

CHAPTER 1

Characteristics Of The Greater Region

The geographic area covered by this plan, identified by ODOT as Region 2 and commonly referred to as the Greater Region, includes Champaign, Clark, Darke, Greene, Miami, Montgomery, Preble, and Shelby Counties. Counties covered in this plan are located in west-central Ohio and include a mix of urban and rural populations. As of the 2010 census, the Region's population was 1,122,137 and encompassed a total of 3,534 square miles with 281 people per square mile. There are a total of 30 cities, 73 villages, and 12 other Census Designated Places (CDP).

In the Greater Region, rural driving distances are one of the greatest barriers to providing residents with transportation. Based on the ODOT Daily Vehicle Miles Traveled data, within the region a total of 8,314,723 miles are traveled on rural roadways daily. The counties with the largest rural roadway miles traveled are Preble, Shelby, Clark and Greene counties all traveling individually over 1,000 miles daily. Low population and sprawling urban development has led to a car dependent, transit limited region. Public transportation is available in seven counties, excluding Preble. Five of the public transit agencies offer demand-response service with the additional three offering a mix of demand response and fixed route options. Refer to **Appendix F: Glossary** , for the definition of these services. The majority of public transit agencies offering the demand response service only are located in sub-region 2a with the exception of the Springfield City Area Transit (SCAT) in Clark County offering a fixed route system within the City of Springfield limits. A number of client-specific human service transportation agencies are also available throughout the Region which is identified in **Chapter 2: Overview of Available Services** .

Since the Greater Region is a mix of large-urban, small-urban, and rural populations, it is funded through a variety of sources making transit planning complex. The Federal Transit Administration (FTA) defines large-urban counties as having a population of 200,000 or greater, small urban counties having a population of 50,000 to 199,999, and rural counties having a population of less than 50,000. As discussed in the Executive Summary, because of these federal rules, regulations and definitions certain FTA funding flows through MVRPC to be distributed among the counties located within the agency's MPO boundaries (sub-region 2b). The remaining counties in the Greater Region are funded directly from the state. As a result, one of the key matters to address through the GRMI plan is how a shift to a regionally coordinated funding structure for both of these areas would function. This analysis further reinforced the need for sub-regions to delineate the funding streams. FTA funding allocated to MVRPC and ODOT cannot be directly combined or used outside of their designated geographies, but can be used in concert to achieve regional purposes.

The populations most affected by this plan include seniors (ages 65 and above), individuals with disabilities, and households with individuals who do not have access to personal transportation. The plan analyzes trends such as population concentration, population growth, and areas with a high demand for transportation to address the future needs of the Region. Analysis of such trends allows for improved allocation of resources, opportunities for increased coordination, and for identifying gaps and duplication of services.

General Population

At the time of the latest American Community Survey (ACS) in 2016, 80% of the Region’s population was located in large and small urban counties with 69% of that population residing in sub-region 2b (**Figure F**). The City of Springfield, Clark County is located in sub-region 2a and has a geography that mirrors the small urban cities in sub-region 2b. The remaining 20% of the Region’s population is dispersed throughout the rural counties. Rural driving distances have proven to be the greatest barrier to residents, as previously mentioned, creating a challenge to servicing populations in Preble, Darke, Shelby, and Champaign counties.

According to the Ohio Development Services Agency (ODSA) population projections for the Region, by 2025 is expected to remain just above 1,100,100; with a decline of -3.0%. The exception is Greene County, which is projected to experience a 1% increase (**Figure F**). Preble County is projected to experience the most significant loss, at -6%. While there are a number of reasons for a decline in overall populations, issues related to transportation planning include the aging and death of older residents, fewer young people choosing to remain in the Region to work, and the endangered ability to ‘age in place’ that can occur when services are removed from rural areas and concentrated in larger population centers. It is more expensive, both personally and as a society, when people move to rehabilitation or nursing facilities because extensive care that is required. Transit and human service providers realize the decline in population over the next few years will significantly impact the amount of funding agencies may receive and are taking measures to identify innovative ways to decrease their cost and improve the efficiency of their services to the public. The goals identified within this plan reflect the current and future work that will occur to address this population decline.

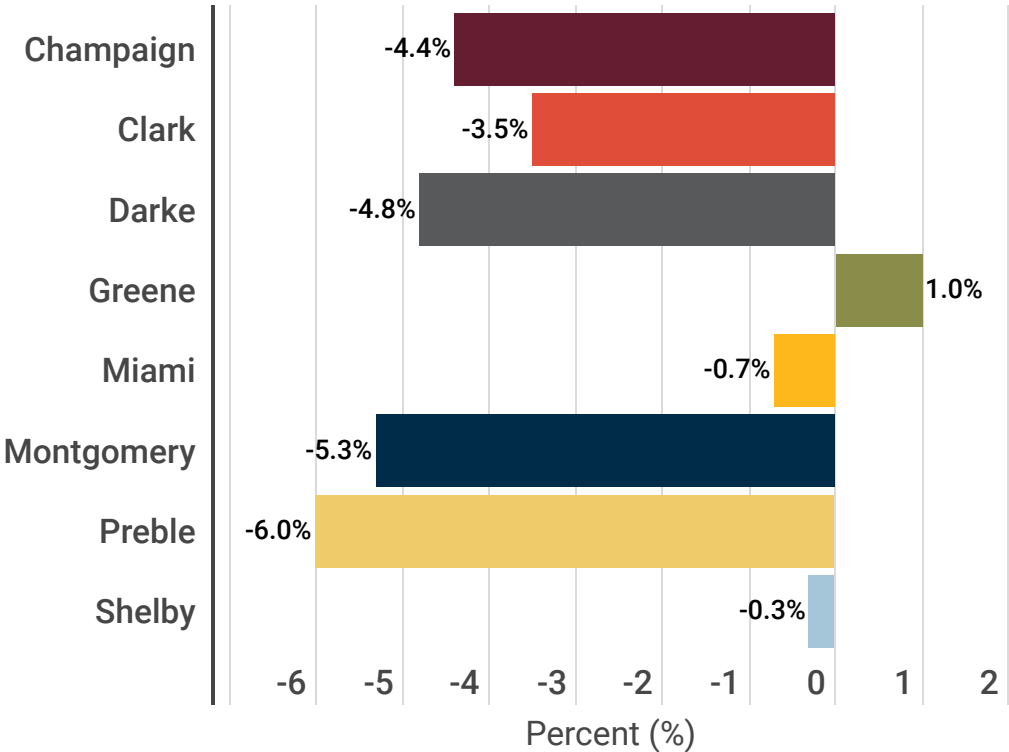


Figure F: Projected Percent Change in Population by County, 2016-2025

Source: Ohio Development Services Agency, Population Characteristics and Projections

Total Population by Age Group

Table 2: Base and Projected Changes in Population

County	Base: 2016	2020	2025	Percent Change
Champaign	39,175	38,090	37,450	-4.4%
Clark	136,175	133,240	131,390	-3.5%
Darke	52,185	51,270	49,670	-4.8%
Greene	164,325	164,940	165,950	1.0%
Miami	103,864	102,590	103,160	-0.7%
Montgomery	532,761	513,830	504,770	-5.3%
Preble	41,561	40,420	39,070	-6.0%
Shelby	48,949	49,290	48,780	-0.3%
Region	1,118,995	1,139,670	1,080,240	-3.0%

Sources: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates, Ohio Development Services Agency, Population Characteristics and Projections

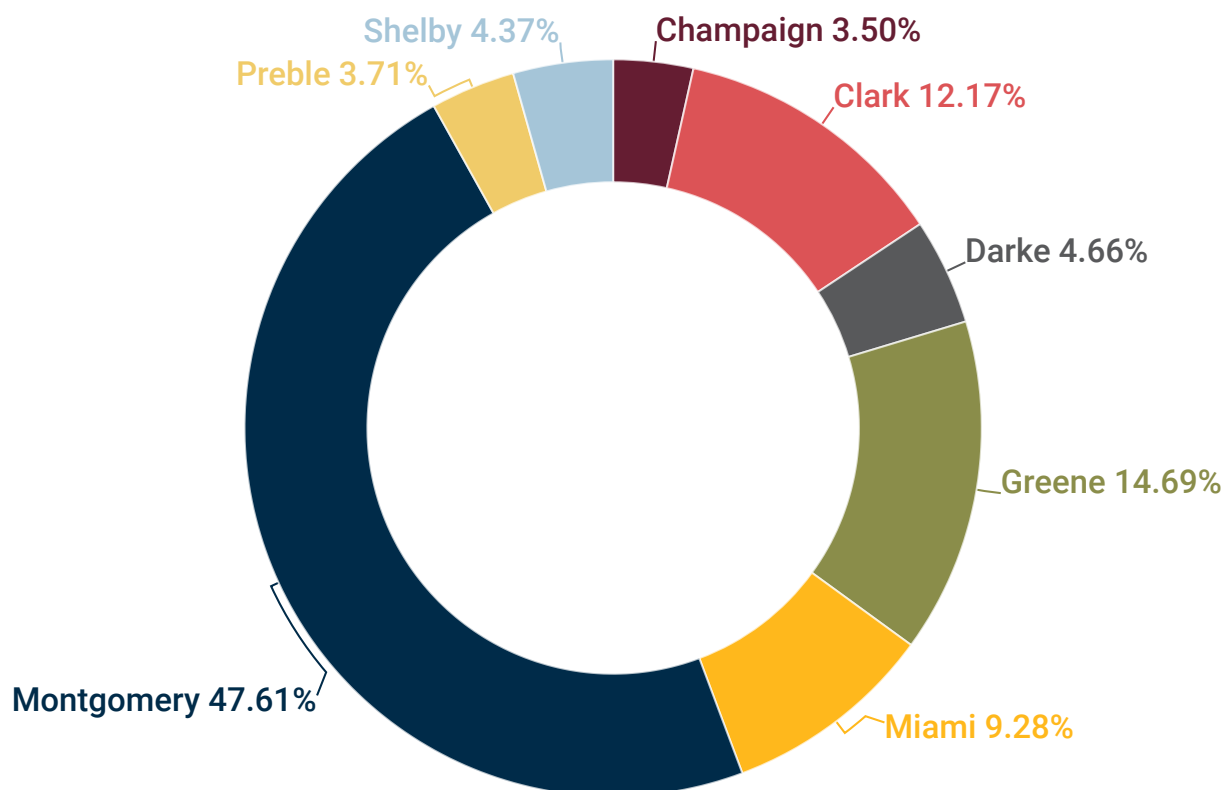


Figure G: Percent of Region Population by County

Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

Table 3: Total Population by Age Group

Age	Chp.	Clk.	Drk.	Grn.	Mia.	Mtg.	Prb.	Sby.	Region
Under 5	5.5%	5.9%	6.1%	5.5%	5.9%	6.2%	5.5%	6.5%	5.9%
5 to 9 years	6.8%	6.2%	7.0%	5.5%	6.0%	6.2%	7.0%	7.3%	6.5%
10 to 14 years	6.7%	6.8%	6.6%	6.1%	7.1%	6.2%	6.3%	7.6%	6.7%
15 to 19 years	6.9%	6.6%	6.7%	7.6%	6.5%	6.4%	6.6%	6.9%	6.8%
20 to 24 years	6.2%	6.3%	5.4%	8.9%	5.5%	6.9%	5.5%	5.7%	6.3%
25 to 29 years	5.4%	5.8%	4.9%	7.0%	5.6%	6.7%	5.4%	5.5%	5.8%
30 to 34 years	5.4%	5.5%	5.5%	6.2%	5.8%	6.3%	5.5%	5.8%	5.8%
35 to 39 years	5.2%	5.6%	5.7%	5.1%	5.7%	5.7%	5.4%	5.3%	5.5%
40 to 44 years	7.3%	5.7%	5.8%	5.8%	6.6%	5.9%	6.6%	6.9%	6.3%
45 to 49 years	7.0%	6.5%	6.6%	6.2%	6.7%	6.3%	7.0%	6.8%	6.6%
50 to 54 years	7.5%	7.1%	7.4%	7.1%	7.3%	7.1%	7.5%	7.5%	7.3%
55 to 59 years	7.0%	7.4%	7.1%	7.1%	7.5%	7.0%	7.5%	7.4%	7.3%
60 to 64 years	6.6%	6.7%	6.6%	6.3%	6.5%	6.4%	7.0%	6.2%	6.5%
65 to 69 years	5.4%	5.7%	5.5%	5.0%	5.3%	5.2%	5.4%	4.7%	5.3%
70 to 74 years	4.5%	4.3%	4.5%	3.8%	4.6%	3.8%	4.6%	3.6%	4.2%
75 to 79 years	3.0%	3.1%	3.2%	2.6%	3.1%	3.0%	3.1%	2.8%	3.0%
80 to 84 years	1.5%	2.3%	2.4%	2.0%	2.0%	2.3%	2.0%	1.7%	2.0%
85 years and above	2.1%	2.4%	2.8%	2.1%	2.2%	2.3%	2.0%	1.9%	2.2%

Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

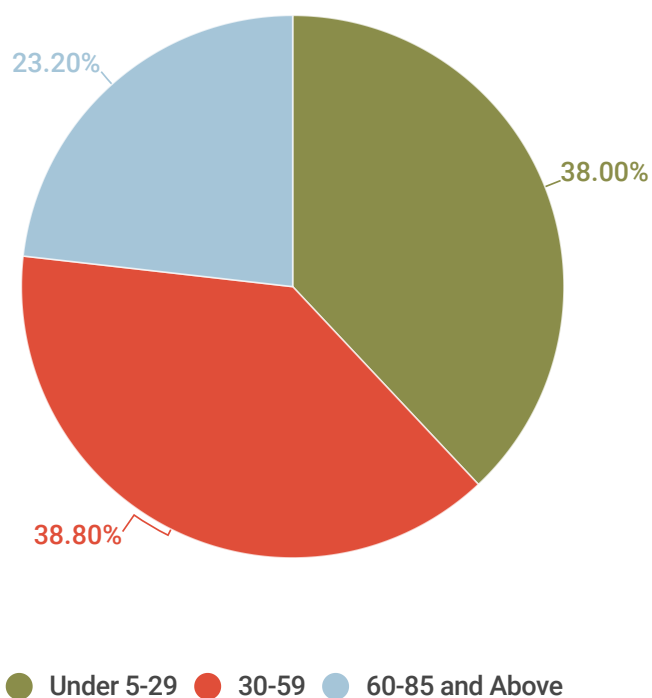


Figure H: Age Group as a Percentage of Population

Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

Table 3: Total Population by Age Group shows the two largest consecutive age groups are those between ages 50-54, known as Generation X, and ages 55-59, known as the Baby Boomers. These age groups make up nearly 15% of the population in the Region. In the coming decade, these groups will become a part of the senior population, inverting the balance of red and blue in **Figure H**. As this population ages we will need to re-purpose our infrastructure and resources to meet the transportation demand. When combined into thirty-year age brackets, ages under 5-29 make up 38% of the population, ages 30-59 make up 38.8%, and ages 60-85 and above make up the remaining 23.2% (**Figure H**). Because of the expected significant increase in the senior population it is critical for transit providers to plan for the increased needs to accommodate this group.

Senior Population

The senior population is expected to grow in all eight counties through the year 2030 (**Figure I**). The regional average of the senior population is 15% and is expected to reach an average of 22% by the year 2030. This equates to a 34% increase. By that year, 1 out of 5 individuals will be 65 or older. Since the region as a whole is expected to see a 3% decrease in overall population, we can assume that the senior population is growing as a result of individuals aging, and not growth of the general population.

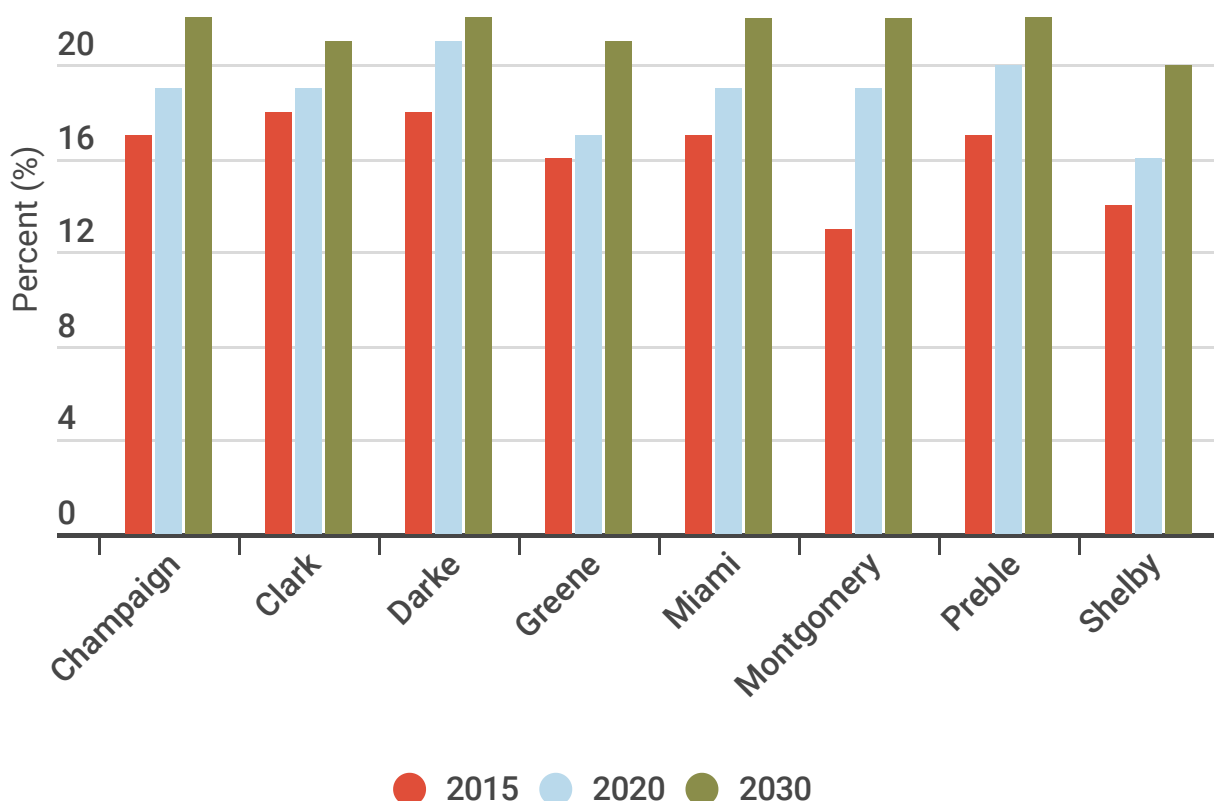


Figure I: Senior Population Growth, 2015-2030

Sources: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates, Ohio Development Services Agency, Population Characteristics and Projections

The area in the Region with the highest percentage of seniors is located in northern Springfield, Clark County. This area is 51% seniors, due to the fact that this is a location of an assisted living facility, Oakwood Village, and is located in a primarily rural setting. In the Region, seniors are not geographically centralized, making it harder to provide transportation to those who live in rural areas. This raises the risk of isolation, increased costs of municipal services, and the possibility of relocation, at the same time as an increasing number of seniors are expressing their interest to 'age in place.' Some seniors may also be living on a fixed income and facing the same challenges as households in poverty, in terms of transportation costs.

Figure J illustrates the areas where the population of seniors (age 65 and above) is at or above the 16.18% regional average. Notice that many of the dark blue areas are in suburbs or at the edges of the counties, increasing the distance needed for travel to services and the importance of cross county-line travel.

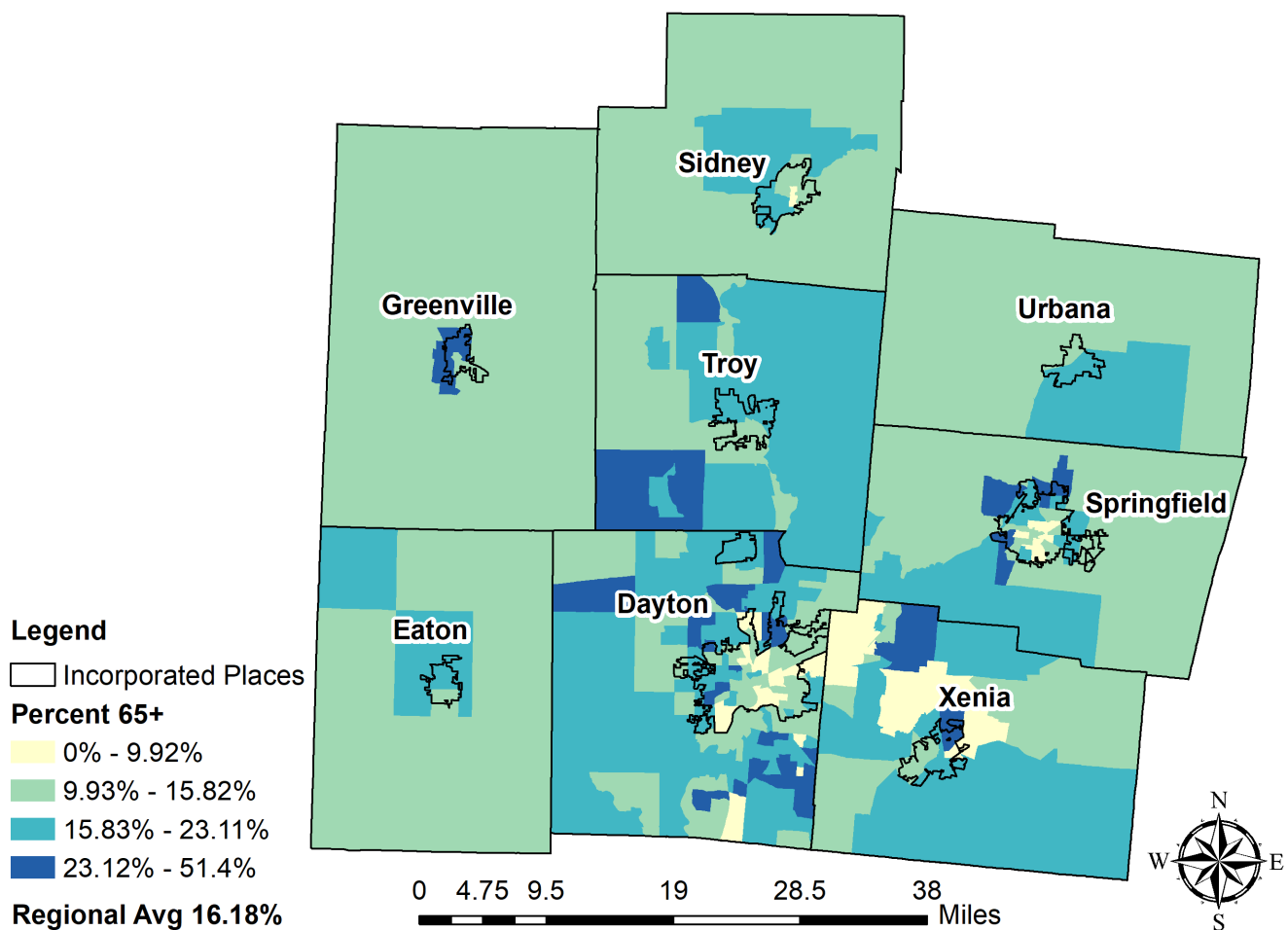


Figure J: Map of Population Density of Individuals Age 65 and Above

Source: MVRPC, U.S. Census Bureau, 2012-2016 American Community Survey 5 Year Estimates

Total Population by Race and Ethnicity

According to Census, the racial makeup of the Greater Region is primarily Caucasian, 80.6%, with the second most prevalent race being Black/African American at 4.9%. Montgomery County is the most racially diverse county in the Region with a lower 73.9% Caucasian population while Darke County is the least diverse with a higher 97.8% Caucasian population as shown in **Table 4: Total Population by Race**. Race and ethnicity is an important consideration in transit planning as it opens the door to review the policies and practices which have led to unintended disparities within communities. Understanding that transportation policies and investments impact not only the lives of individual members and communities, but the growth and prosperity of the broader Region, we need to take the equity landscape into consideration, being intentional about meeting the needs of underserved populations and vulnerable groups when making decisions to connect all citizens to the Region's assets. It is recommended that when transit providers, health and human service providers and public agencies plan for future project spending the public participation efforts are as inclusive as possible to ensure equal access for all.

Table 4: Total Population by Race

County	Caucasian	Black/ African American	American Indian/ Alaskan Native	Asian	Native Hawaiian/ Other Pacific Islander	Other	Two or More Races
Champaign	94.7%	2.2%	0.4%	0.4%	0.0%	0.4%	1.9%
Clark	86.3%	8.8%	0.3%	0.6%	0.0%	1.4%	2.5%
Darke	97.8%	0.4%	0.2%	0.3%	0.0%	0.4%	0.9%
Greene	86.4%	7.2%	0.3%	2.9%	0.1%	0.5%	2.6%
Miami	94.4%	2.0%	0.1%	1.2%	0.0%	0.5%	1.8%
Montgomery	73.9%	20.9%	0.2%	1.7%	0.0%	0.8%	2.4%
Preble	97.6%	0.4%	0.2%	0.4%	0.0%	0.2%	0.2%
Shelby	94.7%	1.9%	0.2%	0.9%	0.1%	0.5%	1.9%
Region	80.6%	4.9%	0.2%	0.9%	0.0%	0.5%	1.6%

Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

It is also important to understand the percentage of the Hispanic or Latino populations in the Greater Region. Clark County has the highest percentage of Hispanic populations in the region, 3.5%, with the majority of that population residing in the City of Springfield (**Figure K**). Montgomery and Greene counties also have approximately 3.0% each of their population that identify as Hispanic or Latino. While these numbers may seem low, the population is rapidly growing across the nation. There is no population projection data for those who identify as Hispanic at the county or state level however; the national population is expected to increase to over 68,000 individuals by 2025 which is a 2% increase. With this information we can assume the Hispanic population within the Region will continue increase as well.

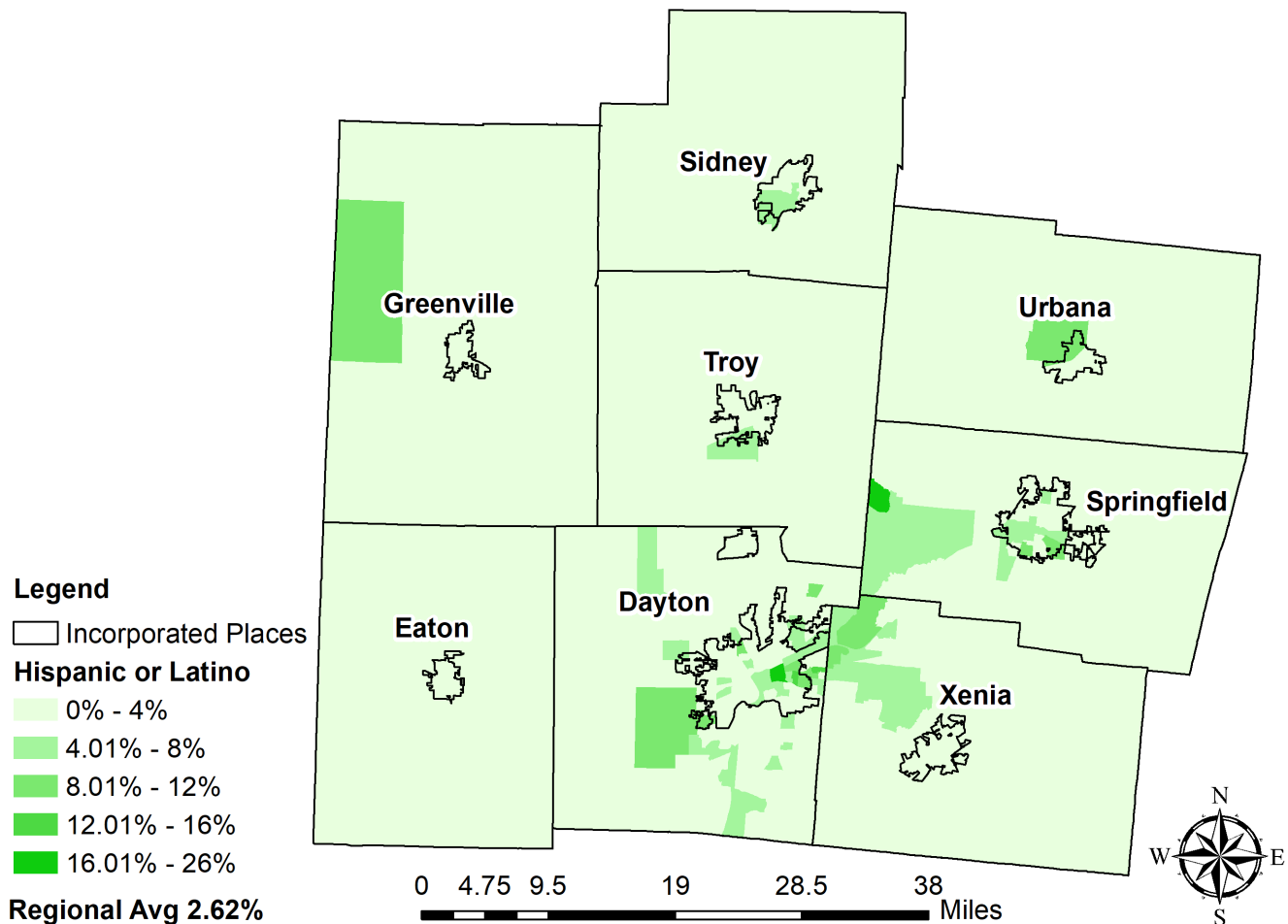


Figure K: Hispanic or Latino Origin of Ethnicity

Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

Limited English Proficiency

The Region is also home to approximately 17,500 individuals who speak English “Less than Very Well.” This equates to approximately 1% of the population, or 1 out of 100 people as highlighted in **Table 5: Population that Speaks English “Less than Very Well”**. The county with the most individuals who speak “English Less than Very Well” is Montgomery County, with over 11,000 people or 2 out of 100 people. Because the Region is largely Caucasian and English-speaking, resources are not often made available in different languages or marketed to a multi-cultural audience, which may be a barrier to using available transportation services. Incorporating multi-lingual resources in print, online, and at call centers could help bridge the gap and bring more awareness to transit options in the Greater Region communities.

Table 5: Population that Speaks English “Less than Very Well”

County	Speaks English Less than "Very Well"	Speaks English Less than "Very Well" (%)
Champaign	230	0.6%
Clark	1,500	1.2%
Darke	298	0.6%
Greene	3,063	2.0%
Miami	926	0.9%
Montgomery	11,149	2.2%
Preble	261	0.7%
Shelby	484	1.1%
Region	17,427	1.0%

Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

Poverty

The federal poverty level is a measure of income used by the U.S. Government to determine who is eligible for subsidies, programs, and benefits. The Department of Health and Human Services (HHS) updates the poverty guidelines every year. HHS issues poverty guidelines for each household size. For example, in 2019 the federal poverty level for a household of four is an annual income of \$25,750. Some agencies also provide assistance to families who earn more than the federal poverty level. For example, some social service programs offer subsidies to families that earn 150% of the federal poverty level. For a household of four, that would be $1.5 \times \$25,750 = \$38,625$. Within the Greater Region, there are nearly 60,000 households living at the 150% poverty level. The Supplemental Nutrition Assistance Program (SNAP), Medicaid, and The Affordable Care Act are examples of agencies that use the federal poverty guidelines. Introducing these additional programs, particularly where they support transportation is both a challenge and an opportunity.

Figure L: Low-to-Moderate Income Areas shows the concentration of poverty in each county. Within the region the highest concentration of poverty is within each county’s main city center. It can be argued this is because the majority of social services utilized by the LMI population lie within city centers and many lack access to personal transportation. All counties

in the Region, with the exception of Preble County, provide some sort of public transportation to residents which support the identified goal of expanding transportation service in counties to meet public needs. Additionally, there are slightly higher LMI levels dispersed outside of city centers in the rural counties. This is not only makes mobility particularly more difficult for residents due to the lack of access to a personal vehicle, but also most transportation providers in rural counties provide demand response style service which limits the amount riders per vehicle. Purchasing additional equipment and hiring more drivers can all support the expansion of service increasing the mobility of all residents.

Financial experts recommend that no more than 50% of a household's annual income go toward basic needs which include housing, groceries, utilities, healthcare, and transportation. In the Greater Region, housing and transportation costs are exceeding recommended budget thresholds and range from 51% to 59% of household income (Housing and Transportation Index). Particularly in suburban and rural areas, the distance of travel creates higher transportation costs contributing to the cycle of poverty. Coordination among local leadership to explore options to improve access to transit as well as easing restrictions for cross county line trips is a critical step in reducing the cycle of poverty.

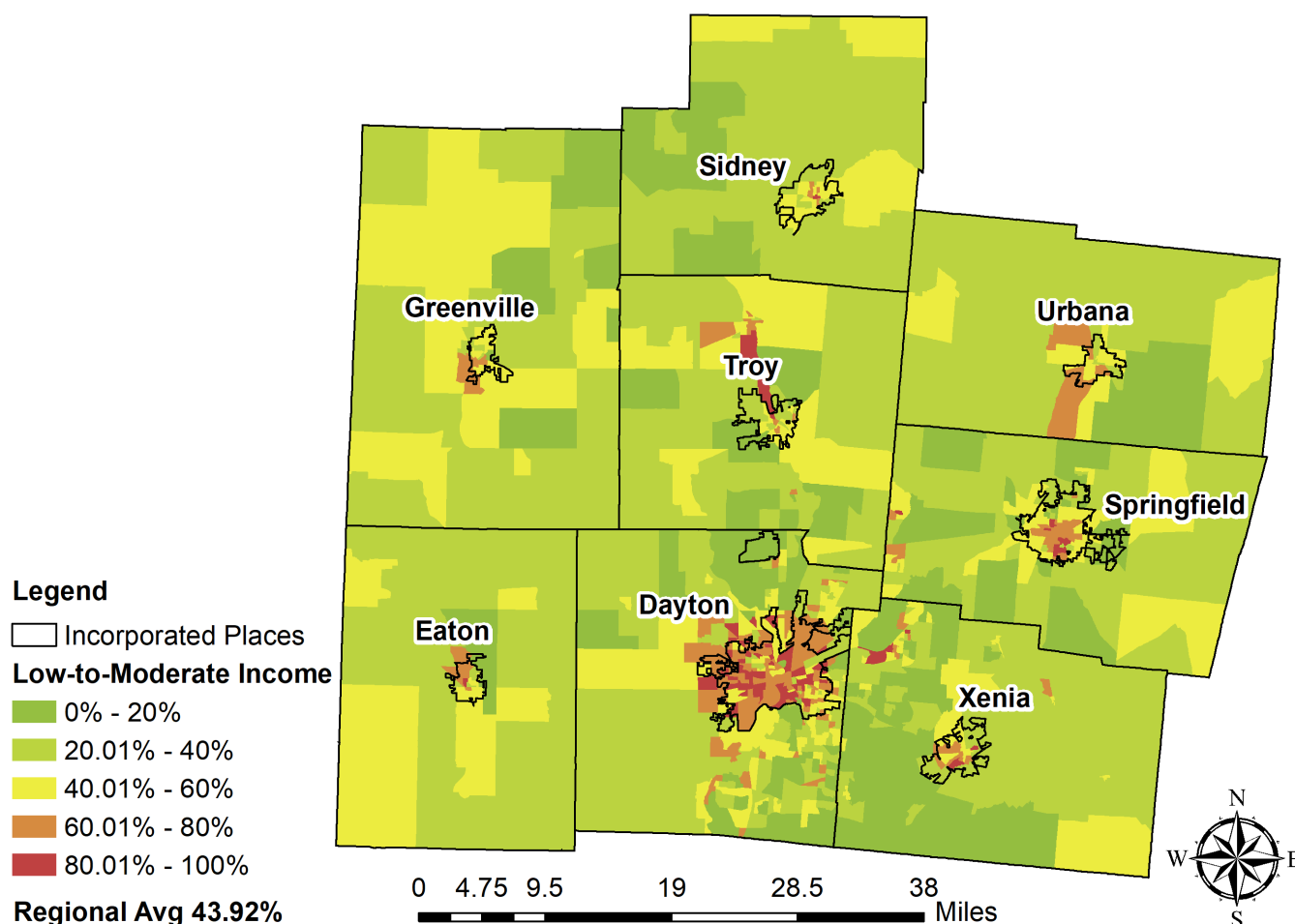


Figure L: Low-to-Moderate Income Areas

Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

Individuals with Disabilities

Currently, the regional average of individuals with disabilities is nearly 15.5%, or approximately one out of six people (**Figure N**). According to the Miami Valley Coordinated Public Transit-Human Services Transportation Plan published by MVRPC specifically covering the counties in sub-region 2b, by 2030, individuals in the MPO with disabilities will grow to 19%, or one in five individuals. While no other reliable models have been calculated for the remaining six counties in the Region, the increase in percentages is assumed to follow the growth.

Figure M described the percent of the Region with a disability by county. The area in Region with the highest percentage of individuals with disabilities is located within the city limits of northern Dayton, to the east of the I-75 and Needmore Rd intersection. Thirty-six percent of individuals in this area have a disability, which is more than two times the regional average. One possible explanation for this could be the number of available stops along the county’s transit routes to places such as grocery stores, pharmacies, restaurants, and social service agencies. The population of individuals with disabilities across the Region is relatively concentrated, primarily around city centers. This may reflect the individuals’ higher likelihood to rely on supportive services, public transit or agency transportation as a condition of their disability.

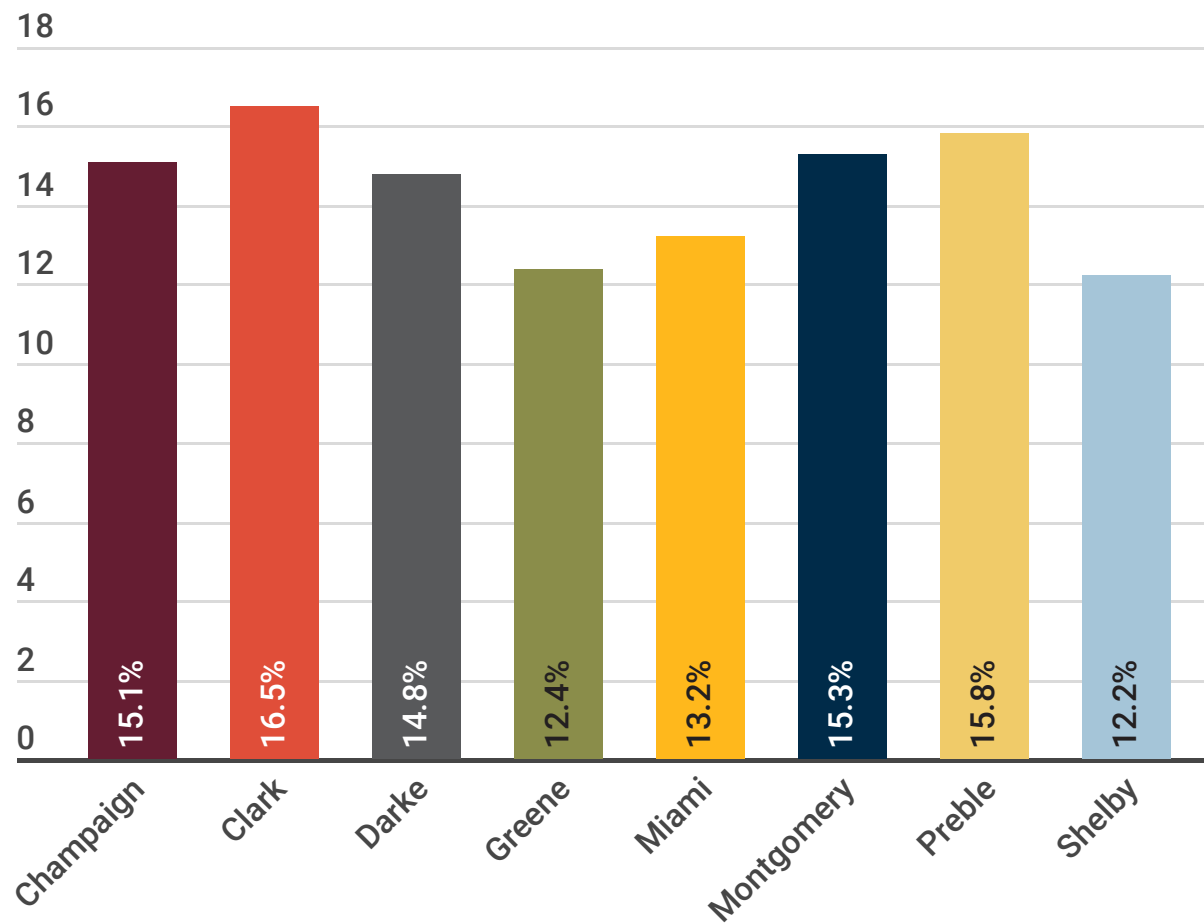


Figure M: Percent of Region with a Disability by County

Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

Figure N indicates the areas where the number of individuals with disabilities is above the regional 15.49% average. As shown, a large amount of the population in the Region resides outside of a city center where the majority of services for these individuals are located. Additionally, many of the County Boards of Developmental Disabilities no longer provide transportation services to their clients directly as an agency provider. Instead transportation funding is available to this population through Medicaid Waivers however; there are a limited number of Health and Human Service transportation providers and nonprofit agencies servicing the region which lacks the capacity to support the demand because of limited hours of operations and a shortage of drivers.

This severely limits the mobility of an individual and in some cases restricts their ability to freely choose where they decide to work or live. Currently, Darke and Clark counties only provide public transit systems within the boundaries of county seats leaving a larger portion of this population with limited to no transportation options.

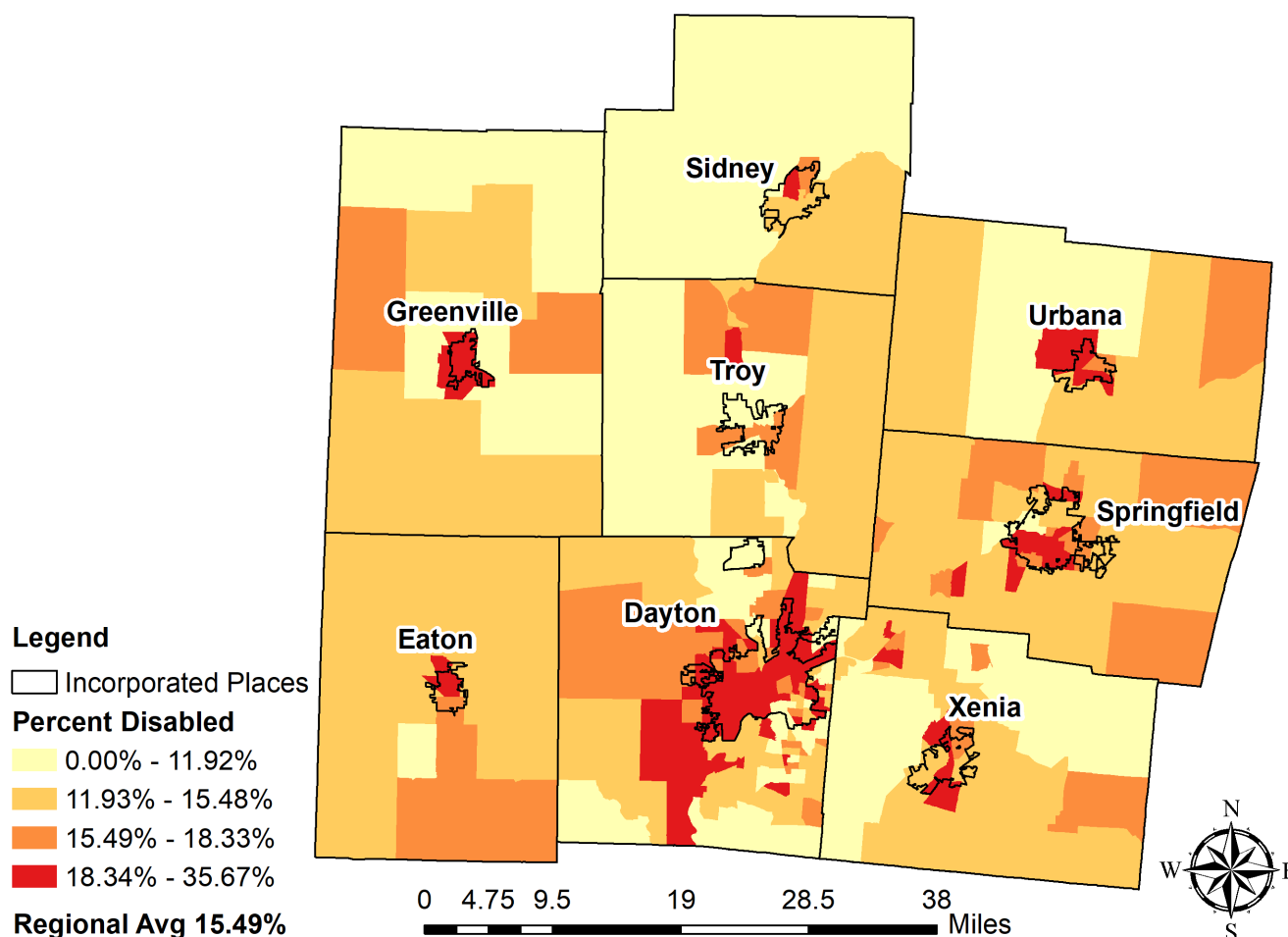


Figure N: Map of Population Density of Individuals with Disabilities

Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

Zero Car Households

Currently, the regional average of households that do not have access to a personal vehicle is 6.25% which equates to 1 out of every 16 people (**Figure O**). Individuals who do not have access to a personal car may choose to forgo this option for reasons such as the rise of public transit, preference for alternative modes of transportation (walking, biking, etc.), or the high cost of owning a vehicle.

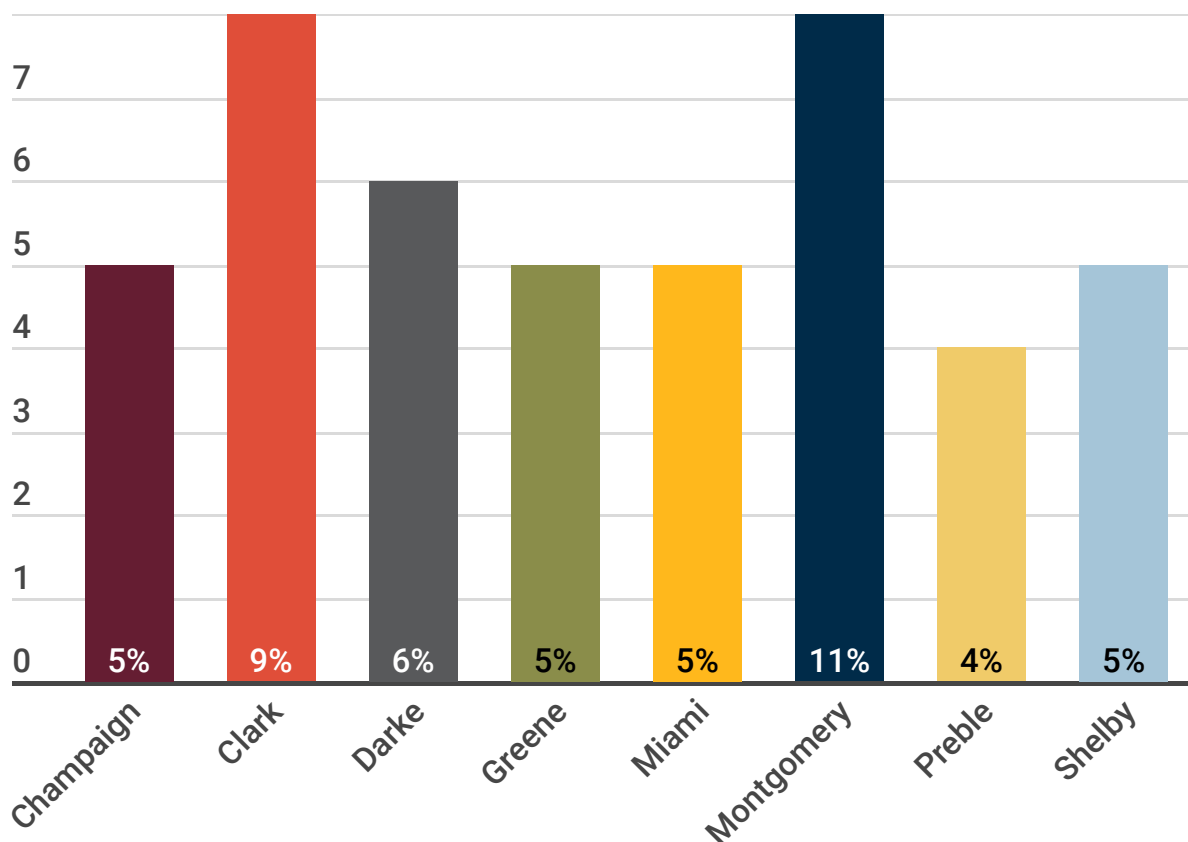


Figure O: Percent of Zero Car Households

Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

According to the Center for Neighborhood Technology: Housing and Transportation Index, individuals in the Greater Region with access to a personal vehicle spend an average of 26% of their annual income on transportation and can spend anywhere between 13%-31% (**Figure P**). This amount includes gas, registration, insurance, and maintenance. Transportation costs are considered to be affordable if they are 15% or less of a household's income. Champaign, Darke, and Preble counties which are primarily rural, have fewer options for public transit, and longer driving distances between destination points adding up to an increased cost of personal transportation. These counties spend the highest percentage, 27%, of their annual income on transportation costs. The access to job availability is significantly lower in the county as well requiring residents to travel outside of the county for employment. The county with households that spend the least for transportation is Montgomery County at 23%, ranging from 17%-30% of their annual income. The lower number is likely due to a substantial public transportation network as well as increased availability to employment and social services.

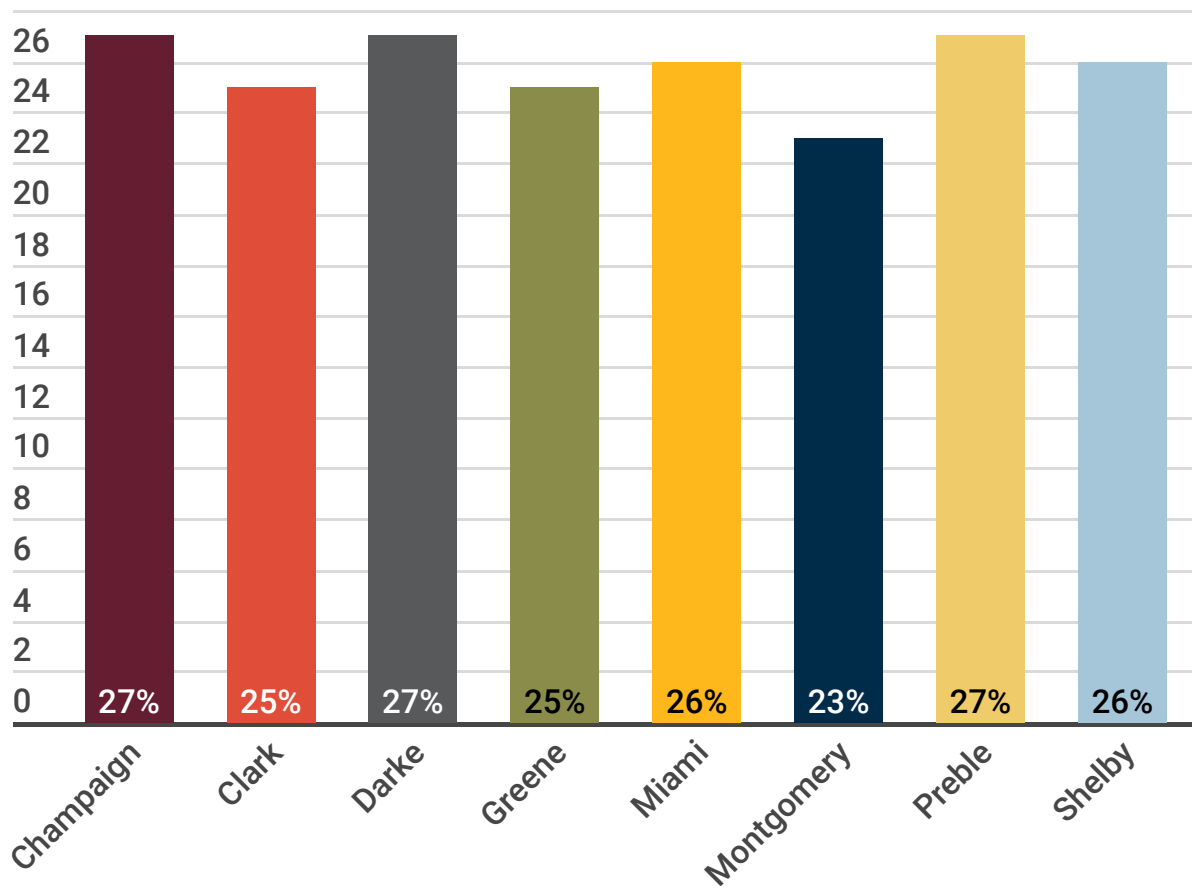


Figure P: Percent of Income Spent on Personal Transportation

Source: Center for Neighborhood Technology: Housing and Transportation Index

Montgomery County has the highest rate of zero vehicle households, at 11% which is higher than the regional average of 8.8% (**Figure Q**). Higher levels of poverty, individuals with disabilities, limited English proficiency population, and more alternative transportation options within the county can all be contributing factors to this number. Preble County has the least amount of zero vehicle households, at 4% and is subsequently one of the counties that spend the most on personal transportation. Further analysis of trip origin and destination data explained in the ‘Trip Generators’ section of this chapter explains why Preble County has higher personal transportation costs. Additionally, Preble County currently has limited transit options available to residents requiring reliance on personal transportation.

There are many factors that have been evaluated in this plan which contribute to zero car households. This all presupposes that an individual driving their own single-occupancy vehicles is the regional default mode of transportation. The Greater Region has multiple services that provide transportation targeted toward the populations reviewed in this plan, such as County Boards for Developmental Disabilities, County Job and Family Services offices, and Senior Centers or Assisted Living facilities that may provide alternative methods of transportation filling the gaps in service.

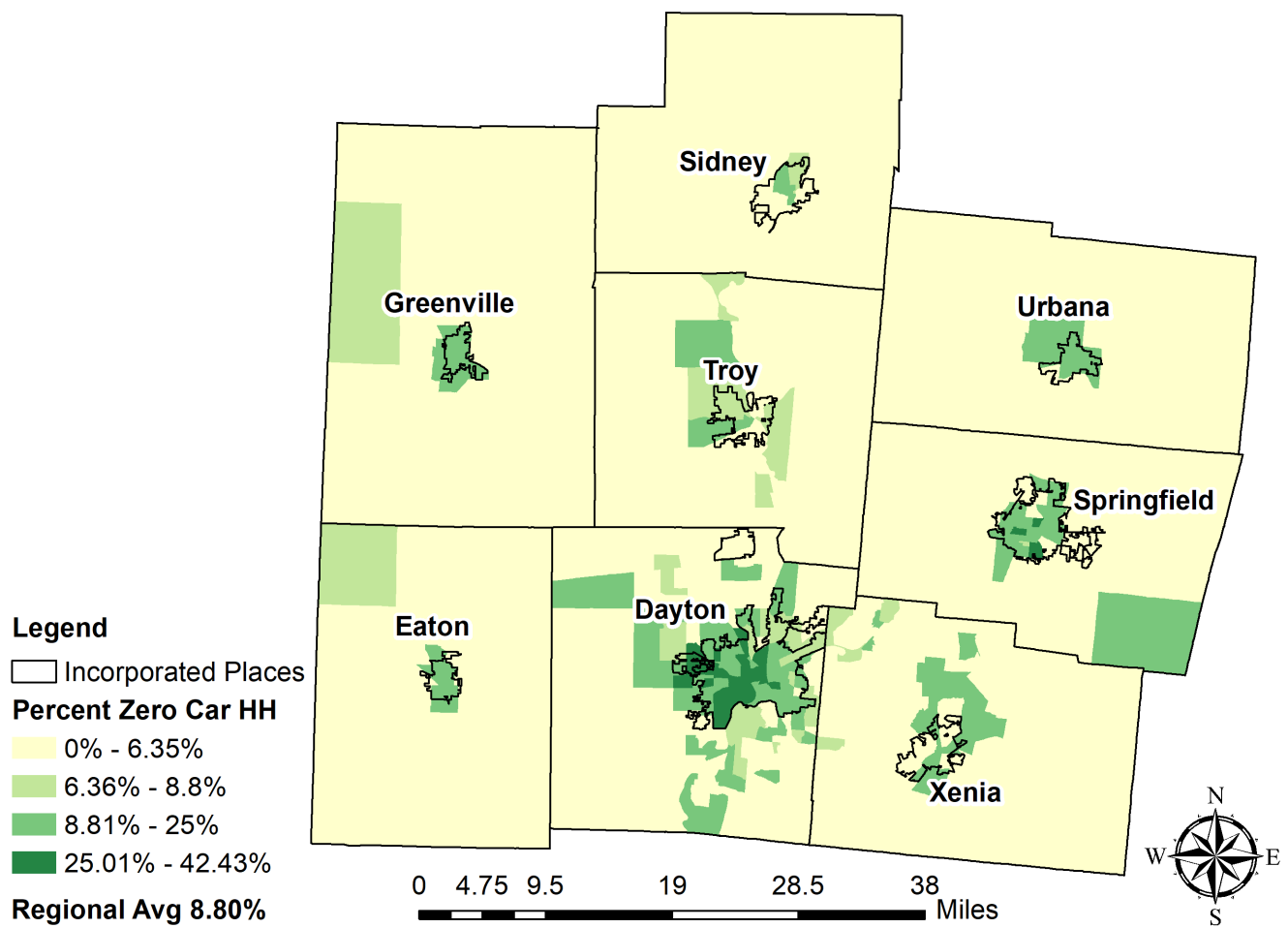


Figure Q: Map of Density of Zero Car Households

Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

Trip Generators

A Trip Origin is used to indicate where people are coming from (often their residence) and Trip Destination data is identified as the final location of travel. Together this information provides Trip Generators which can be utilized to make decisions for funding and project development.

Analyzing socio-demographic data, such as concentration of seniors, individuals with disabilities, and zero car households, can help determine transit patterns. Top destinations for existing transportation providers as well as individuals who drive personal vehicles can be identified by examining where vital and life-enhancing services are located. For the purpose of this plan, these services include:

- Developmental Disability Services
- Grocery Stores
- Human Services/Government Agencies
- Libraries
- Medical Facilities
- Pharmacies
- Schools
- Senior Centers

Physical addresses of these services in the Greater Region were collected and spatially located. A heat map was then generated to show where most services are located, thus creating high travel demand areas. Areas with a high travel demand tend to be clustered around city centers. This pattern holds true throughout all counties in the Region. The county seats, often the county's largest city center, hold the majority of services vital to the improvement or sustainability of an individual's quality of life. As an individual travels farther away from the center of the county, the availability of services decreases. Individual county level trip generator data can be reviewed in **Appendix A: County Trip Generators**.

Figure R illustrates the high and low trip demand areas for people in the Greater Region, including individuals who drive a personal vehicle.

Looking at the high concentration of trip generators it becomes clear that the origins and destinations of trips are far apart. Often people come from rural or suburban locations into city centers to receive services. As public transit or agency transportation services plan their routes, drivers' time, and gas, they must take into account longer travel distances. Public transportation is considered very expensive for this reason, but it is essential to meet the needs of these affected populations. Another challenge to the public provision of transportation is the declining population in the Region; this will reduce the ability and/or increase the cost of supportive services. Plans will need to address realistic decline, rather than planning for optimistic growth or continuation of the existing services.

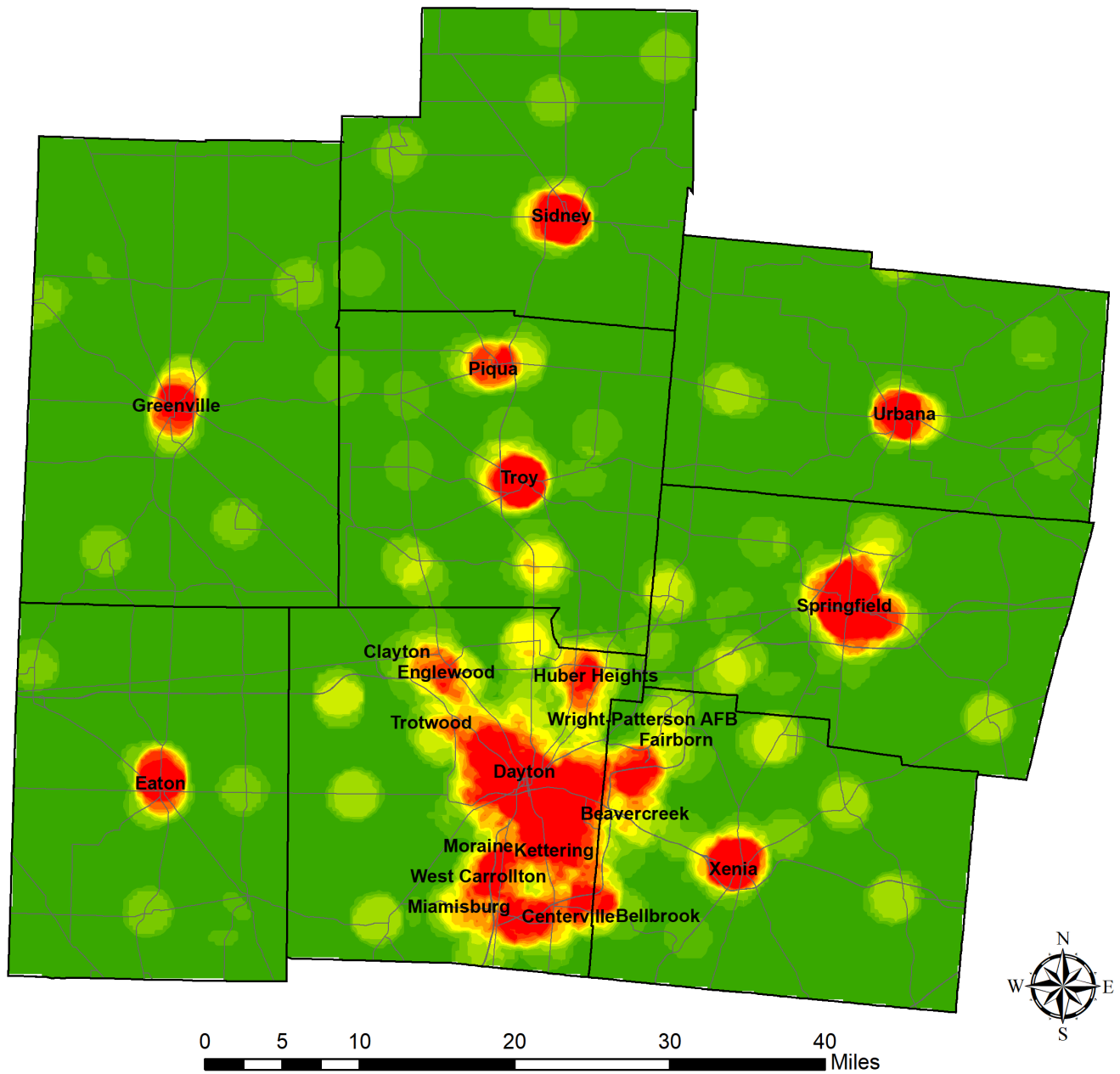


Figure R: Map of Major Trip Generators

Sources: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

