity Index are presented in **Figure 2.4**. Additionally, a map of solid waste facilities and major roadways in the County is presented in Chapter 3 in **Figure 3.4**.