

Chapter 3 State of the Region

3.1 Overview

The Miami Valley Region (hereafter the Region), located in southwest Ohio, is defined as Greene, Miami, and Montgomery counties and the jurisdictions of Franklin, Franklin Township, Carlisle, and Springboro in northern Warren County. The Region is situated approximately 50 miles north of Cincinnati, 70 miles west of Columbus, and 90 miles east of Indianapolis.

As of 2020, the Region is home to approximately 868,090 people in 1,345 square miles with 82 units of county, city, village, and township governments. Montgomery County is the largest county, with 62% of the Region's total population, and the City of Dayton is the largest city with approximately 137,644 residents. The Region is also home to Wright Patterson Air Force Base (WPAFB), the largest single-site employer in Ohio.

The Region is served by a variety of transportation modal choices. The Dayton International Airport is located in the northern part of Montgomery County and a Greyhound bus terminal is located in Trotwood. Further, an extensive network of roads, transit services, bikeways, and pedestrian facilities provide mobility, accessibility, and connectivity within and outside the Region. Freight infrastructure and facilities support the efficient movement of freight passing through and moving within the Miami Valley.

According to the 2020 Census, the majority of residents in the Region live and work within the same county, although Montgomery County attracts a significant number of its workers from the surrounding counties. The Region is also heavily dependent on personal vehicles, with approximately 84% of work trips made by automobiles averaging a 21.2-minute commute to work.

Under the assumption that the development patterns of the past will remain predominant in the future, it is anticipated that the Region will continue to develop along freeway corridors and their fringes. Overall, the Region's total population is expected to decrease slightly by 4.2%, with the eventual stabilization of population loss in the older urban areas, continued growth in the suburbs, and some spillover of that growth into the surrounding rural areas. On the other hand, employment is expected to grow by 12.8% between 2020 and 2050.

The regional Travel Demand Forecasting Model (TDFM) that predicts transportation assignment forecasts based on future assumptions of development patterns has been updated for use in the transportation planning process.

3.2 The Miami Valley Region Today

When the Region was first settled in the late 1700s, urban land uses followed the river valleys, which were the main transportation arteries prior to the development of mechanized forms of transportation. Most of the heavy industries were located along the rivers, which also provided the major source of water.

Today, employment is still concentrated in some of the original locations even though the Region's economy has since diversified from its industrial base. Although the current land use patterns in the Region have been shaped more by history than by any inherent physical limitations or advantages, the development patterns of the Miami Valley Region can be characterized as following the main transportation network.

Over the past 55 years, the Region has experienced a drastic change in developed areas characterized by an outward movement from the central city to the suburban areas following Interstates I-75, I-70, and I-675 and US 35, as seen in Figure 3.1. According to the 2020 Census, the urbanized area extends north for 30 miles into the City of Troy in Miami County; east for 15 miles into the City of Xenia in Greene County; south for 15 miles to northern Warren County; and west for 8 miles from the Dayton Central Business District (CBD). Further, the 2020 Census indicates that densely settled areas have emerged in scattered locations throughout the Region.

The trend to move from urban to suburban and suburban-fringe rural areas continued between 2010 and 2020. While there isn't one specific reason for the shift, there are various ones that make the move understandable including real or perceived crime rates, school district quality, and a desire for newly build housing coupled with an underinvestment in urban housing stock in both rented and owner-occupied markets. Post the 2008 recession, housing also became relatively more affordable to build as construction materials were cheaper and builders were offering various forms of low interest financing for homes in the suburbs. One exception to this trend is that Downtown Dayton showed an increase in housing stock with several new housing developments being completed or under development.

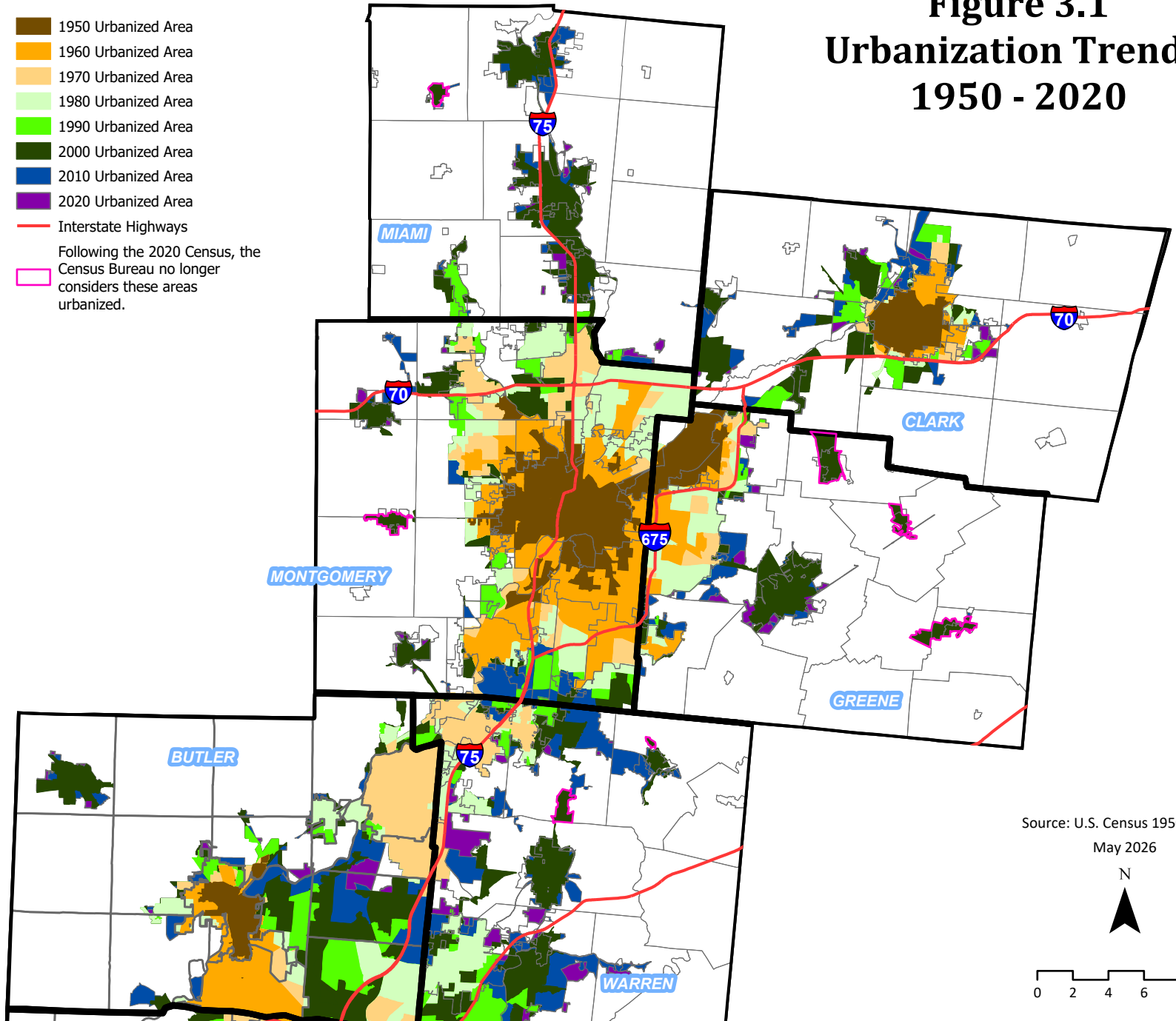
During the same period, employment also underwent a shift towards suburban employment centers making living and working in the same place possible for some suburban workers.

Land Use

MVRPC used its GIS capabilities along with the latest aerial photography to examine how the land was utilized in the year 2025. Figure 3.2 shows the generalized land use/land cover in 2025. Figure 3.2 shows that residential development in the Region is spread fairly evenly throughout the urbanized area, with high concentrations between the eastern half of Montgomery County and western part of Greene County and along I-75 in Miami County. Since 2000, increased residential development has occurred in northern Warren County as well. The Region's residential development is largely low-density in character.

Figure 3.1 Urbanization Trends: 1950 - 2020

- 1950 Urbanized Area
 - 1960 Urbanized Area
 - 1970 Urbanized Area
 - 1980 Urbanized Area
 - 1990 Urbanized Area
 - 2000 Urbanized Area
 - 2010 Urbanized Area
 - 2020 Urbanized Area
 - Interstate Highways
- Following the 2020 Census, the Census Bureau no longer considers these areas urbanized.
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Source: U.S. Census 1950 - 2020

May 2026

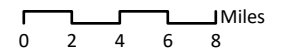
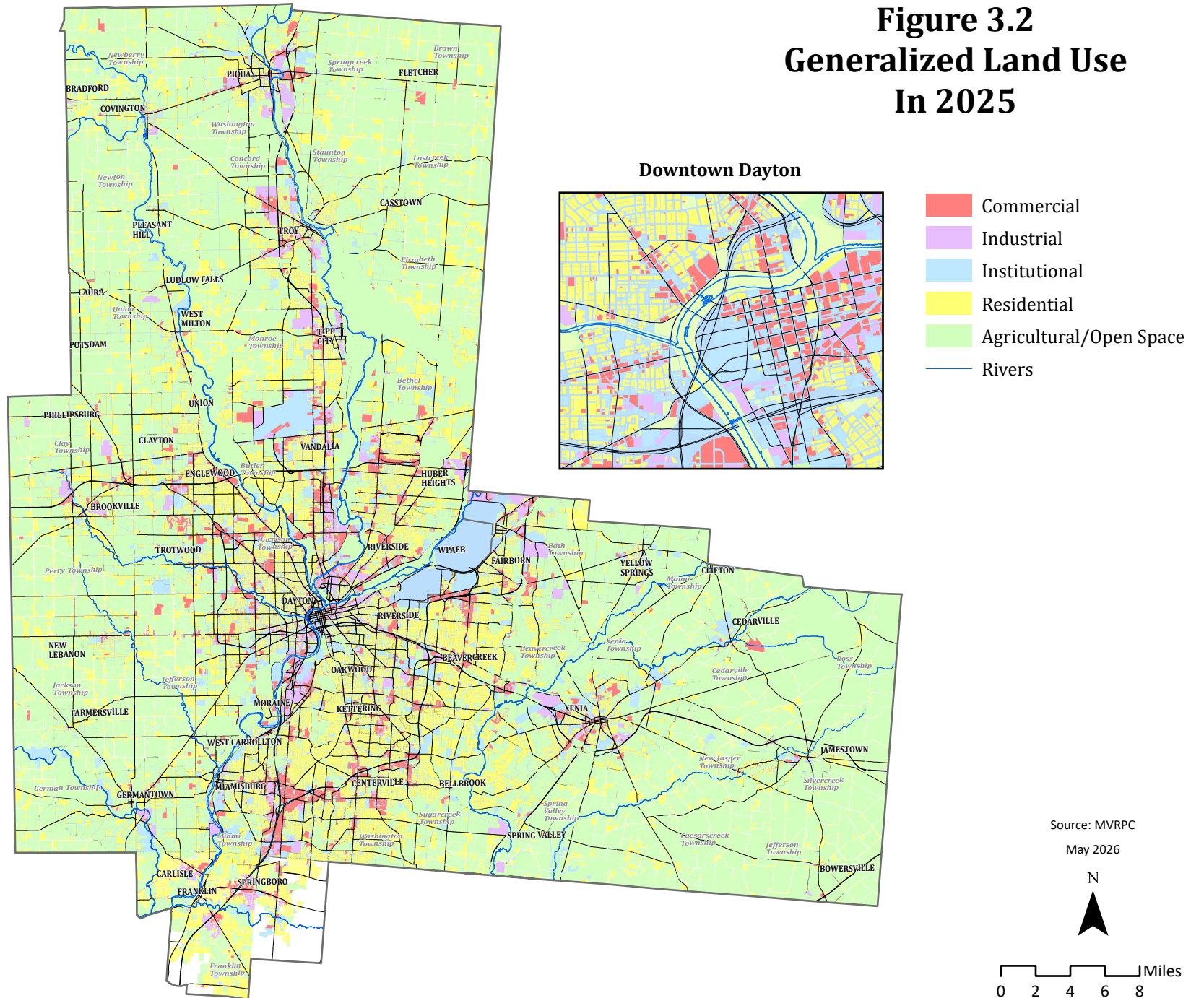
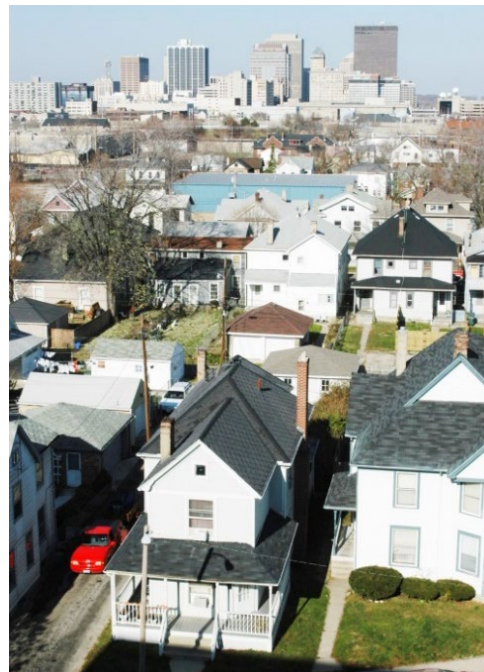


Figure 3.2 Generalized Land Use In 2025



Commercial development is spread somewhat less evenly, with concentrations around three suburban malls and in the Dayton CBD. Additional commercial areas are found along the major transportation routes, such as Interstates, US Routes, and State Routes, and at the junctions of major roadways, such as the intersection of I-75/I-675, I-70/SR 202, and I-675/SR 48. However, outside of these highly concentrated locations, there is still a mixture of shopping centers, strip center development, and neighborhood shopping districts, with several rural and suburban municipalities also retaining recognizable downtown commercial districts. As a result, most parts of the Region are well served by retail and service facilities.



Industrial development in the Region generally follows the I-75 corridor, which parallels the Great Miami River and provides access to major factories and office clusters stretching from the City of Piqua at the northern edge of the Region to the southern Montgomery County border.

The most important concentration of employment outside the I-75 corridor is located along the Greene/Montgomery County border, near the intersection of I-70 with SR 4, and along I-675.

Socioeconomic Data

Three main sources of information were utilized to produce socioeconomic variables. For residence-related variables, the Census was the sole source. For employment, MVRPC used a combination of Covered Employment and Wages by Industry data known as ES202 prepared by the Ohio Department of Jobs and Family Services and obtained from the Ohio Department of Transportation, as well as a variety of local sources and knowledge.

Residence-related data were extracted directly from the 2020 Census at the block level and then aggregated to the Traffic Analysis Zone (TAZ). In addition, the 2018-2022 American Community Survey (ACS) data was used for variables unavailable from the 2020 Census products, for example, automobile availability. For employment-related variables, several steps were taken in order to develop base year data. First, the ES202 data obtained from ODOT was geocoded to the TAZ level. Second, in-house databases were used as secondary data sources to complement the ES202 data and fine-tune employment figures. Third, extensive field reviews were conducted throughout the Region for areas with high employment concentrations to verify the locations of individual businesses. Finally, the total employment and employment by 25 industry sectors were generated at the TAZ level following North American Industry Classification System (NAICS) codes. A summary of the Region’s socioeconomic data and the percentage share by county is shown in Table 3.1.

Table 3.1 — 2020 Socioeconomic Data

County	Population ¹	Households ¹	Employment ²
Greene	167,966 (19.3%)	66,831 (18.6%)	108,884 (22.02%)
Miami	108,774 (12.5%)	44,086 (12.3%)	54,109 (10.9%)
Montgomery	537,309 (62%)	228,536 (63.6%)	313,766 (63.5%)
Warren*	54,041 (6.2%)	20,011 (5.6%)	17,742 (3.6%)
Total	868,090	359,464	494,501

Note: *Warren County includes only the municipalities of Franklin, Franklin Township, Carlisle, and Springboro. The employment number for Warren County is an aggregate of TAZs because the employment numbers were developed at the TAZ level. The area covered by these TAZs is slightly larger than the area covered by the constituent municipalities.

Source: ¹ 2020 Census DCH; ² MVRPC/OKI

The Region is home to a population of 868,090. The majority of the population, (61.9%), lives in Montgomery County. However, a closer look at the population density distribution indicates that the Region has significant variations as shown in Figure 3.3. In general, higher population density is observed around the City of Dayton with the density decreasing away from the center and into the surrounding rural areas. Nonetheless, some of the municipalities in the rural areas also have population densities similar to those found inside the urbanized area.

There are 359,464 households in the Region, with 63.6% located in Montgomery County. The household density distribution is similar to the population density distribution; household density is highest in the developed areas in the City of Dayton and in the immediate suburbs, and gradually decreases outward into the rural areas.

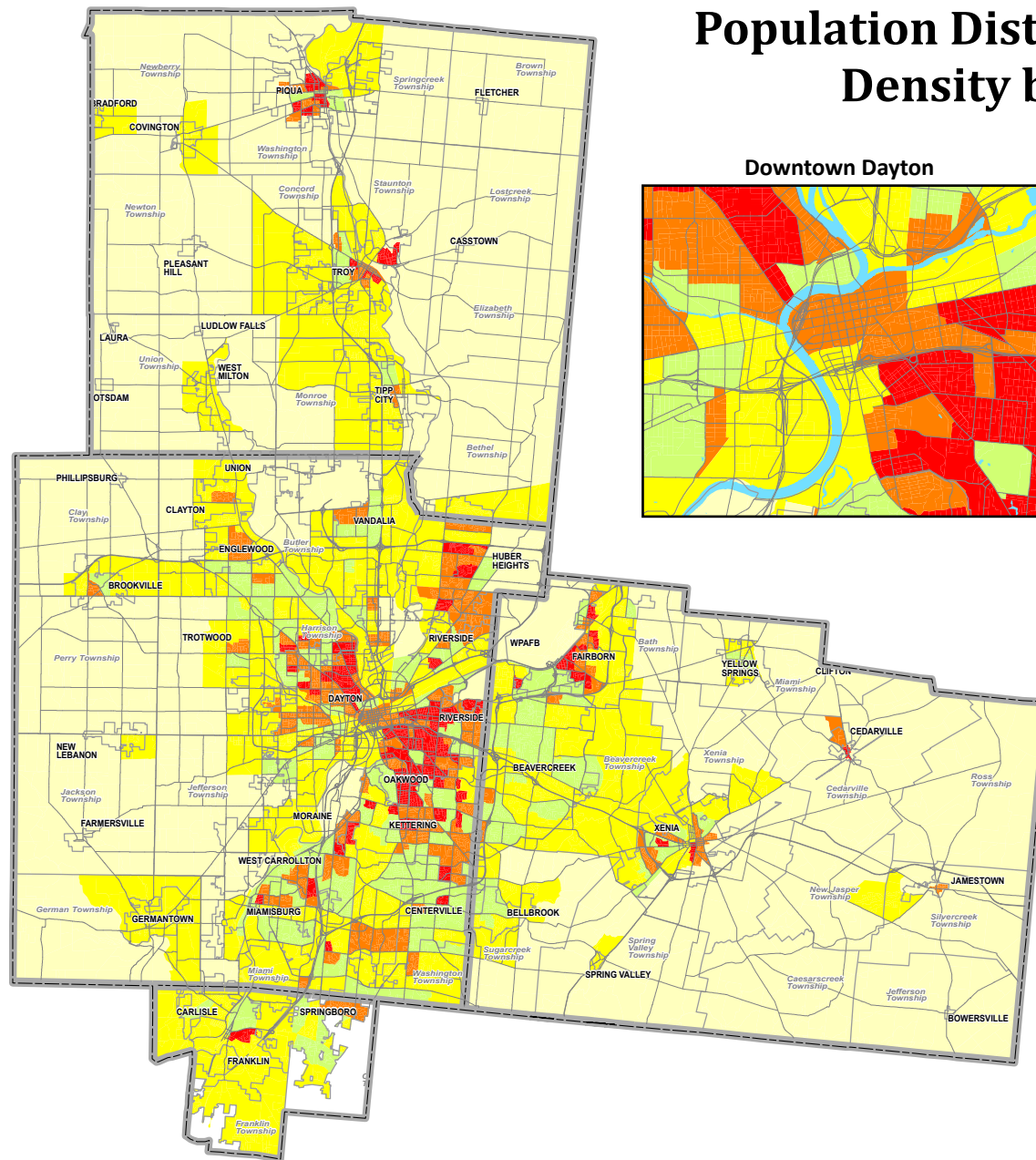
The Region is also home to over 494,500 jobs. Similar to the population and household distributions, Montgomery County has the largest employment share, with 63.5% of the Region’s total employment, followed by Greene (22.0%), Miami (10.9%), and northern Warren (3.6%) counties.

Functional Classification

Approximately every ten years, MVRPC, in cooperation with ODOT, conducts a major review of the existing Functional Classification System following the urbanized area changes made by the Decennial Census. MVRPC completed the most recent update to the functional class system in 2020. MVRPC’s regional functional classification system can be seen in Figure 3.4.

According to FHWA, Functional Classification is the grouping of roads, streets, and highways in a hierarchy based on the type of service they provide. Type of service is defined by combinations of mobility and land access as follows:

Figure 3.3 Population Distribution - Population Density by Block Group



- Population per Square Mile**
- Low (0 - 300)
 - Medium Low (300 - 1,700)
 - Medium (1,700 - 3,000)
 - Medium High (3,000 - 5,000)
 - High (5,000 +)

Source: U.S. Census 2020

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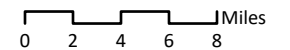
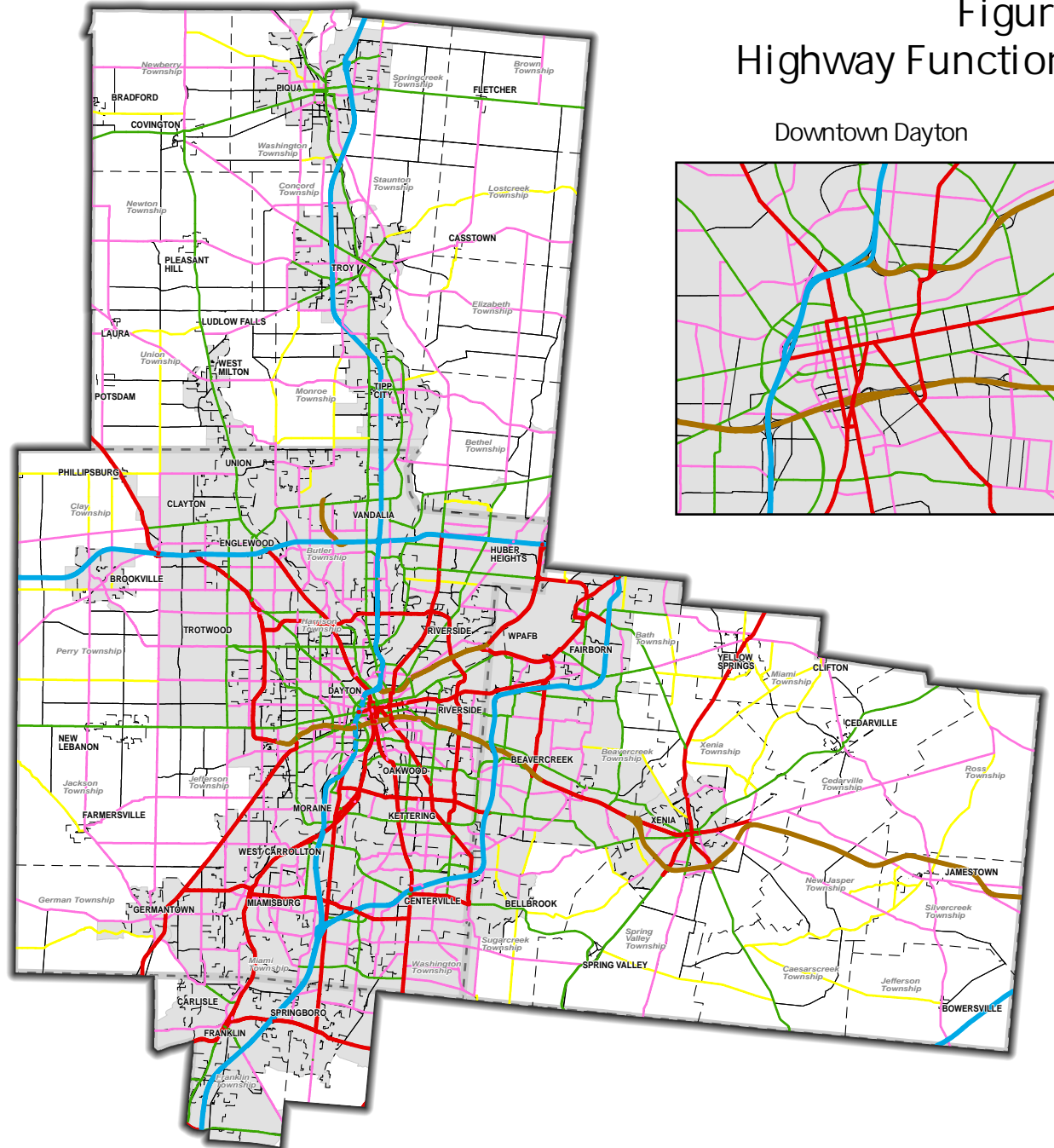
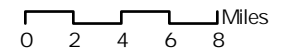


Figure 3.4
Highway Functional Classification



- Principal Arterial - Interstate
- Principal Arterial - Freeway and Expressway
- Principal Arterial - Other
- Minor Arterial
- Collector - Major
- Collector - Minor
- Transportation Urbanized Area

Source: ODOT and MVRPC
May 2026



- Arterials include those classes of highway emphasizing a high level of mobility for the through movement of traffic, with land access being a secondary function. Interstates and freeways represent the highest class of arterials.
- As their name indicates, collectors collect traffic from the lower-class facilities and distribute it to the higher-class facilities. Their function is divided equally between mobility and land access.
- Local streets are located at the bottom of the hierarchy, their primary function being to provide access to adjacent land uses.

Using these three major categories as the base, roads are then subdivided into major or minor as shown in Table 3.2.

It should also be noted that only roadways that are functionally classified as a Minor Collector or above in an urban area or Major Collector or above in a rural area are eligible to use federal funds, the exception being bridges on non-classified roads.

Table 3.2 — Functional Classification System

Functional Class	Functional Class Number
Principal Arterial (Interstate)	1
Principal Arterial (Freeway/Expressway)	2
Principal Arterial (Other)	3
Minor Arterial	4
Major Collector	5
Minor Collector	6
Local	7

Source: FHWA

Multimodal Transportation System

The Region offers a variety of multimodal transportation opportunities as seen in Figure 3.5. The Region is served by the Dayton International Airport located in the northern part of Montgomery County, three Interstate highways, and a Greyhound bus terminal located in Trotwood.



Together, they connect the Miami Valley Region to other regions in the U.S. by air and ground. Within the Region, a variety of intermodal facilities, such as an extensive transportation network of roads, transit, bikeways, and pedestrian facilities, provide multi-faceted transportation options for better mobility, accessibility, and connectivity. The Region’s roadway network includes three interstates (I-70, I-75, and I-675), freeways, and principal arterials, including the intersection of I-70/I-75, a major focal point for intermodal traffic.

Figure 3.6 illustrates multimodal freight infrastructure and facilities located in the Region. Networks of railroads, pipelines, and roadways, along with facilities such as the Dayton International Airport and truck terminals, support the efficient movement of raw materials, manufactured items, merchandise, and/or other material goods passing through and moving within the Region.

The Region is also served by four transit agencies. The Greater Dayton Regional Transit Authority (GDRTA) serves Montgomery County residents with an extensive network of 22 different types of fixed routes covering nearly 700 miles of directional roadways serving over 6.2 million passenger trips per year. Further, GDRTA's Transit Hubs, located throughout Montgomery County, connect the central city and the suburban areas with bus services at centralized locations.



Greene County is served by Greene CATS Public Transit (Greene CATS) on a demand-responsive basis, providing over 66,000 one-way passenger trips per year. Greene CATS provides flex-route service from Fairborn to Beavercreek, from Xenia to downtown Dayton, and east-west transit services within Xenia and Fairborn. The Miami County Transit System provides demand-responsive transit service for Miami County residents, with approximately 42,000 passenger trips per year. The Warren County Transit System provides demand-responsive services in Warren County and provides 33,606 passenger trips per year.

The Region offers excellent opportunities for pedestrians and cyclists, with an extensive network of bikeways and sidewalks. Further, intermodal facilities such as Park-N-Bike and Park-N-Ride are located throughout the Region.

GoBus

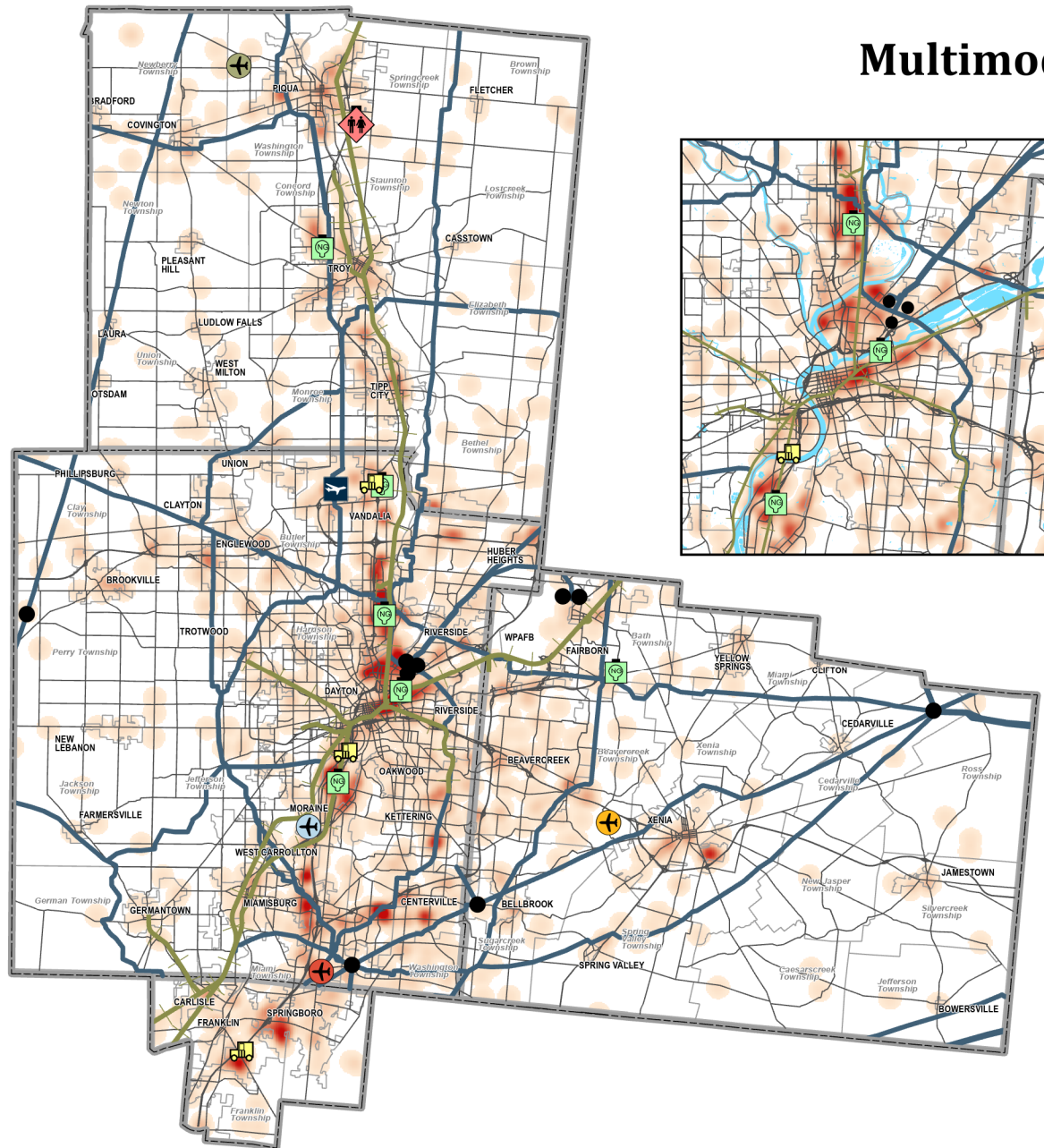
GoBus, established in 2010, is a federally supported bus service administered by Hocking Athens Perry Community Action Program (HAPCAP) that connects rural communities across Ohio with major urban centers, improving access to jobs, education, and essential services.














An expansion announced in October 2025 launched in March 2026, adding four new routes and increasing the network from five to nine routes. The Red Line, running between Toledo and Cincinnati, includes stops in the MVRPC area at Dayton and Yellow Springs. The service runs daily, year-round, with multiple departures in both directions. With this expansion, GoBus now serves 64 communities across 47 of Ohio's 88 counties, providing connections to 32 colleges and universities and 27 local transit systems.

Ohio 3C&D Corridor

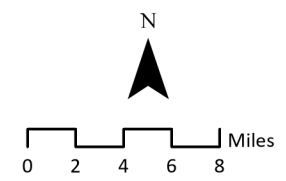
The proposed 3C&D passenger rail line aims to link Ohio's three largest cities: Cleveland, Columbus, and Cincinnati along with Dayton across around 267 miles of existing rail. These four metropolitan areas make up around 60% of Ohio's 11.8 million residents. Amtrak Connect U.S., a 15-year vision to add 39 new routes and enhance 25 existing routes, showed the corridor having strong potential for

Figure 3.6 Multimodal Freight Facilities



-  Dayton International Airport
-  Dayton Wright Brothers Airport
-  Lewis A Jackson Regional Airport
-  Moraine Air Park
-  Piqua Airport - Hartzell Field
-  Private Travel Centers
-  CNG Stations
-  Rest Areas
-  Pipeline Terminals
-  Railways
-  Pipelines
-  Roads
-  Sparse Concentration of Freight-Dependent Employment
Dense

Source: MVRPC
May 2026



high ridership among proposed new corridors in the Midwest through a comprehensive assessment including likely ridership, investment costs, and operating costs.

The Federal Railroad Administration (FRA) Corridor Identification and Development (Corridor ID) Program, established as part of the Infrastructure Investment and Jobs Act (IIJA), is intended to be the primary instrument to guide intercity passenger rail development in the United States and create a pipeline of intercity passenger rail projects ready for implementation. The 3C&D Corridor, sponsored by the Ohio Rail Development Commission (ORDC), was selected for funding by the FRA to initiate planning in FY 2022.

As of September 2025, the Phase I Corridor ID had been submitted to the FRA including the project scope, schedule, and costs estimates for preparing a Service Development Plan. Future phases include completing the Service Development Plan (Phase II) which would prepare a service frequency analysis, capital project inventory, financial/operating plans, environmental/economic impact analysis, and governance and public engagement. Phase 3 would then focus on preliminary engineering, NEPA and environmental reviews, and final design and permitting. Pending the successful completion of all three phases, final construction for the 3C&D Corridor could begin in 2028 with service starting as early as 2031.

Airports

The Miami Valley has a long aviation history since the ideas of two young bicycle shop owners became a reality with the first flight of the Wright-B Flyer in 1903. This tradition is continued today at Wright-Patterson Air Force Base, one of the premier aviation research and development centers in the world, and also at the Dayton International Airport, the United States' top 90-minute air market. In addition to the Dayton International Airport, the Region is served by four general aviation airports eligible for funding by ODOT (see Figure 3.5).



The Dayton International Airport is the focal point of the Region's air transportation network, including freight. The other airports in the Region are mainly general aviation airports that serve small private planes for personal and agricultural uses.

James M. Cox Dayton

The James M. Cox Dayton International Airport (DAY) serves as the primary commercial service airport for the MVRPC Region. The Dayton Airport is located approximately 11 miles north of downtown Dayton in northern Montgomery County on 4,500 acres. The Dayton International Airport is less than a five-minute drive from the I-70/I-75 interchange and has three runways: a 10,900-foot primary, a 7,000-foot parallel with operations on a parallel runway when necessary, and an 8,500-

foot crosswind runway. The dual runway system allows simultaneous operations on parallel runways with landings and departures on the crosswind runway.

There were four airlines serving the airport in 2026, with American Airlines as the single largest passenger carrier, surpassing Delta after American's merger with U.S. Airways. For the 12-month period ending on December 31, 2024, the airport had an average of 107 aircraft operations per day, 38% of which were air carrier, 24% air taxi, 36% general aviation, and 1% military. There are 34 aircrafts based at this airport. There are more than 50-70 passenger flights a day with nonstop service to 13 major domestic markets carrying about 650,000 passengers annually. In 2024, total passenger enplanements at the Dayton International Airport were 645,930. That is an increase of 3.9% from 2023's total passenger enplanements.

Washington/Baltimore, Orlando, and Atlanta respectively, were the three busiest domestic routes for the airport in 2024.

In 2020 during the pandemic, passenger enplanement dropped dramatically to a 5-year low of 337,517, which was a 62.2% decrease from 2019. Since then, not only has enplanement almost doubled, there have been major updates to the airport itself and surrounding property to accommodate distribution, air cargo, and military airplane maintenance. Since 2019, over 3,900 new jobs have been created from the addition of distribution and warehouse facilities being built which included companies such as Crocs, Spectrum Brands, Pratt Industries, ALPLA, Purina Mills, and General Pet Supply. Amazon has committed to the region as well with a 630,000 square foot facility which created 1,500 new jobs and is adding another 250 jobs from the construction of a delivery hub.

On a six-acre site near the north side of the airport, Sierra Nevada Corporation (SNC) is currently developing the airport's Defense and Aerospace Campus. This facility will be used for aerospace maintenance, and will allow the airport to accommodate very large and military aircraft. Since 2024 SNC has continued to expand with 3 more hangars, including the SNC Aviation Innovation and Technology Center (AITC), and have been contracted to update the Survivable Airborne Operations Center aircrafts that the government utilizes.

Greene County Lewis A. Jackson Regional Airport

The Greene County Lewis A. Jackson Regional Airport (GDK), situated 8 miles east of Dayton in Beavercreek Township, is undergoing numerous improvements to support increasing general aviation needs in eastern Montgomery County and Greene County. The airport underwent a significant expansion in 2005, adding runway and taxi length as well as service buildings and roads. The Greene County Regional Airport Authority owns the airport and is comprised of seven members of the community.

Dayton-Wright Brothers Airport

The Dayton-Wright Brothers Airport (MGY) is a general aviation airport located, approximately 12 miles south of the City of Dayton, on State Route 741. I-75 allows easy access to and from the airport.

The Dayton-Wright Brothers Airport covers an area of 541 acres which contains one asphalt paved runway (2/20) measuring 5,000 feet.

For the 12-month period ending December 31, 2024, the airport had 38,851 aircraft operations, an average of 106 per day: 98% general aviation, 2% air taxi, and <1% military. There are 75 aircraft based at this airport.

Piqua Hartzell Field Airport

The Piqua Airport — Hartzell Field (I17), home to 27 aircrafts, is located approximately 3 miles from downtown Piqua. The airport has a 4,000-foot runway and is the home of the Hartzell Propeller Factory Service Center.

Moraine Air Park

The Moraine Air Park (I73) is located approximately 4 miles south of downtown Dayton. The air park is home to 108 aircrafts, including medical aircrafts owned by Miami Valley Hospital which uses the air park as a maintenance base. Facilities include a 3,500-foot runway (08/26) and a partial parallel taxiway.

Journey to Work Characteristics

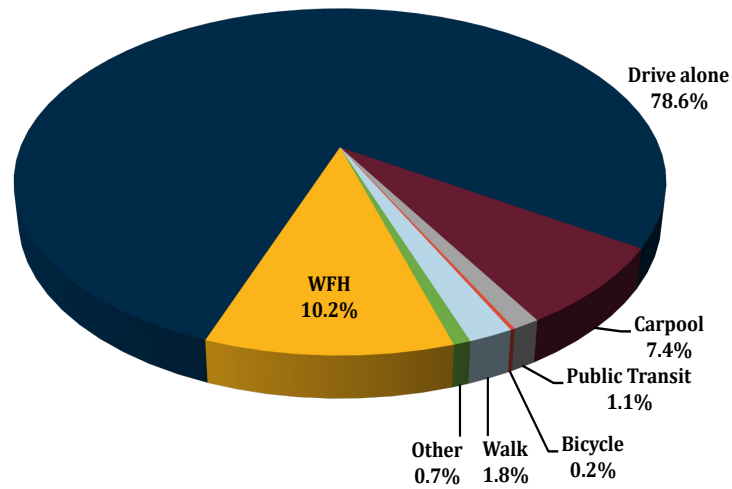
The Region’s journey-to-work characteristics were examined for Greene, Miami, Montgomery, and Warren counties using data from the 2017-2021 and 2018-2022 American Community Survey (ACS) 5-year estimates. Warren County was included as a whole for journey-to-work analysis purposes since detailed place “city” level data is unavailable for Franklin, Franklin Township, Carlisle, and Springboro in the Region. However, an examination of available data indicates that a significant number of workers that reside in Carlisle (26%), the City of Franklin (24%), or Springboro (40%) commute to Montgomery County. This is consistent with the location of these municipalities at the edge of the Montgomery/Warren County border.

Work trip characteristics were examined due to work trips increasing travel at peak times that can make the difference between the transportation system reaching maximum capacity or staying below that threshold.¹ The 2022 National Household Travel Survey found that in 2022, most vehicle commutes started between 6 a.m. and 9 a.m. and between 4 p.m. and 7 p.m. The data shows that in the morning and evening peak periods these additional trips have the potential to overload the transportation system.

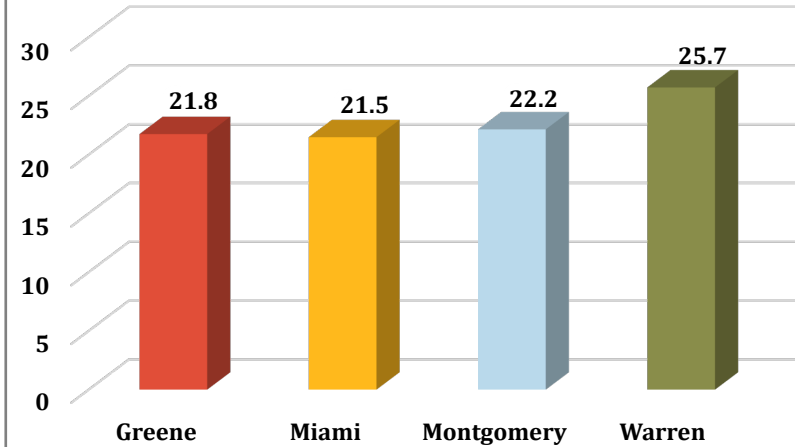
Figure 3.7 summarizes journey-to-work characteristics, including commuting patterns, means of transportation, and average travel time to work for Greene, Miami, Montgomery, and Warren counties.

¹ FHWA 2022. “Summary of Travel Trends 2022 National Household Travel Survey (NHTS)” https://nhts.ornl.gov/assets/2022/pub/2022_NHTS_Summary_Travel_Trends.pdf

Regional Commuter Mode Share*



Average Commute Time in Minutes*

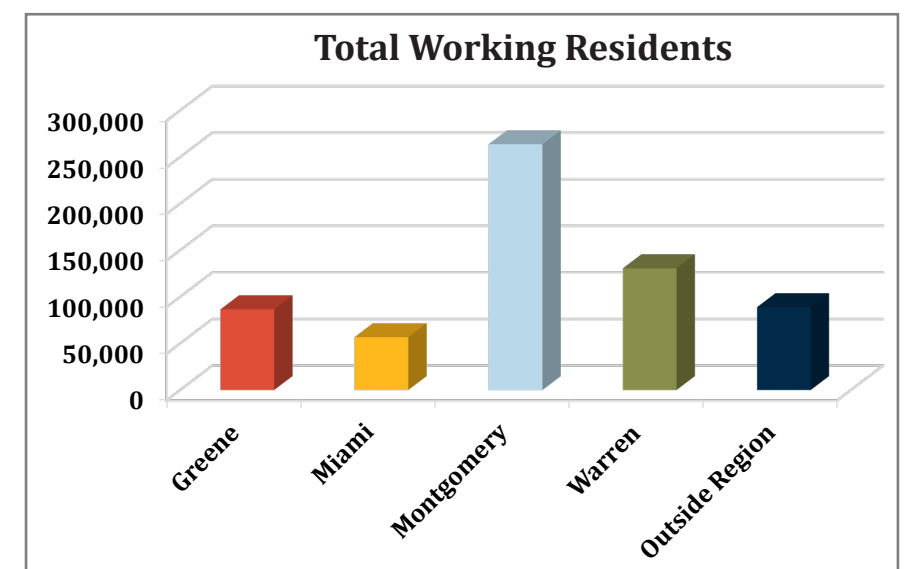
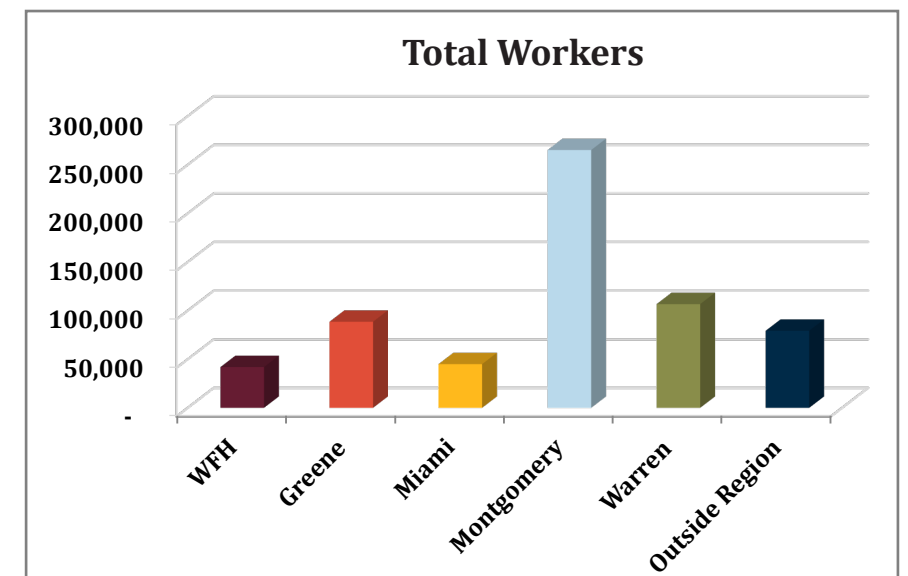


**Figure 3.7
Regionwide
Journey-to-Work
Characteristics**

Source: ACS 2018-2022*
and CTP 2021**
May 2026

Residence	Workplace**						Total Working Residents	
	To From	Work at Home	Greene	Miami	Montgomery	Warren		Outside Region
Greene		6,720	46,320	670	23,250	1,320	8,281	86,561
Miami		3,660	1,755	31,455	11,840	125	7,877	56,712
Montgomery		17,555	26,775	5,330	188,070	8,390	17,611	263,731
Warren		13,985	2,980	130	13,365	54,645	45,503	130,608
Outside Region***			10,714	7,366	28,634	42,218		88,932
Total County Employees		41,920	88,544	44,951	265,159	106,698	79,272	

***Only outside residents working inside the Region are considered.



The ACS data revealed that, although the majority of Greene, Miami, Montgomery, and Warren County residents work in the same county in which they live, Montgomery County is a major “work destination” for commuters living in the surrounding counties. Significant portions of Greene (27%), Miami (21%), and Warren (10%) County residents travel to Montgomery County for work according to 2017-2021 ACS data.

Commuting demographics changed significantly between the 2006-2010 and 2017-2021 ACS. All four counties saw a work-from-home (WFH) work rate increase of at least 150%; Warren County saw the biggest increase in WFH workers (248%) in comparison to their 2006-2010 ACS numbers. There has also been an increase in the total amount of workers in all four counties and an increase in employment across all counties. Warren County saw both the largest increase in employment (28%) and the number of workers living in the county (32%). The substantial increase in employment and worker numbers across all counties reflects the region’s recovery from the 2008 recession.

Other notable shifts in regional commuting demographics include a significant increase in workers commuting from Montgomery County to Warren County (45%), and Warren County to Greene County (48%).

Average travel time to work was analyzed for the Region using 2018-2022 ACS data. The average commute time was 21.8 minutes for Greene County workers (2.3-minute increase from 2010), 21.5 minutes for Miami County workers (0.8-minute increase from 2010), and 22.2 minutes for Montgomery County workers (1.4-minute increase from 2010). While all these commute times are longer than the average commute times for each county observed in 2010 ACS 5-year data, the commute time increases are relatively low and significantly lower than the current average state (23.6 minutes) and national (26.7 minutes) commute times.

Travel trends in the Miami Valley Region follow national patterns. As is the case with the U.S., the automobile represents the preferred mode of travel. According to the 2018-2022 ACS, approximately 78.6% of the Region’s residents drove their automobile alone to work. This represents a slight decrease in residents that drove their automobile to work alone from the 84% seen in 2006-2010 ACS results, due to the significant increase in workers working from home.

3.3 The Miami Valley Region in the Year 2050

The Region in 2050

The Plan assumes that the development patterns of the past will remain predominant in the future. The Region will spread further away from the central city and beyond the boundaries of existing suburbs. The future of the Region will be characterized by less concentrated, low density development patterns, away from existing urban centers, and by fragmented land uses where complementary developments are not always in close proximity. However, it is expected that there will be a close relationship between transportation and land use, as future development is likely to occur along freeway corridors.



MVRPC, as a regional agency, maintains locally adopted future land use plans for jurisdictions located in the Region and constantly updates the data as jurisdictional updates become available. Although future land use plan horizon years vary among jurisdictions, they are good indicators of future growth patterns (see Figure 3.8).

As illustrated in Figure 3.8, residential areas are to remain in the eastern part of Montgomery County, western part of Greene County, and along the I-75 corridor in Miami County. However, it is observed that additional residential developments are planned beyond what is currently developed throughout the Region. Industrial and commercial areas are planned for the western part of the City of Dayton in the vicinity of SR 49 and southern part of Montgomery County near the county line. In Greene County, commercial areas are planned in the vicinity of the I-675/US 35 interchange and industrial areas along the US 35 bypass south of the City of Xenia. In Miami County, industrial areas are planned on the outskirts of the cities of Tipp City, Troy, and Piqua.

In addition to the expansion of residential, commercial, and industrial areas, it is expected that a certain level of infill development will occur over the next 30 years. For instance, the greater Downtown Dayton area is attracting more businesses and people; several research facilities have been planned in the vicinity of the University of Dayton, Downtown Dayton and surrounding areas are witnessing a spur in residential development, the inner suburb of Kettering is attracting office and other retail establishments, and in Moraine, the vacant former General Motors plant complex has been reinhabited by a large overseas automotive glass manufacturing company and several other smaller companies.



In summary, MVRPC anticipates that much of the growth in the Region, as illustrated in Figure 3.9, will continue to occur along the fringes of the I-675 corridor, the I-70 corridor, the I-75 corridor in Miami County, and the southern portion of I-75 in Montgomery County. Further development will occur along US 35 from the Montgomery/Greene County border to the external edge of the City of Xenia, and along SR 49 in western Montgomery County. Northern Warren County is also projected to experience new development.

Population and Employment Projections

MVRPC developed 2050 population and employment projections to identify the Region's future socioeconomic characteristics and for subsequent use by the travel demand forecasting model and LRTP analyses. Projections were generated for Greene, Miami, and Montgomery counties.

**Figure 3.8
Adopted Land Use Plans**

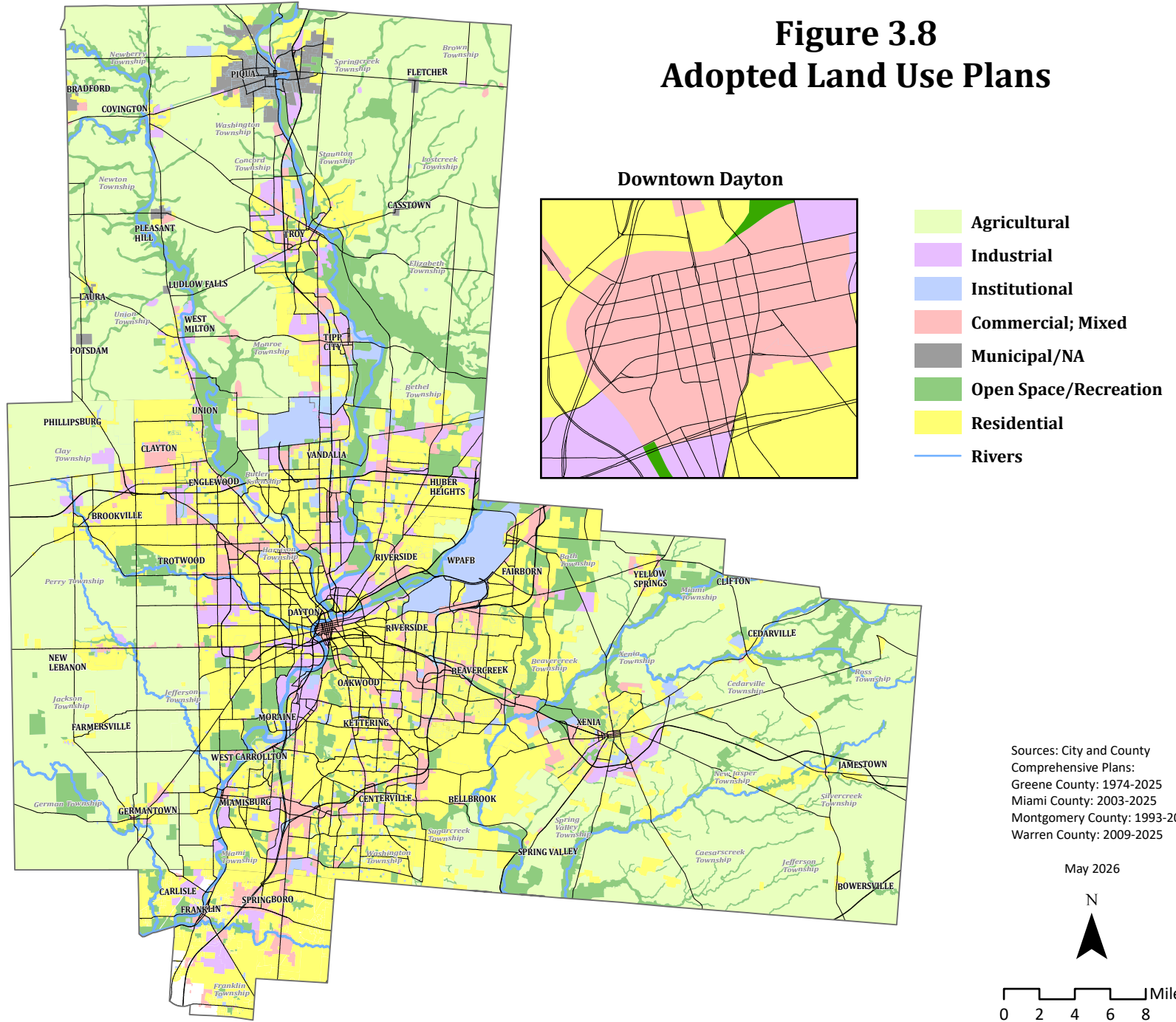
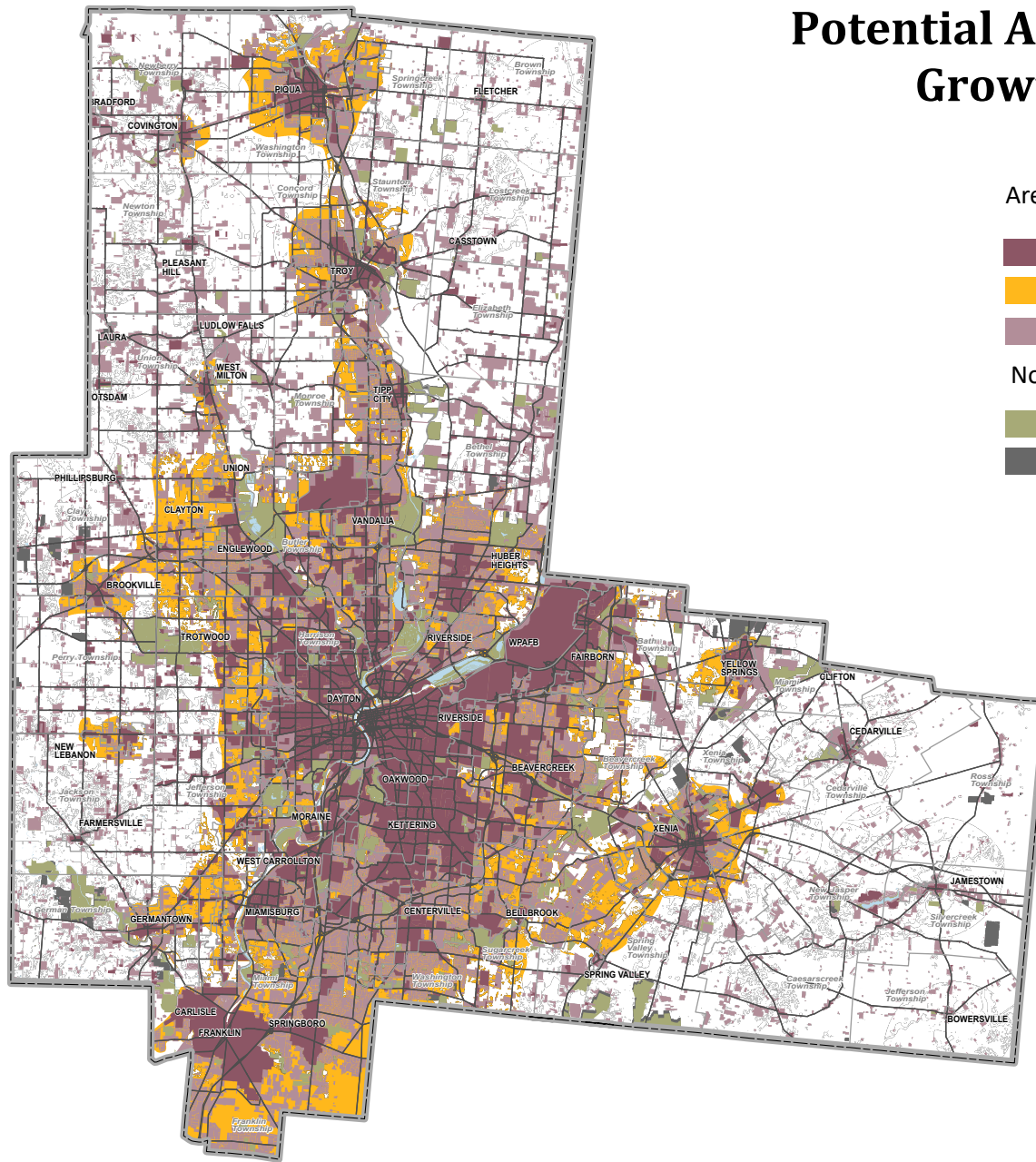


Figure 3.9 Potential Areas of Concentrated Growth: 2018 - 2050



Areas of Development

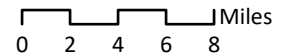
- 1970 Developed Areas
- Potential Growth Areas: 2018 - 2050
- 2018 Developed Areas

Non-developable Areas

- Park, Cemetery, Used Open Space
- Protected Area

Source: MVRPC

May 2026



For the 2026 update of the 2050 LRTP, MVRPC used the forecasts developed in 2018 based on county-level forecasts purchased from Woods & Poole disaggregated to TAZs, ES202 employment data by industry, and in-house databases. These forecasts were adjusted to 2020 ES202 employment data for the 2026 LRTP update. Each TAZ was assigned growth factors applied to the base-year population and employment totals, resulting in 2050 projections for population and employment in each of 12 forecasted industry sectors.

Overall, the population of the Region is expected to decrease slightly between 2020 and 2050 as shown in Table 3.3. However, Miami and Greene counties are expected to gain while Montgomery County is expected to lose population.

Table 3.3 — Population Projections: 2020 – 2050

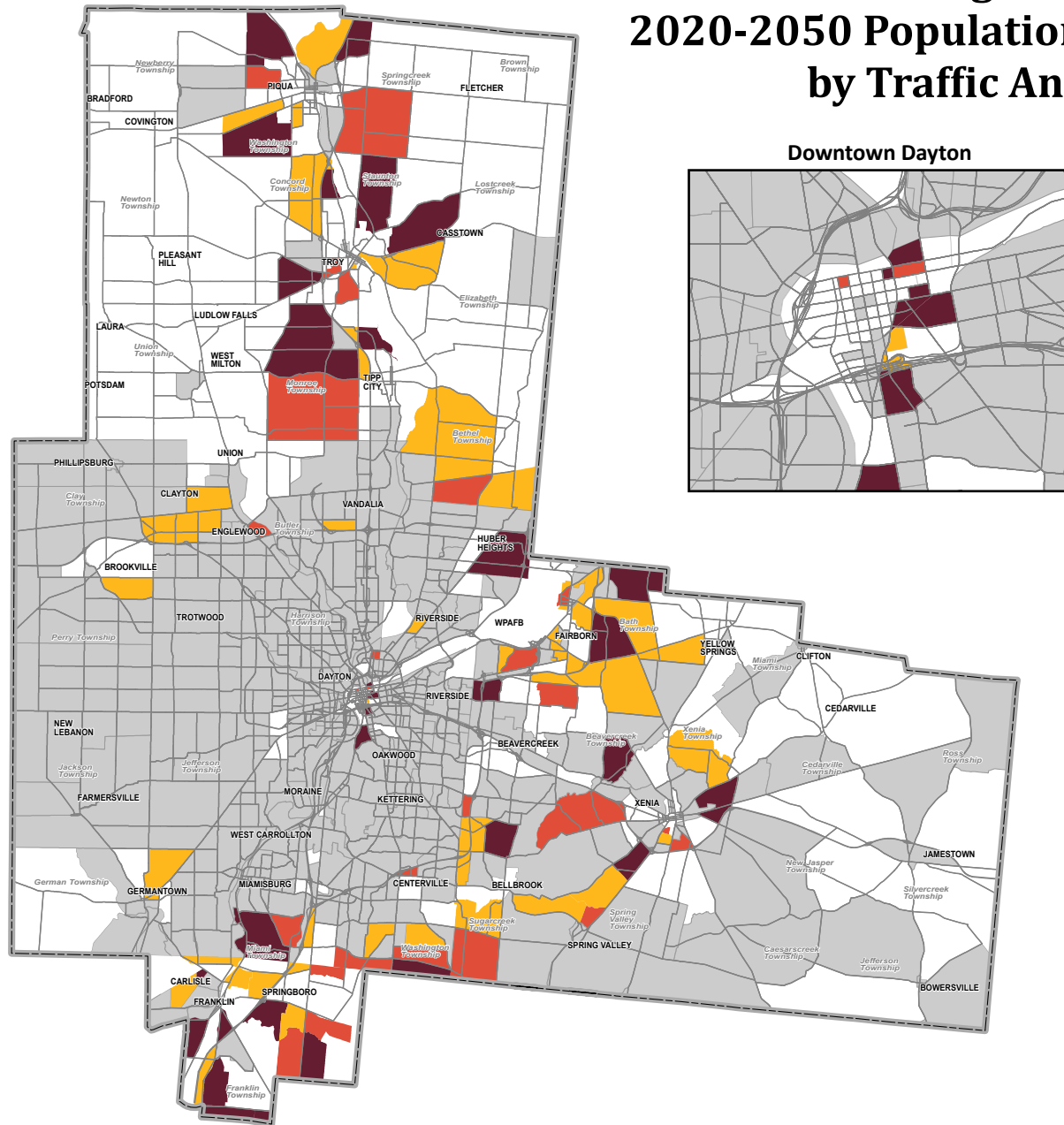
County	Census 2020	MVRPC 2050	% Change (2020 – 2050)
Greene	167,966 (20.6%)	171,091 (21.9%)	1.86%
Miami	108,774 (13.4%)	116,812 (15%)	7.39%
Montgomery	537,309 (66.0%)	492,205 (63.1%)	-8.39%
Total	814,049	780,108	-4.17%

Source: 2020 Census/MVRPC

Figure 3.10 shows the population percentage changes from 2020 to 2050 at the TAZ level, illustrating where the population growth and decline are expected to occur. It is anticipated that there will be a continuing outward movement of population characterized by the stabilization of population losses in the older urban areas, continued growth in the newer suburbs, and some spillover of that growth into the surrounding rural areas. Thus, the central city and first ring suburbs are expected to experience the highest population declines while the outlying areas, such as southeastern Montgomery County, areas along the I-75 corridor in Miami County and Western Greene County, are expected to experience the highest population gains. Areas in and around the new Austin Pike Interchange are projected to see strong growth, including areas in northern Warren County. Further, downtown Dayton is expected to moderately offset the trend of population decline in the central city when considering continued redevelopment efforts.

Table 3.4 summarizes population density by area type between 2020 and 2050. Overall, all densities but the CBD, are anticipated to be lower in 2050 than in 2020. By county, both Greene and Miami counties will have slightly higher densities in 2050 than in 2020 for both suburban and rural areas because of the outward movement of population.

Figure 3.10
2020-2050 Population Change Projection
by Traffic Analysis Zone



Population Change

- Below -5%
- 5.0% - +5.0%
- 5.1% - 25.0%
- 25.1% - 50.0%
- Over 50.0%

Source: MVRPC

May 2026

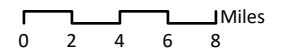


Table 3.4 — Population Density by Area Type: 2020 – 2050 (Persons per acre)

Area Type	Greene		Miami		Montgomery		Total	
	2020	2050	2020	2050	2020	2050	2020	2050
CBD	-	-	-	-	4.83	5.29	4.83	5.29
Urban	5.32	5.21	7.41	7.11	5.85	4.93	5.85	5.06
Suburban	1.72	1.74	1.32	1.44	1.87	1.98	1.87	1.83
Rural	0.12	0.13	0.14	0.16	0.14	0.14	0.14	0.14

Source: MVRPC

Overall, employment in the Region is expected to grow between 2020 and 2050 by approximately 12.8%. The employment projections by county are summarized in Table 3.5. Both Greene and Miami counties are expected to experience substantial employment growth between 2020 and 2050 (23.1% in Greene County and 20.6% in Miami County). Montgomery County employment is expected to show a more modest growth of 7.8%.

Table 3.5 — Employment Projections: 2020 – 2050

County	2020	2050	% Change (2020 – 2050)
Greene	108,884 (22.8%)	134,078 (24.9%)	23.1%
Miami	54,109 (11.3%)	65,242 (12.1%)	20.6%
Montgomery	313,766 (65.8%)	338,279 (62.9%)	7.8%
Total	476,759	537,600	12.8%

Source: MVRPC

In general, it is anticipated that urban, suburban, and rural areas will all experience employment growth through 2050. The bulk of employment growth is expected to continue to occur along major road corridors such as Interstate I-75, I-70, US 35, SR 4, and SR 49. The areas around Dayton International Airport and Wright-Patterson Airforce Base are expected to experience robust growth.

Employment density changes are summarized in Table 3.6. Urban and suburban areas in Greene and Miami Counties see the greatest percentage increase. Montgomery County urban and suburban areas are projected to see modest growth, while rural area employment density in all counties is expected to remain about the same.

Table 3.6 — Employment Density by Area Type: 2020 – 2050 (Jobs per Acre)

Area Type	Greene		Miami		Montgomery		Total	
	2020	2050	2020	2050	2020	2050	2020	2050
CBD	-	-	-	-	32.23	30.89	32.23	30.89
Urban	5.91	7.31	3.24	4.09	2.68	2.94	2.77	3.08
Suburban	1.22	1.51	0.87	1.05	1.23	1.34	1.17	1.34
Rural	0.02	0.02	0.03	0.03	0.02	0.02	0.02	0.03

Source: MVRPC

3.4 Travel Demand Forecasting Model

ODOT and MVRPC have worked closely together to establish and maintain a regional travel demand forecasting model since the 1960s (last updated in 2025). The model is a series of computerized mathematical programs using databases to rationalize the social, physical, and psychological constraints of travel patterns.

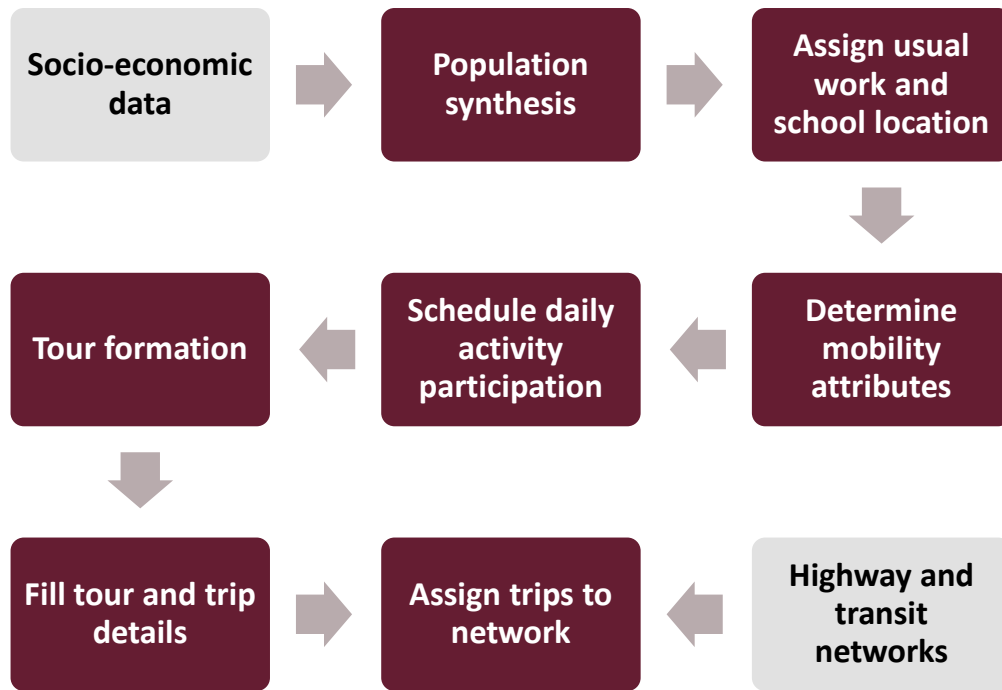
Combined OKI/MVRPC Travel Demand Model

The OKI/MVRPC Travel Demand Forecasting Model (TDFM) includes the combined planning regions under the jurisdictions of the Ohio-Kentucky-Indiana Regional Council of Governments (OKI) and MVRPC. The combined OKI/MVRPC TDFM was originally developed as part of the North-South Transportation Initiative in 2000 and extended the OKI model design to the combined OKI/MVRPC super-region. Between 2013 and 2019, the model structure was updated again to an activity based concept from a traditional trip-based 4-step version, and for the 2021 LRTP update the horizon year was extended to 2050. The 2026 LRTP update incorporates the results of the 2020 U.S. Census.

Activity Based Models (ABMs) have similarities to traditional 4-step models but rather than representing each trip individually they represent each person’s activities and travel choices across the entire day. ABMs give consideration to the types of activities the individual and household need to participate in and set priorities for scheduling these activities. Because ABMs are based on behavioral theory about how people make decisions they can provide a more realistic view of travel and be used to test a wider range of policy alternatives.

Figure 3.11 shows a simplified version of the activity based model structure and how different components interact with one another. Data inputs are shown in gray and the various model steps are shown in burgundy. The results of the model are then used in model applications such as congestion management, air quality, or as needed by on-going regional transportation studies.

Figure 3.11 — Basic Model Structure



Data Inputs

Model data inputs fall into two main categories: socioeconomic variables and transportation networks. Socioeconomic variables at the TAZ level can be broadly divided between households and related variables (persons, workers, and autos per household) and employment, classified by 2-digit NAICS code. Three main sources of information were utilized to produce the 2020 base-year model. For residence-related variables, the 2020 Decennial Census was the sole source. For employment, MVRPC used a combination of ES202 data prepared by the Ohio Department of Jobs and Family Services as well as a variety of local sources and knowledge.

Households and employment are forecasted for year 2050. For intermediate years, the model has the built-in capability of interpolating between available data sets, 2020-2050. Information on the forecasting methodology and data sources is available in Section 3.3 of this chapter. Table 3.7 summarizes 2020 and 2050 Census/forecasted socioeconomic variables.

Table 3.7 — Year 2020 and 2050 Forecasted Socioeconomic Variables

Variable	Area Type				
	CBD	Urban	Suburban	Rural	Total
# of TAZs	64	209	458	125	856
Acres	871	30,708	301,083	492,893	825,555
2020 Census Population	4,207	179,712	562,318	67,812	814,049
2020 Households	2,599	75,980	235,477	25,397	339,453
2020 Employment	28,061	85,011	352,288	11,399	476,759
2050 Population	4,603	155,336	550,133	70,036	780,108
2050 Households	2,948	68,093	238,709	27,477	337,227
2050 Employment	26,900	94,571	403,263	12,865	537,600
2020 Persons per Household	1.39	2.27	2.34	2.55	2.33
2020 Workers per Household	0.84	1.04	1.15	1.26	1.13
2020 Autos per Household	1.02	1.53	1.85	2.32	1.81

Source: 2020 Census/MVRPC

The base-year transportation network is based on the existing year 2020 roadway facilities and available fixed transit routes. The network is updated on an annual basis using a combination of field surveys and orthophotos. Roadway inventory information, such as number of lanes, is then coded in the format required by the model, along with all other relevant information such as roadway capacity and speeds. A transit network, based on the 2020 GDRTA fixed transit routes was also developed for five different time periods. The travel demand model does not have the capability of forecasting demand-responsive transit services.

Future-year highway networks are developed for the following years (2029 E+C and 2050) based on the feasibility period in the congestion management project list provided in Chapter 5 and also include completed projects between 2020 and 2025. The 2029 E+C (Existing plus Committed) network includes all projects that are currently funded in the Transportation Improvement Program (TIP). Since transit service levels are expected to remain constant throughout the planning period, all future year networks are based on current (2025) transit routes which also include Greene CATs flex routes.

Trip Summary Overview

The forecasting model and methodology first replicated existing (2020) conditions. The network was then used to forecast traffic for year 2050 based on the Existing plus Committed transportation system (2050 E+C) and for the year 2050 based on all the projects in the Congestion Management list (2050 Plan). Table 3.8 shows trips by trip purpose for year 2020 and 2050. The table shows trips increasing by approximately 3% from 2020 to 2050, the fastest growing trips are trucks and external trips at 24 and 46 percent respectively.

Table 3.8 — Typical Weekday Trip Summary

Analysis Period	Person Trips					Vehicle Trips		
	Home	Work	School	Shopping	Other	Trucks	4T-CV	External
2020	763,156	478,212	66,868	544,430	779,416	154,536	143,185	185,760
2050	749,409	492,336	62,642	535,846	762,150	192,304	150,234	271,286

Source: MVRPC

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