Chapter 2:
Regional Trends Through 2035

To anticipate future transportation needs in central Ohio, it is essential to anticipate demands on the transportation system. Development patterns, as well as demographic and socioeconomic characteristics, affect the way people travel. Demographic and socioeconomic characteristics also have impact on transportation needs. Age can affect personal mobility, economic conditions can affect accessibility due to affordability, and culture can affect choice of travel due to language barriers or other cultural characteristics. Providing a complete transportation system that accommodates travel needs of all users is a core purpose of this MTP.

Development patterns directly impact the transportation system both in terms of accessibility and capacity. The way land develops, including densities, proximity to transit, and accessibility to roadways, is just as important as the type and location of development that occurs.

Predicting regional trends that include characteristics of the people in the MPO planning area, as well as the amount of development, provides decision makers with information to help them make investment choices that meet the objectives of this MTP.

2. Regional Trends Through 2035

This section is an account of existing and projected settlement patterns of central Ohio. The planning process uses the projections represented below to identify future traffic demand, which, in turn, indicates where the expenditure of transportation dollars is needed most.

Central Ohio is expected to continue to be a dynamically growing community. Much development has occurred since 2000. More is expected to come as, Figures 2.1 and 2.2 show. Projections include significant amounts of infill and repopulation of areas that suffered losses during the recent economic crisis.

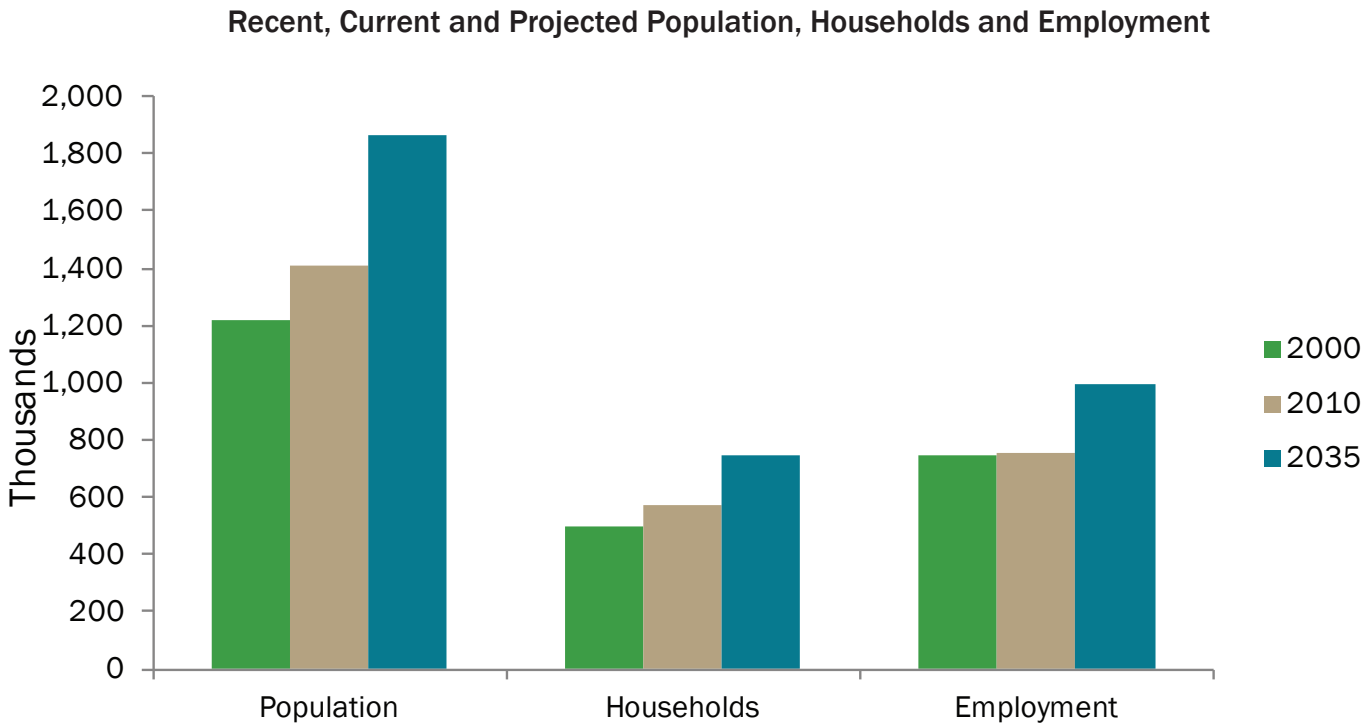

Figure 2.1 Recent, Current and Projected Population, Households and Employment in MPO Area
Source: US Census, 2000, 2010; Ohio Department of Development Office of Statistical Research, MORPC

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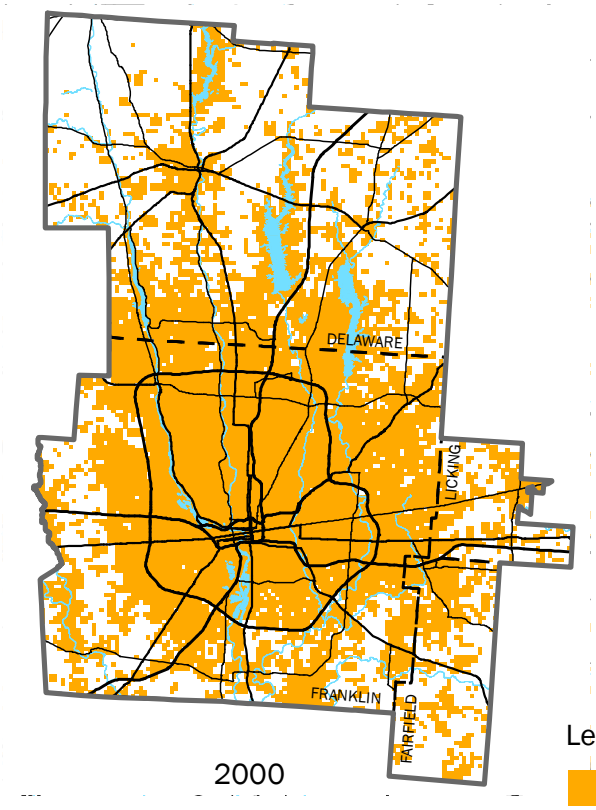

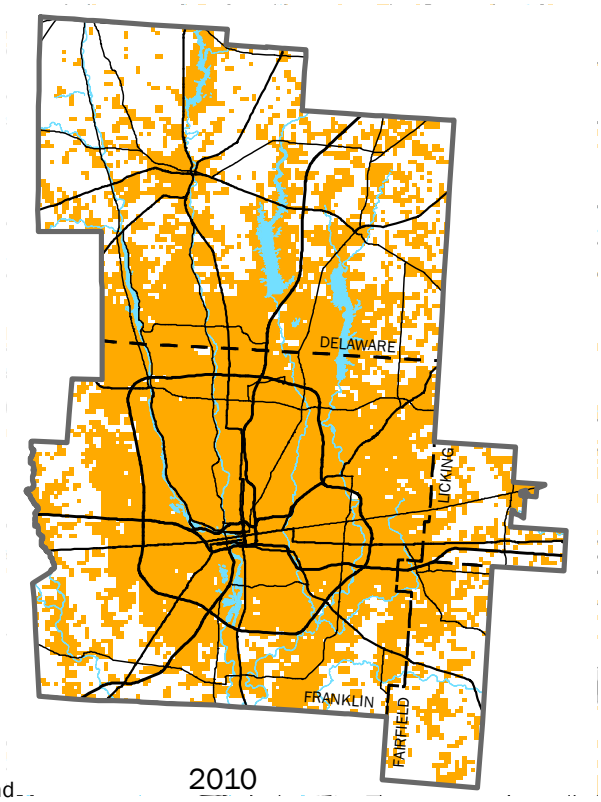

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Central Ohio is expected to continue to be a dynamically growing community. Much development has occurred since 2000. More is expected to come. These figures depict the development footprint from 2000 and 2010, and the expected footprint in 2035.

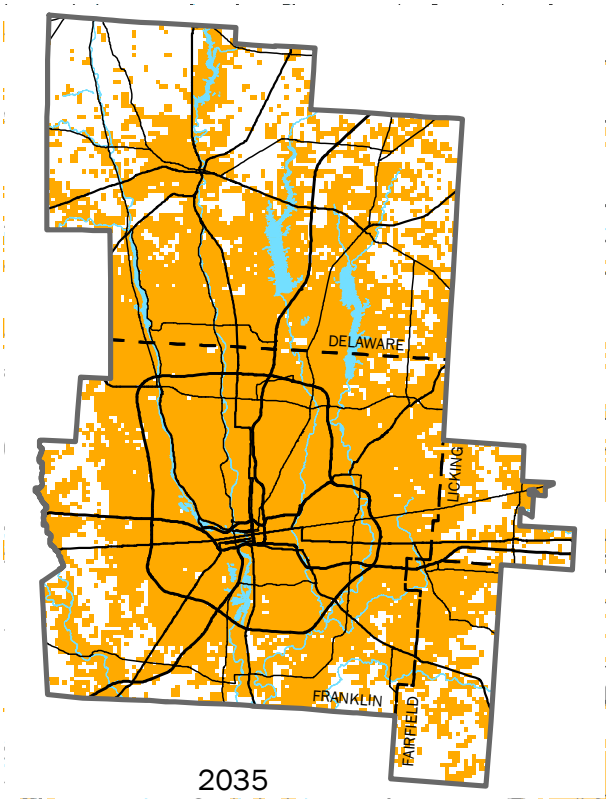

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Figure 2.2 Map of Developed Land, in 2000, 2010 and 2035

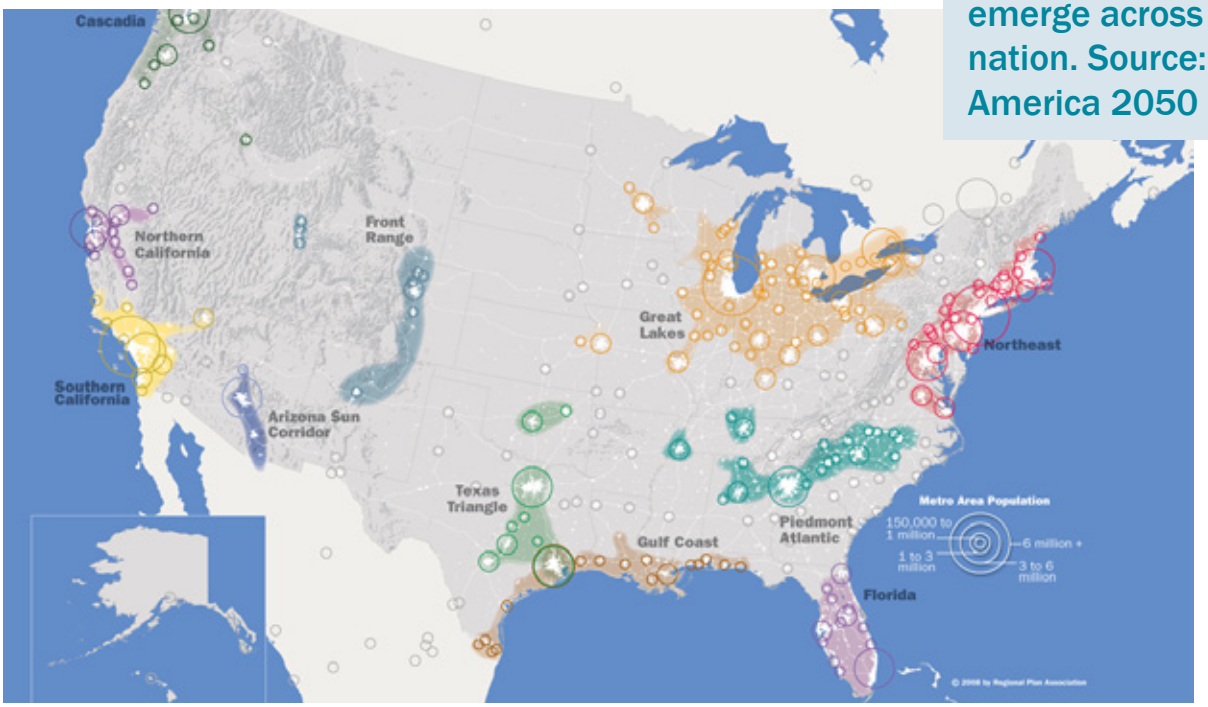
2.1 Transportation and Development Patterns

Development, transportation and economic systems are inextricably related. The land use system defines the origin and destinations of travel patterns, while the transportation system is the means by which this occurs. Economics and access are the drivers for having a transportation system.

The first European settlement in central Ohio over 200 years ago was due, in part, to its proximity to other large markets and the potential of a far-reaching distribution system. The area was chosen because of its proximity to the Scioto River, which, as a main tributary to the Ohio River was thought to be a suitable water highway between the frontier and more established markets. Unfortunately, the Scioto was not a navigable river for large boats, so settlers had to rely on overland transportation routes. This central location has played an important role in determining the local economy as a distribution center. Farmers from throughout the fertile region sent their produce to the eastern markets by way of Columbus.

Central Ohio is part of the powerful Great Lakes mega-region. A mega-region includes clusters of metropolitan areas, linked through transportation and economic ties. Historically, The Great Lakes mega-region was the industrial core of the nation. In the Great Lakes region, approximately 15 percent of the employment is dedicated to manufacturing. Nationally, the manufacturing share is 12 percent. The Great Lakes port cities of Buffalo, Chicago, Cleveland, Detroit, Erie, Milwaukee and Toledo, as well as inland port cities including Pittsburgh, St. Louis and Cincinnati, were centers of industry for many reasons.

As metropolitan areas grow, megaregions emerge across the nation. Source: America 2050



Among those reasons was access to raw materials, as well as shipping and rail corridors for moving goods from east to west. Late in the 19th century, industrialists made use of the extensive rail system built during the Civil War. Subsequently, the Federal Highway Act of 1956 authorized the building and improving of a national network of high-speed interstate highways. While the dynamics of the manufacturing sector may have changed, the geographic assets of the Great Lakes megaregion are still true.

Only nine percent of employment in central Ohio is dedicated to manufacturing.

Contrary to other areas in the Great Lakes region, only nine percent of employment in the Columbus metropolitan area is dedicated to manufacturing. However, Columbus is in the heart of Ohio, which is at the crossroads of the Eastern and Midwest portions of the United States. Central Ohio has maintained its position as a fulcrum for distributing goods. Its infrastructure is expansive. The terrain is relatively flat, allowing free movement for freight by rail and road. Freight leaving Columbus can reach approximately 44 percent of the US and Canadian populations within a day.

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As central Ohio grew, expansion of the transportation system to serve the people who live and work here was reactive to local development pressures. Whereas development tends to occur based on market forces, land use patterns are localized responses that are independent of regional impact.

The quality of the intra-regional transportation system is dependent on local decisions. Local density regulations, site plan requirements and road network design affect the successful integration of transit, bike and pedestrian activity.

The MTP takes a broader view of development patterns to connect the local markets through regional solutions by forming a framework for road network connections, transit service and bikeways. Weighing local decisions in the context of regional functionality allow for ease of intra-regional movement by cars, trucks, cyclists, pedestrians and transit riders. Incorporating transportation amenities as part of local development considerations, such as sidewalks, transit accessibility considerations, and bikeways better disperses the concentrated need for mobility that the regional system delivers.

The 2000's started with an unemployment rate of 3.0 percent, and ended at 8.5 percent.

2.2 Central Ohio Portrait

The area covered by the MPO has approximately 1.4 million people, 756,000 jobs and 627,000 housing units, 55,000 of which are vacant. During the first decade of the 21st century, central Ohio built many houses, added many people and shuffled jobs around. The 2000's started with an unemployment rate of 3.0 percent, and ended at 8.5 percent.

DEMOGRAPHICS

Central Ohio has historically been relatively young, owing in part to the presence of The Ohio State University (OSU). The Columbus Metropolitan Statistical Area (MSA) has a median age of 35 years, whereas the national average is over 37 years, and the Great Lakes region is over 38 years. However, like the rest of the nation, central Ohio is aging. Consequently, the region will face extraordinary

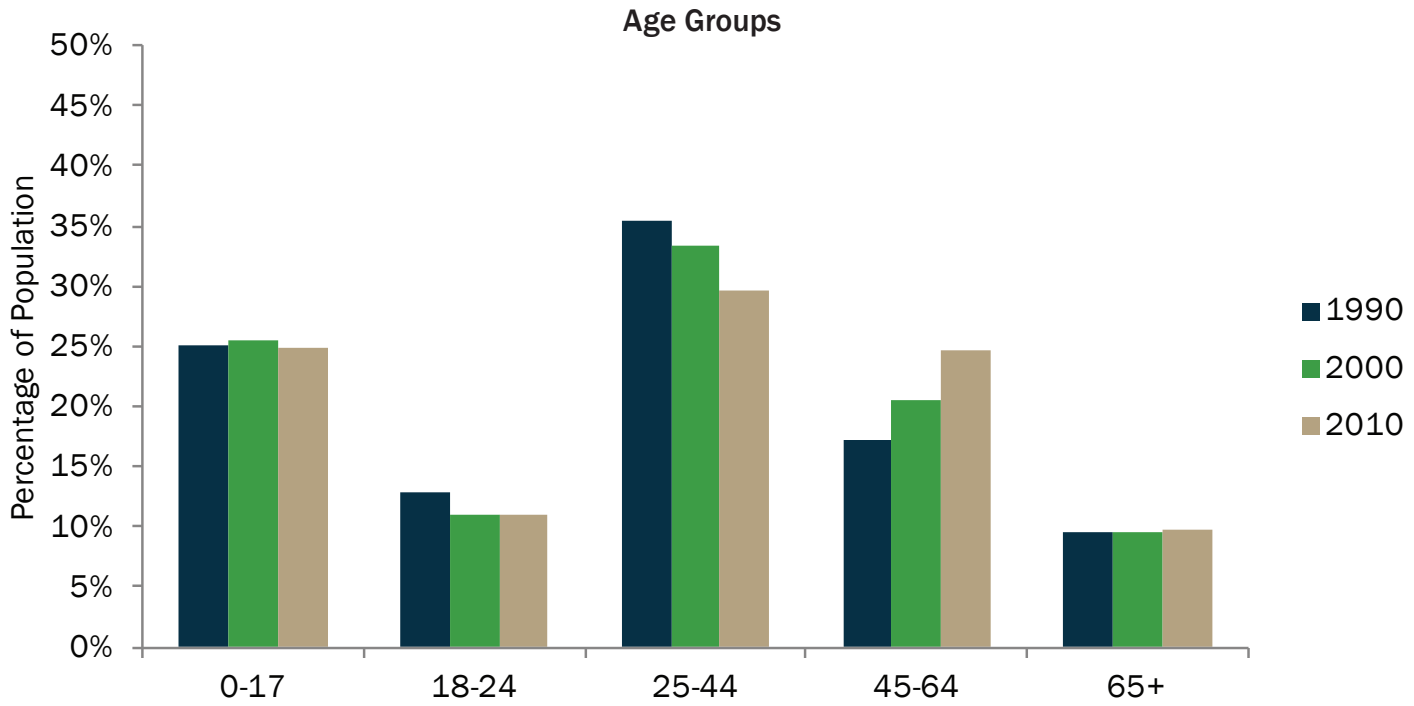


Figure 2.3 Age Groups in MPO Area, 1990, 2000 and 2010
Source: US Census Bureau, 1990, 2000, 2010

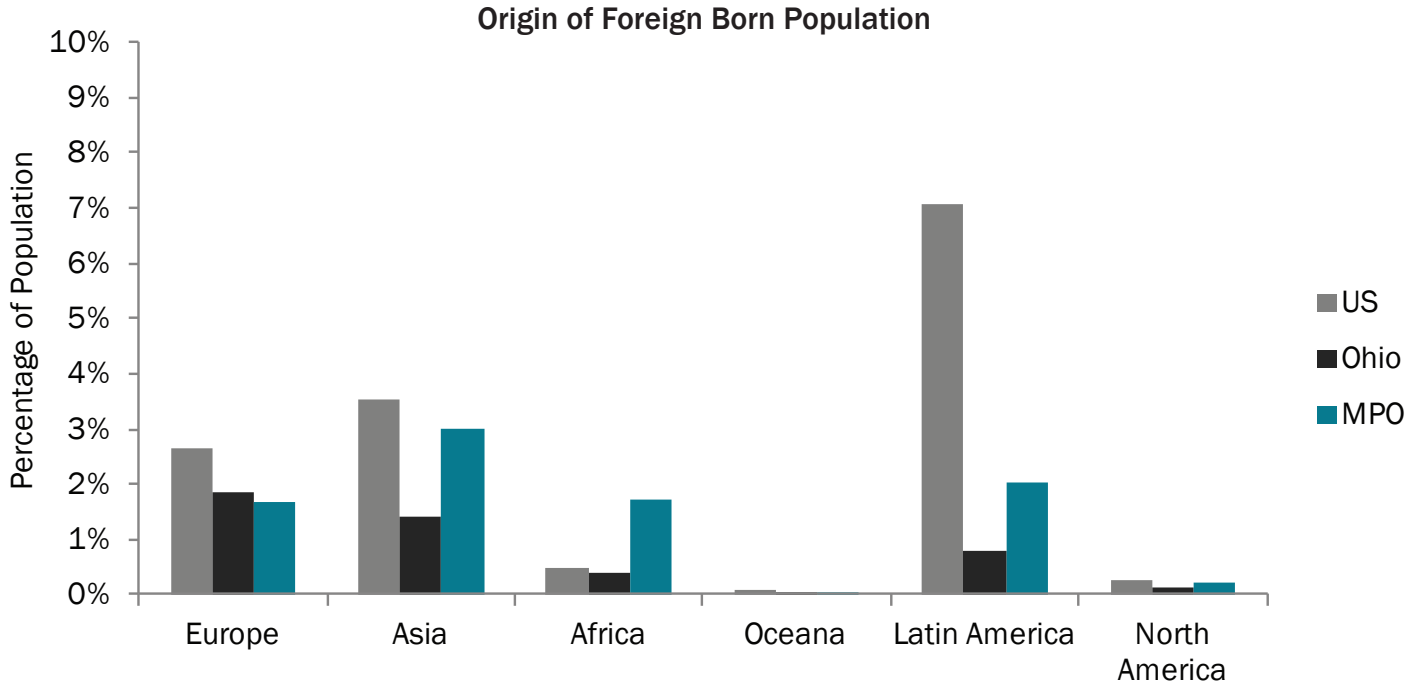


Figure 2.4 Origin of Foreign Born Population in US, Ohio and MPO Area
Source, US Census Bureau American Community Survey 2006-2010

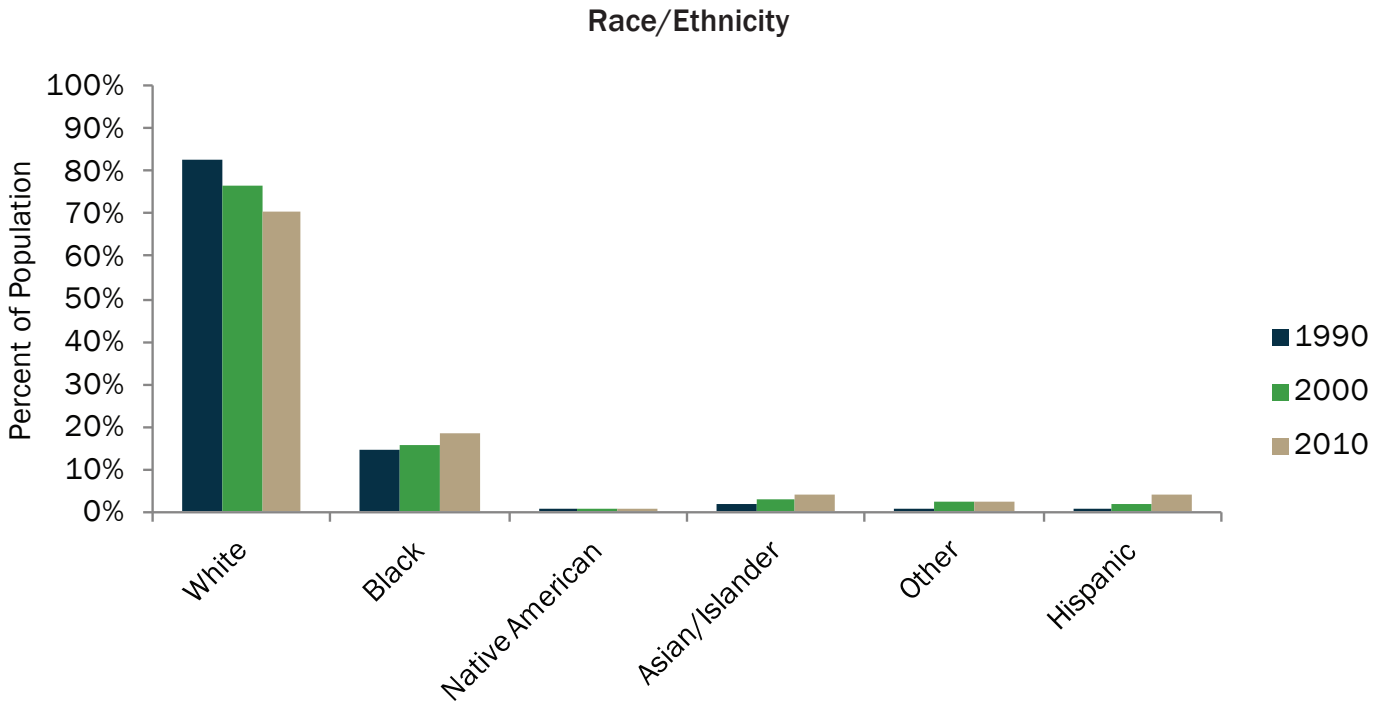


Figure 2.5 Race/Ethnicity in MPO Area, 1990, 2000 and 2010
Source: US Census, 1990, 2000, 2010

challenges in the future as the baby boomers leave the workforce and move into retirement. Between 2000 and 2010, the segment of the population over 65 grew by 19 percent, compared to a 12 percent increase in the number of children under 18. In the next decades, the swell of baby boomers now in their 50's and 60's (see Figure 2.3) will start moving out of the workforce. An increased demand for services may tax the social infrastructure, and increased competition throughout the nation for businesses and young people to fill the labor pool will increase.

One out of every five new people added to the region over the past decade came here from a different country.

The MPO planning area is gaining in diversity. More African Americans were added than any other group, followed by whites, then Hispanics and Asian populations. Figure 2.5 shows the increasing diversity. Approximately 110,000 people living in central Ohio are foreign born. They represent 10 percent of the total population. One out of every five new people added to the region over the past decade came here from a different country. Of these, slightly more than half speak English very well, and while they have a lower unemployment rate than the overall population, they also have a higher poverty rate. The growing community of African immigrants deserves a special note. The area has a significant population of people from east African countries such as Somalia and Ethiopia, as well as other sub-Saharan countries, such as Ghana. Figure 2.4 shows that individuals born in Africa make up a higher proportion of the MPO area population than in the state or nation.

Asian populations have settled in the north and northwest areas, and Latino populations have doubled in numbers all along the urban fringe. The African American population is now more widely distributed across the region than at the time of the 2000 Census, especially in the northeast and southwest areas with major inroads in Delaware County.

ECONOMICS

Living costs in central Ohio are attractive. However, the median income has been somewhat stagnant. The poverty rate has increased. The median household income hovers just over $50,000, slightly higher than the nation, and lower than the state average. At 18 percent, the poverty rate is higher than both the nation and the state. Median home values are near $150,000, compared to $185,000 nationally. Central Ohio has a higher homeownership rate than the nation, but also has a high vacancy rate due to foreclosures. The unemployment rate escalated during the economic crisis of the last decade, but never reached the dire status of other Ohio regions.

Central Ohio has a higher homeownership rate than the nation, but also has a high vacancy rate due to foreclosures.

The population is skilled and well educated. Over 90 percent have a high school diploma or higher, Columbus has more people with a Bachelor's degree or higher than any other major city in the Great Lakes mega-region. The area has numerous large universities and renowned medical research facilities. In central Ohio, higher education enrollment is over 100,000 people, who collectively attend 30 colleges and universities.

Higher education enrollment is over 100,000 people.

With nearly one-fourth of employment in education and health care, these sectors make up the greatest share of Columbus area employment. Retail (13 percent) and the professionals, scientific and management sector (11 percent) are the next highest sectors. As shown in Figure 2.6, all of these sectors have greater shares than the nation as a whole. Central Ohio has a higher than average share of employment in the finance and insurance industries. This employment sector represents 10 percent of the region's employment compared to seven percent exhibited in the nation. In addition, Columbus employs five percent of people in transportation and warehousing, which is less than Chicago, Toledo or Pittsburgh, but more than Cleveland or Cincinnati.

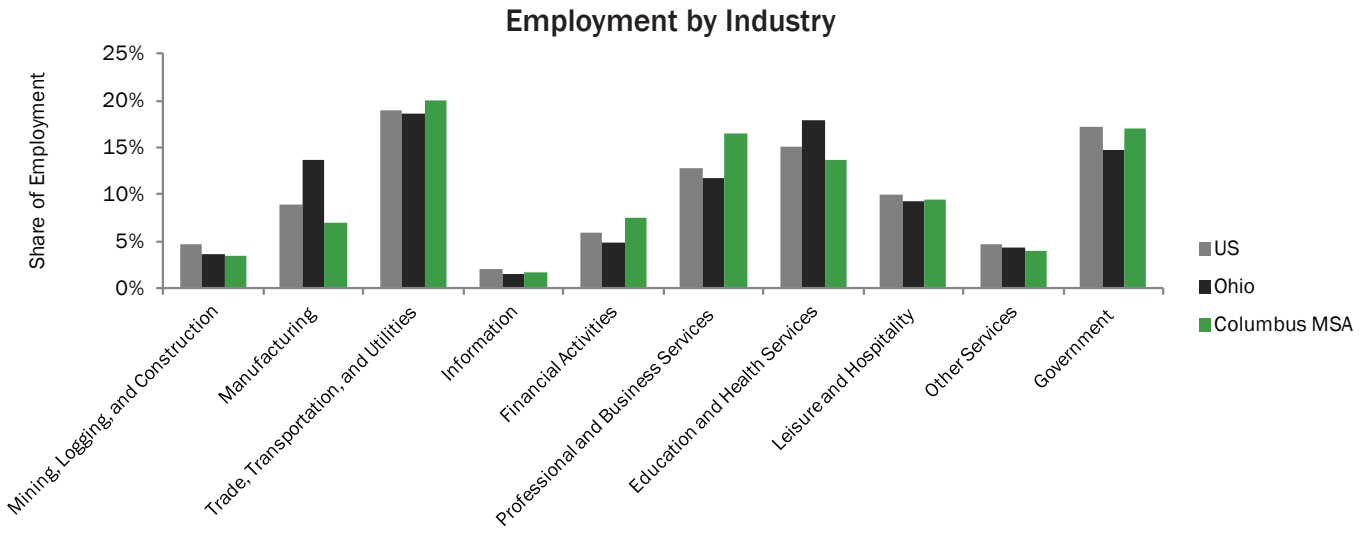


Figure 2.6 Employment by Industry in US, Ohio and Columbus Metropolitan Statistical Area (MSA)
Source: US Bureau of Labor Statistics

NATURAL LANDSCAPE

Waterways and fertile soil define the landscape of central Ohio. The area is relatively flat except where ripples from the Allegheny Mountains wrinkle the land in the southeast and easternmost edges of the region.

Of the 450 square miles currently in agricultural production, current long-range local land use plans identify over 270 square miles for some use other than agriculture.

Prime Farmland: The US Department of Agriculture rates most of the undisturbed soil in central Ohio as prime farmland. Agriculture currently represents approximately 39 percent of the land area in the planning area. In central Ohio, of the 450 square miles currently in agricultural production, current long-range local land use plans identify over 270 square miles for some use other than agriculture. However, there is a growing propensity to retain agricultural lands at both the state and local levels. Many communities are starting to include policies in their land use plans to encourage continuance of agricultural uses as it both adds to the economic bottom line, and reduces the costs of providing services to developments located at points distant from where the services originate.

Wetlands: Wetlands are located throughout the region because the water table is relatively high and the soils tend toward wet. Development pressure in this case comes from agriculture as much as urbanization, because much of the soil in the region is considered prime farmland when drained. Wetlands are important for species diversity and water quality. They function as filters, collectors of storm water, and purifiers of high-nutrient agricultural runoff. They are also habitats of many waterfowl. While wetlands are regulated, there is often a wide difference between the quality of a natural wetland pond and the abundance of species it supports and manmade wetlands formed through mitigation regulations.

Floodplains: Floodplains are generally adjacent to the rivers and streams. However, the deeper banks along streams in the northern parts of the area are generally narrow compared to the flat lowland topography downstream where the floodplains are broad. While discouraged, development in floodplains is possible. The watersheds and major streams generally lie in a north-south alignment. Efforts to preserve their banks as regional greenways are working to create a unique identity for central Ohio. There is also a growing understanding that healthy stream banks can serve the community as natural buffers for flood control, reduce costs associated with purifying water from storm water run-off, protect habitat corridors and provide aesthetic value. The waterways are also becoming corridors for recreation.

Bio-Diversity: Bio-diversity is the abundance and density of different species found in a given location. It is a measure of environmental health because various plants and animals are adapted to, and depend on each other for habitat, food sources and natural population control. The removal of one species, regardless of how insignificant they may seem, can cause a cascade effect through the ecosystem. The Big and Little Darby Creeks that divide Franklin and Madison Counties carry both state and national scenic river designations due to the extent of their bio-diversity. This watershed has over 80 types of fish, including populations of five endangered species, such as a federally listed fish called the Scioto Madtom. Plans are in place on a multi-jurisdictional level to protect the Darby watershed.

Historic Preservation: Central Ohio has a rich history of prehistoric and historic habitation. Before European settlement, the indigenous people also farmed and hunted on the fertile land. Evidence of their habitation is apparent in mound structures that sprinkle the landscape. Most noticeably, these structures remain

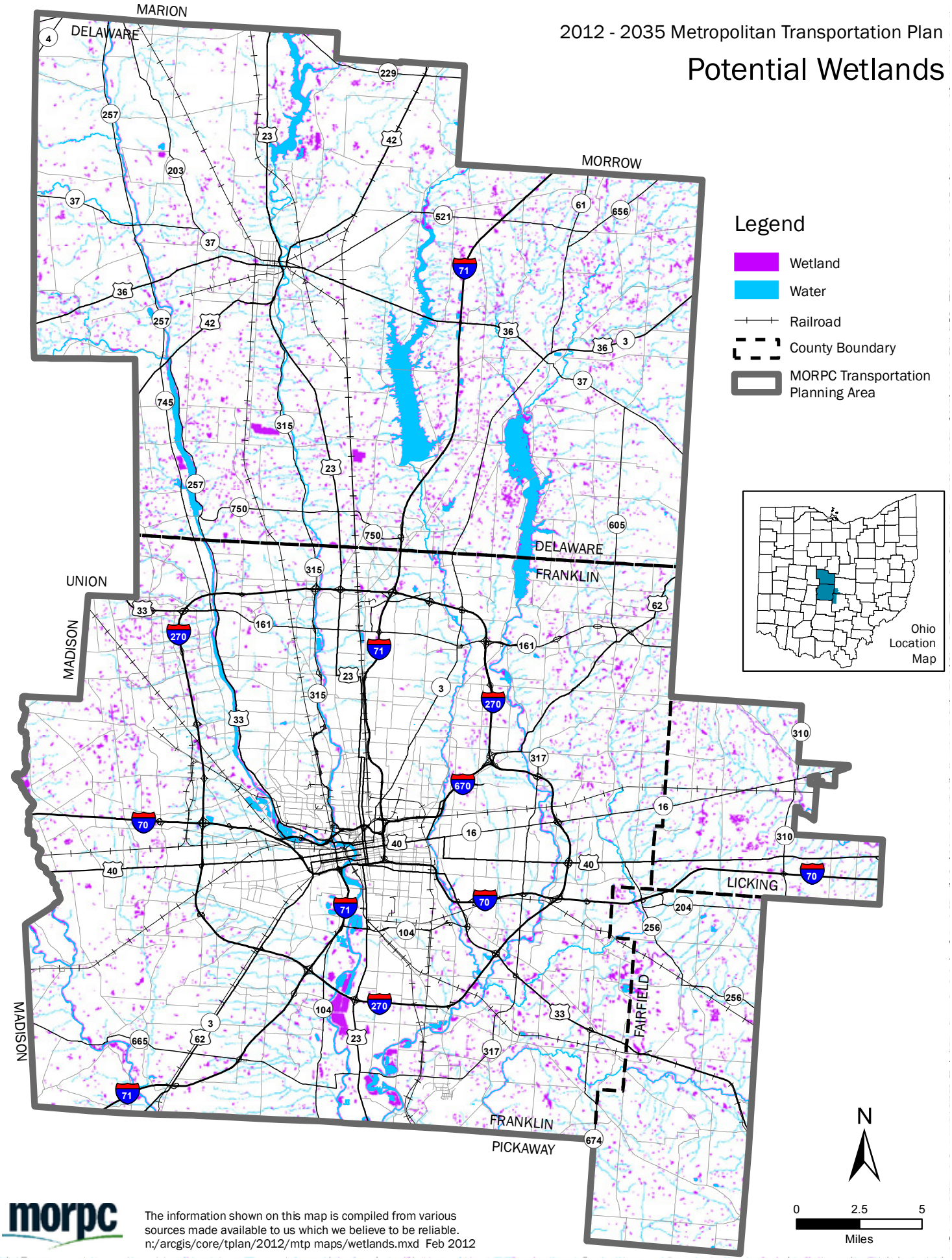


Figure 2.7 Map of Potential Wetlands

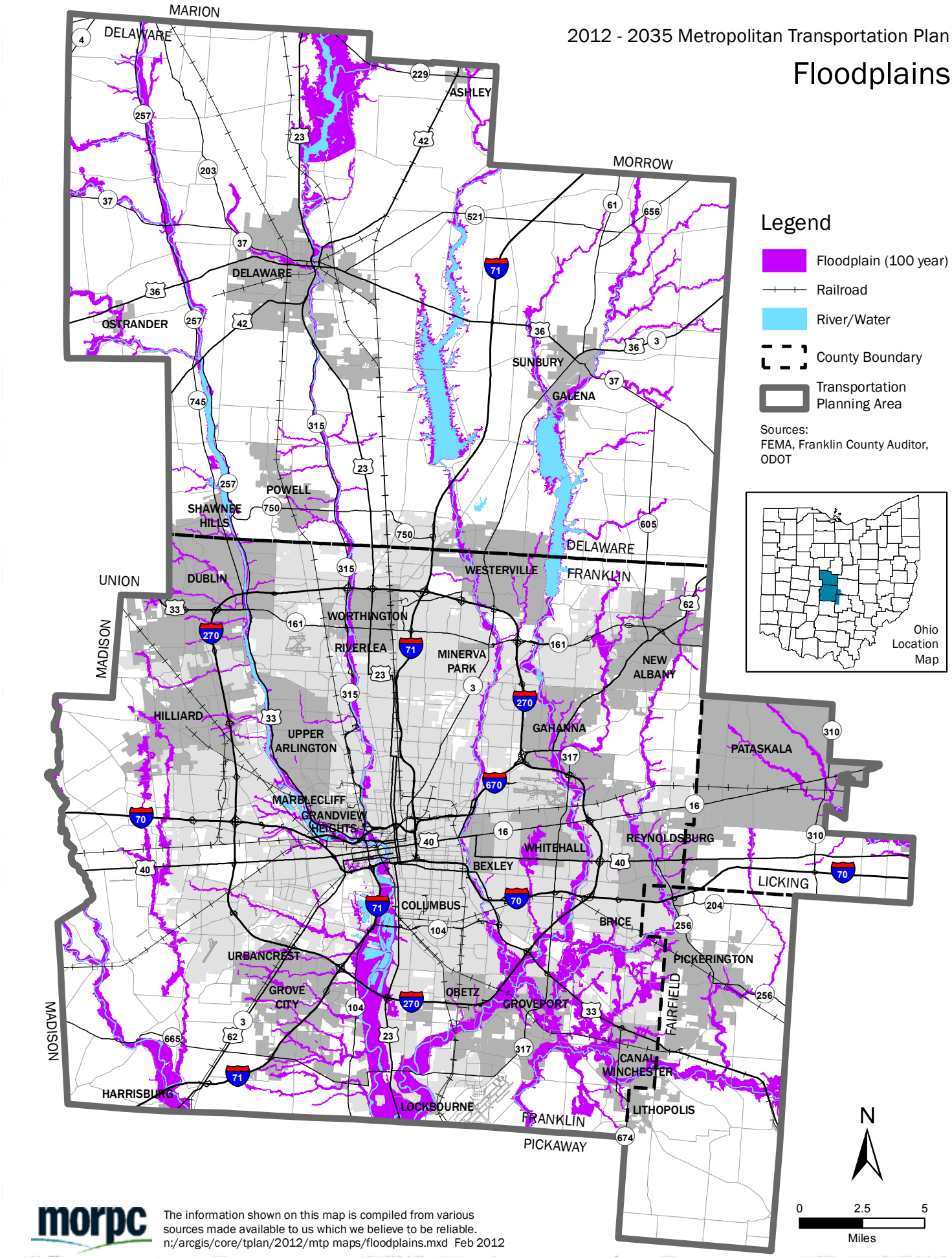


Figure 2.8 Map of Floodplains

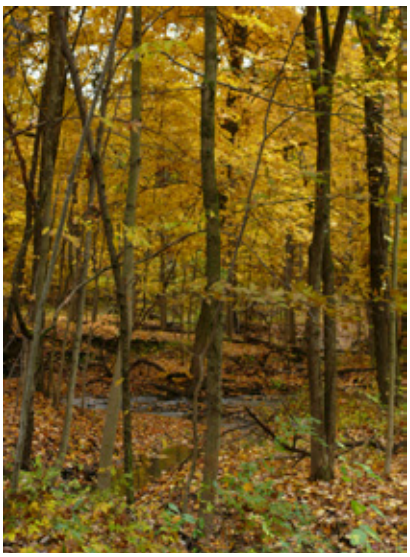
preserved along the waterways in Licking County, Delaware County and Pickaway County. In addition, there are many noteworthy historic sites from early colonial settlements. Many communities are approximately 200 years old. They have preserved their historic heritage by placing a number of sites on the National Historic Register.

Parklands and Green Spaces: Green spaces are considered open land, and, for the purposes of this plan, cemeteries and parks are included as green spaces. While any of these could be transformed from their present use, it happens infrequently. While not all of these uses are public domain, they do present a vista of open land, or green space for the residents of central Ohio. Institutional public spaces around government or university campuses are also green spaces. For example, the campuses at Ohio State in Columbus, Ohio Wesleyan in Delaware, Otterbein in Westerville, Capital in Bexley and Ohio Dominican in northeast Columbus all grace those communities with an open space asset that should not be overlooked. Similarly, the Ohio Capitol grounds are a treasured green space in downtown Columbus.

Public parks are lands set aside for active recreational uses, as well as to preserve areas of environmental significance. Most communities maintain their own municipal park systems and regulate parkland dedication through their individual development processes. The regional metropolitan park system and several state parks supplement community and neighborhood parklands. There is no comprehensive regional park plan, but rather a collection of parks under various jurisdictions including local, county and state parks.

The Franklin County Metropolitan Park System, colloquially known as the Metro Parks, includes 16 parks with 175 miles of trails. These regional parks accommodate recreational needs of the urbanized area population, and establish green areas for natural habitats. The Franklin County Metro Park System preserves approximately 17,000 acres. In addition, Preservation Parks District of Delaware County holds over 900 acres of preserved land. While much of their holdings serve conservation purposes, there are also trails and educational programs.

In a number of areas, the greenways that flank the banks of streams and rivers have been transferred to public holdings in concert with public water utilities. Dams on the Scioto River, Olentangy, Alum Creek and Walnut Creek have created reservoirs that are used as recreation areas and public water sources. The City of Columbus maintains parklands along Hoover Reservoir created from Walnut Creek in southeast Delaware County, the O'Shaughnessy Reservoir in southwest Delaware County, and Griggs Reservoir on the Scioto River in central Franklin County. In addition, park districts are actively working with public utility partners such as the City of Columbus and the Delco Water to maintain protected public areas around new planned upground water reservoirs. Collaborative planning between other entities, such as the Franklin County Metro Parks, the city of Delaware and Preservation Parks is an example of coordination of capital investment and maintenance between partners.



Highbanks Park is a part of the Metro Parks system.
Source: (cc) Marada

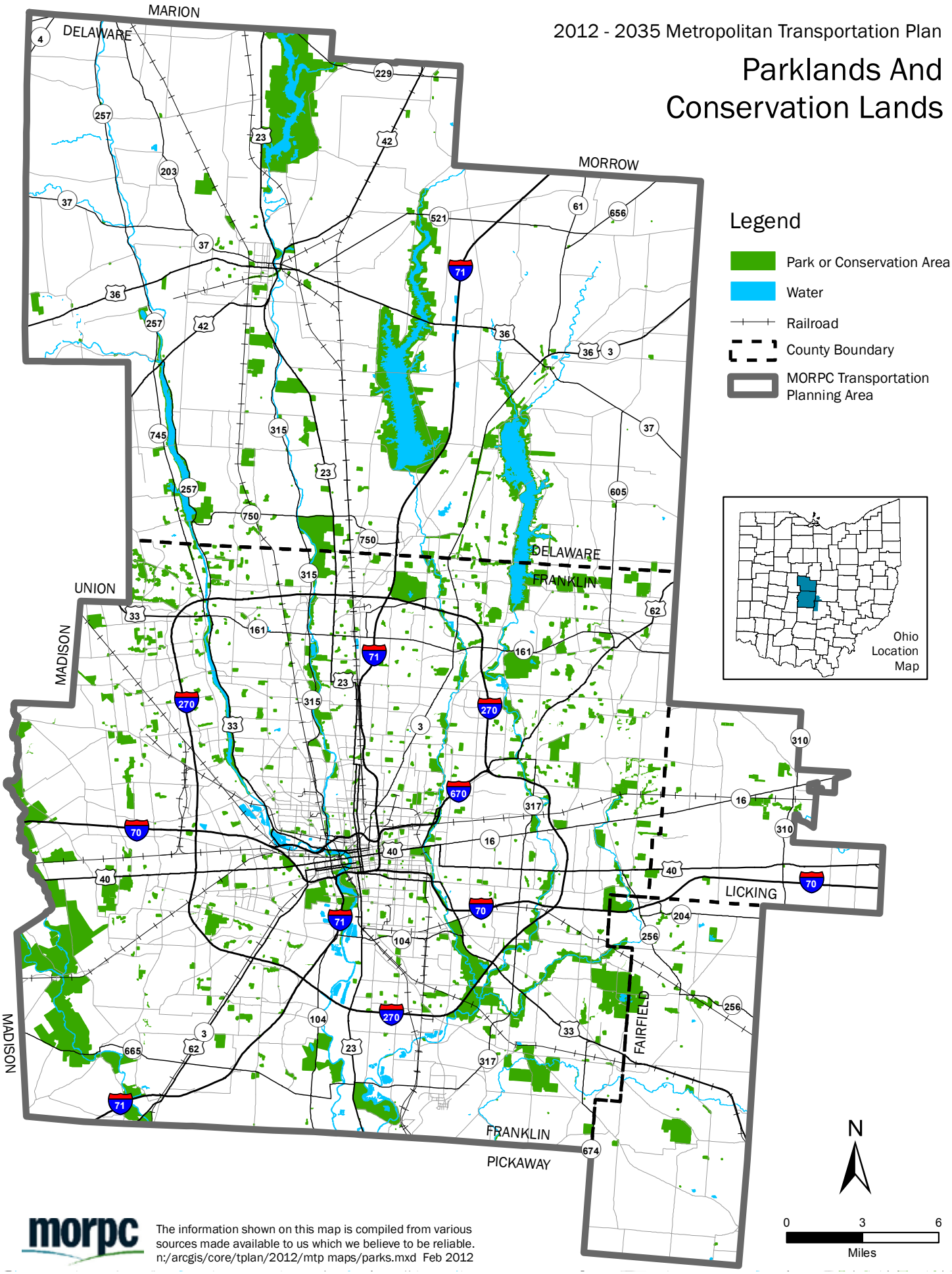


Figure 2.9 Map of Parklands and Conservation Lands

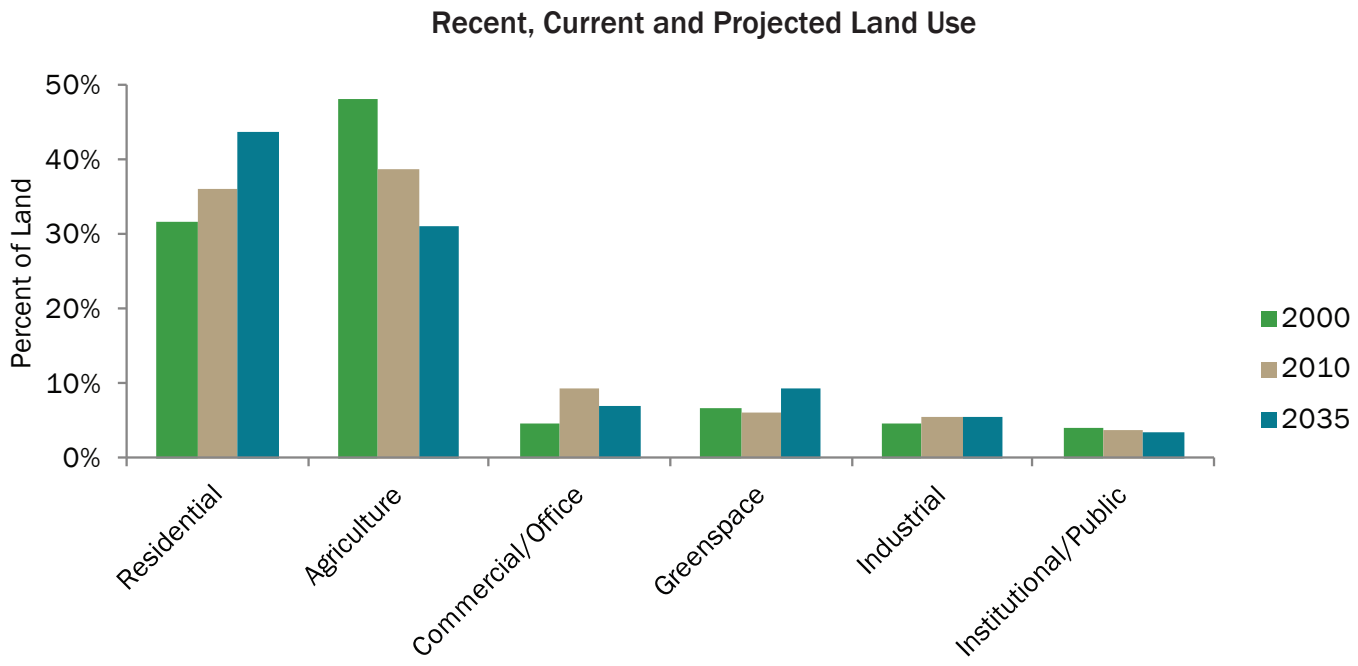


Figure 2.10 Recent, Current and Projected Land Use
Source: MORPC Land Use Model

BUILT LANDSCAPE

As shown in Figure 2.10, the MPO planning area is diverse. In 2010, slightly more land was used for agriculture than housing. Approximately 39 percent of the land was used for agriculture compared to 37 percent that was used for residential purposes. Approximately seven percent of the land was used for commercial purposes, six percent for industrial uses, three percent institutional uses such as universities, schools, churches or hospitals. The remaining eight percent of the land was open space as parks, golf courses or cemeteries.

2.3 Development Trends over the Last Ten Years: 2000-2010

Between 2000 and 2010, the region added approximately 190,700 people – 70,000 households and 8,600 jobs. With few exceptions, most of the growth occurred outside of Interstate 270, also known as the outerbelt.

Central Ohio saw explosive residential growth, especially during the first half of the decade. Over 90,000 residential building permits were issued between 2000 and 2010, with 70,000 of these being issued outside the outerbelt. The area inside the outerbelt added 7,400 people and lost 1,500 households. An anomaly was in the downtown, where 1,200 new units were added. However, the decade also saw an explosion of vacant housing. 20,000 more units were vacant by 2010 when compared with 2000. Home foreclosures, shown in Figure 2.11, contributed to this number.

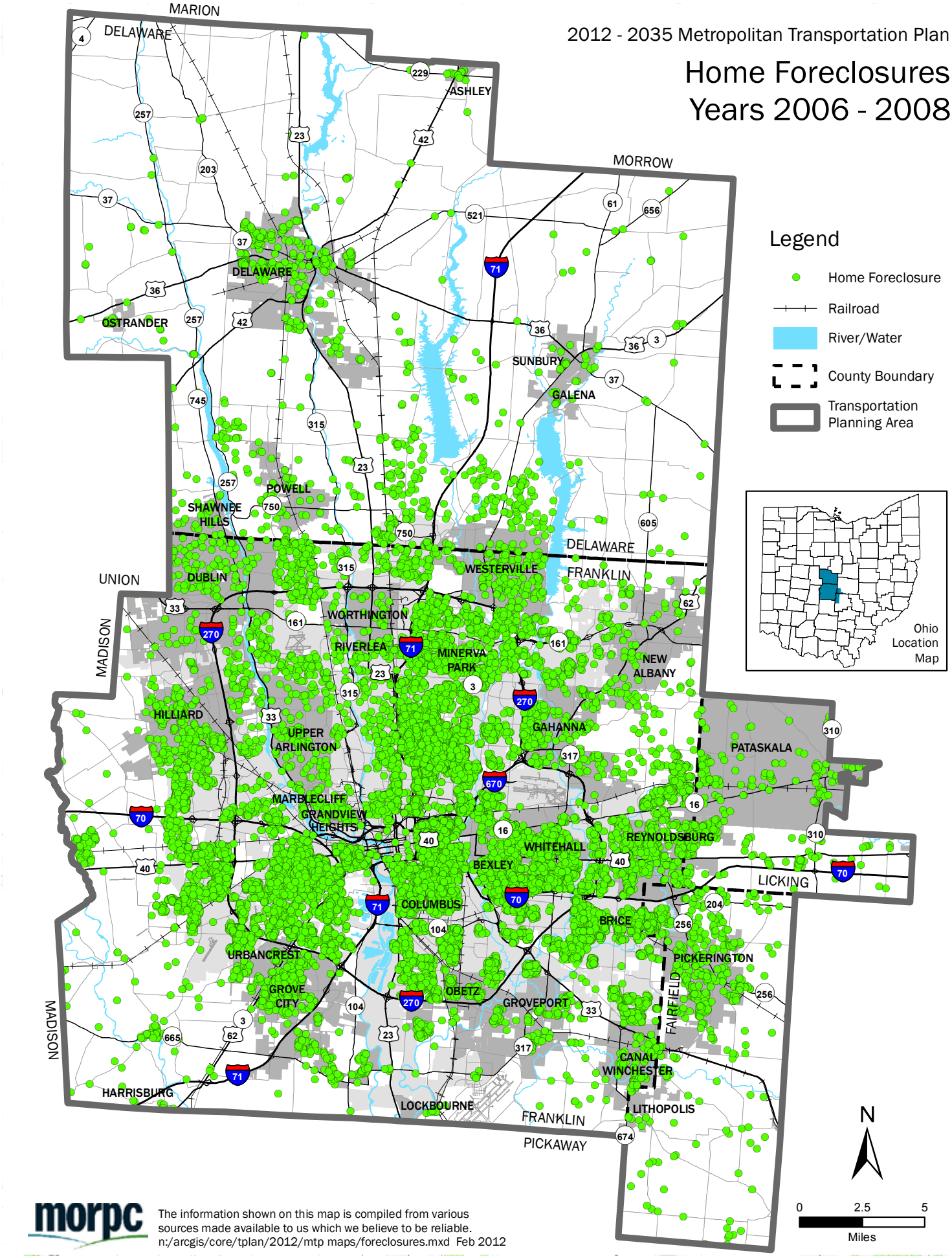


Figure 2.11 Map of Home Foreclosures, 2006-2008

During this time, approximately 100 square miles of agricultural fields were converted to some other use (see Figure 2.12). Residential was the predominant land consumer. The net residential density decreased from 2.3 to 2.2 units per acre as new housing flourished in the greenfields outside of the outerbelt. In 2000, approximately 57 percent of the households were located inside of the outerbelt. By 2010, this share had shrunk to 50 percent.

Like much of the country, the central Ohio area was hit hard by the economic crisis. Economic growth did not keep pace with residential growth. Strong employment components in the financial, insurance, education and health care sectors kept central Ohio from suffering the severity of economic recession that other parts of Ohio experienced. Nevertheless, since the mid-2000's, the region has been somewhat economically stagnant. The 10-year job growth rate was meager at less than 1.2 percent. Regionally, only the office and government sectors experienced net increases in jobs. The downturn in the economy hurt the service and industrial sectors hardest, with one out of every five retail jobs and one out of every four industrial jobs evaporating during the decade.

Closer analysis showed that while there was a slight net gain in jobs, the job growth was geographically disproportionate. In 2000, 68 percent of the area jobs were located inside the outerbelt. By 2010, the share was just 59 percent. The area inside the outerbelt lost 75,000 jobs, while the area outside added 65,000 jobs. Downtown suffered a 12 percent decline (10,950) in total jobs. Government jobs were the only sector in Downtown to net a positive gain.

2.4 Development Trends over the Next Twenty-Five Years: 2010-2035

Looking forward, the MPO area is projected to add an additional 460,000 people by 2035. This translates to approximately 176,000 households. To support this growth and regain lost ground to achieve a healthy five percent unemployment rate, the area will need to add 240,000 jobs.

The MPO area is projected to add an additional 460,000 people by 2035.

The population and employment forecasts are dependent upon regional control totals supplied by the Ohio Department of Development Office of Strategic Research (OSR). The projections must be realistic and account for reasonable growth to assure consistency with statewide growth. The OSR prepared population forecasts for all 88 counties in Ohio, and all Ohio MPOs use the OSR forecasts in guiding the development of their future scenarios to maintain statewide consistency of regional growth assumptions. The population projections provided by OSR help determine the expected employment based on labor force participation rates, unemployment rates and external regional commuter patterns.

Housing, population and employment forecasts are prepared at a detailed geographic level for use in the MORPC Travel Demand Model to estimate future deficiencies in the transportation system. The results from the MORPC Travel Demand Model serve as technical support to guide policy makers when determining future

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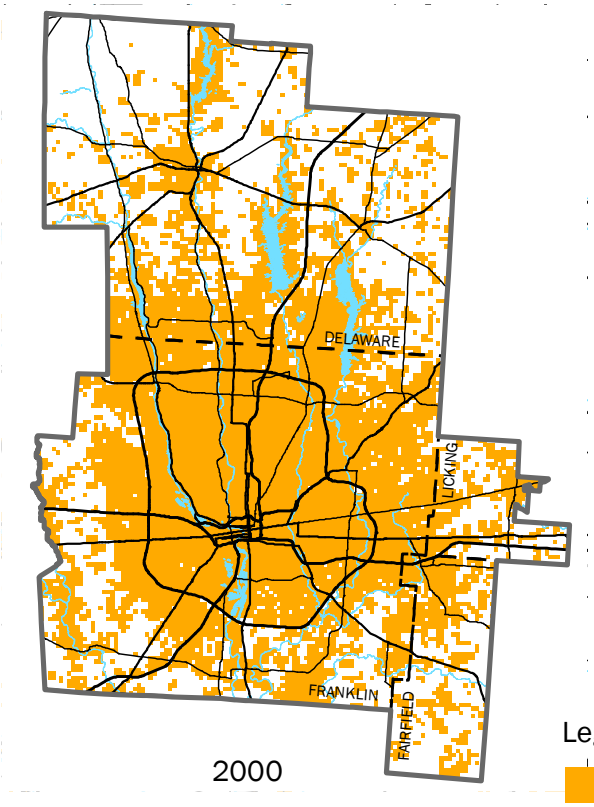

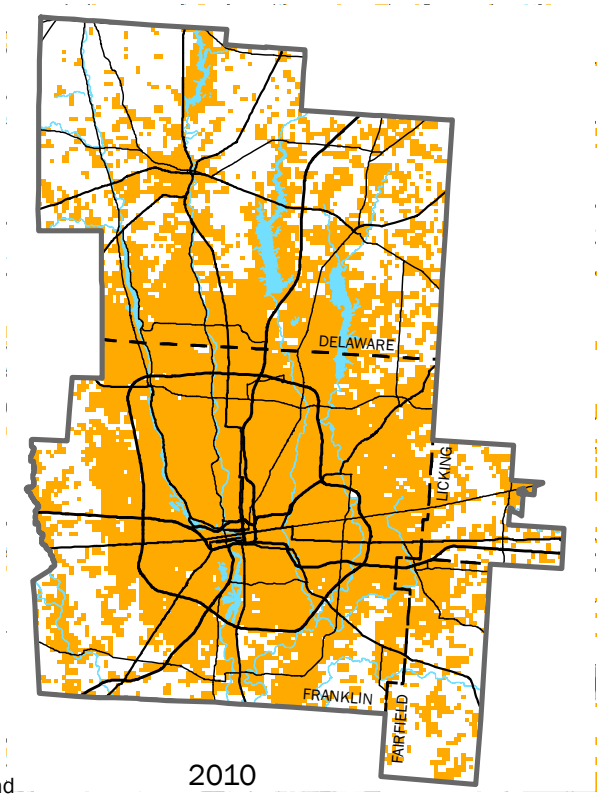

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Developed Land

Approximately 96 square miles of agricultural land are expected to be consumed over the next 25 years, compared to 99 square miles that were consumed during the last 10 years.

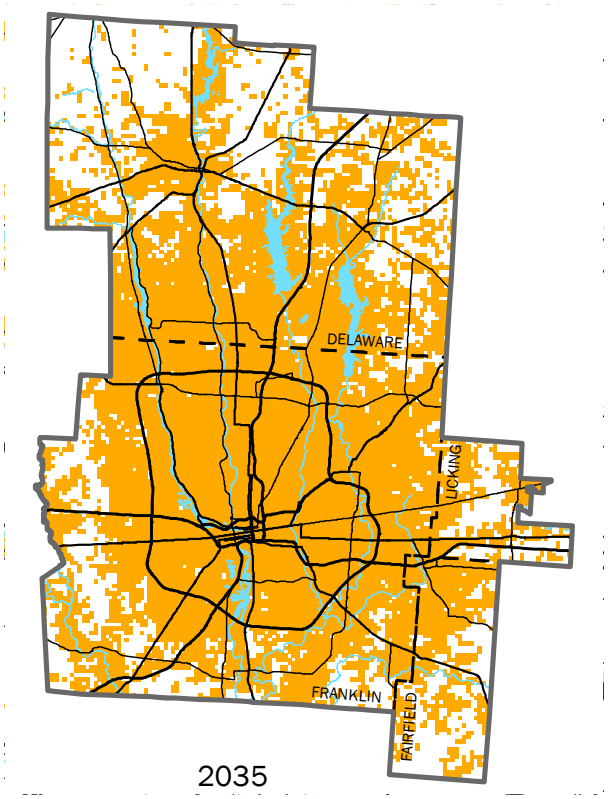

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Figure 2.12 Map of Converted Agriculture

transportation priorities for spending state and federal transportation funds. The future land use scenario is not intended as a regional land use plan. Rather, it is a composite of all local plans matched with a reasonable distribution of population and employment totals.

MORPC uses an allocation model based on 1/4 square mile gridded geography to distribute expected growth to subregional levels. The allocation method ranks the attractiveness of each grid based on environmental, historic, cultural and economic characteristics. The forecasts also take into account development trends, development policies and known details about specific plans. See Appendix A for more details.

DEVELOPMENT POLICIES AND PRINCIPLES

Central Ohio is a collection of communities each with its own land use planning authority. As mentioned, several communities have embraced policies to delay conversion of, if not outright preserve, agricultural lands to support the economic benefits of agricultural industries. Moreover, they have begun to introduce policies to tighten the reign on sprawling development that is challenging their budgeted ability to provide public services such as sanitary sewer, water, police, fire and well-maintained transportation facilities.

Reconnecting disjoined and economically challenged neighborhoods is also an ongoing theme. The reconstruction of the Interstate 70/71 innerbelt that rings the downtown began in 2011 and will continue for at least the next decade. Called "Columbus Crossroads," this project will result in the closure of some freeway ramps and modifications to surface streets and will have a long-term impact on Downtown. Part of the design calls for reinforced bridges to support "caps" that can bear buildings to reconnect Downtown, similar to the cap over Interstate 670 on High Street, completed in 2004. These caps are intended to reinvigorate neighborhoods such as the King-Lincoln District, which became isolated after the interstate was built 40 years ago. The recent construction of the Main Street and the Town Street bridges over the Scioto River are other examples of how infrastructure can create linkages between communities, as well as carry traffic.

The cap over Interstate 670 hosts a variety of restaurants and retail shops. Source: (cc) Peyton Chung

Recognizing that the demographics of the area are changing, communities are also beginning to look at ways to provide transportation infrastructure to support a broader set of travel options to accommodate an aging population. By including concepts of Complete Streets and planning for Lifelong Communities, as described elsewhere in this plan, communities are making use of public rights of way in the context of the development they abut to allow for all modes of travel. For example, the City of Columbus has established incentive programs to continue to spur growth in Downtown, and retrofitting many of the downtown streets to support two-way traffic rather than their current one-way function as a means to create a neighborhood ambience. The city of Dublin is using land development incentives and strategies to implement the *Bridge Street Corridor Plan*. This plan calls for increasing intensity and mixture of development along the city's main thoroughfare. It complements the development with sidewalks and bikeways to bring human-scaled elements to the broad auto-oriented roadway to support safe access to jobs, services and entertainment by a choice of modes.

The theme of sustainability, with energy and environmental stewardship, is also influencing the development climate. Mixed-use developments, reinvented main

streets, sidewalks and bikeways are being embraced as a way to attract residents and employers, and to enable a reduction in auto travel. Air quality, water quality, access to fresh food, and general public health are all directly related to the transportation system and land development patterns.

For example, some communities such as Westerville and Columbus have developed overlay zoning districts to encourage sustainable development. Other communities like New Albany, Worthington, Bexley and Gahanna are incorporating LEED (Leadership in Energy and Environmental Design) certification into their zoning codes and city buildings. Grandview Heights is redeveloping an abandoned warehouse site on the near northwest into the mixed use Grandview Yards development that will link the residential, retail, entertainment and office spaces of the site to major employer sites such as the OSU campus and Downtown.

The region is engaged in a series of development plans organized around watersheds rather than the traditional political boundaries. Five watershed plans are being undertaken using a state-formulated "balanced growth" process that will result in a unique plan for the communities within the watersheds. The process strives for a balance between the need for growth, conservation of individual community identity, and nature. Through Geographic Information System (GIS) analysis and public involvement, specific areas receive priority designation for conservation, development and agricultural land preservation. As of 2012, these plans are ongoing, although similar concepts and criteria used in the balanced growth plans were applied to the development of the future land use scenario used in the MTP.

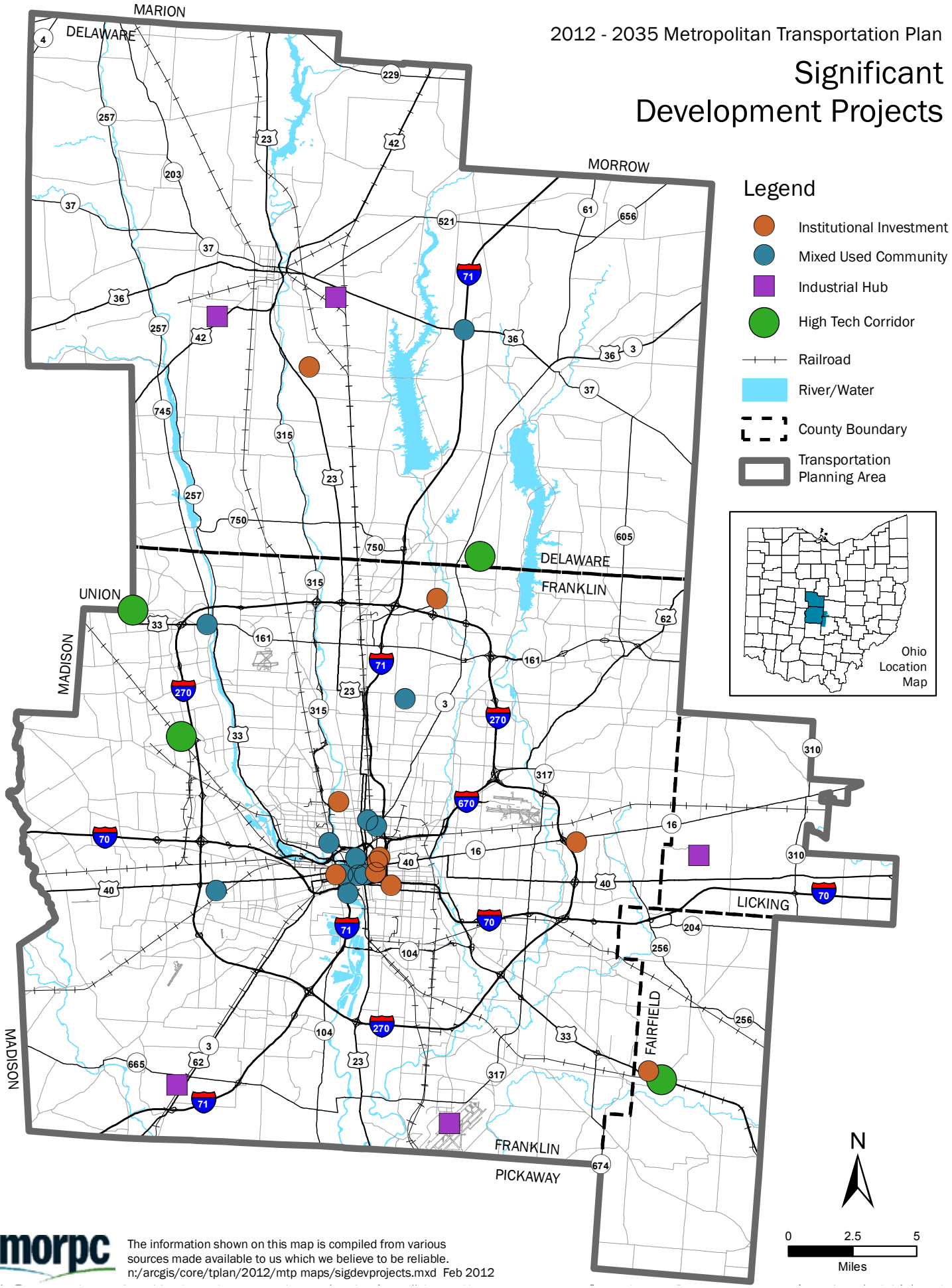
This concept of collaborative planning is becoming more common to weather the "new normal economy," characterized by reduced government revenue amid rising costs. Communities have begun exploring ways to share services. In central Ohio, this may take the form of shared information technology centers, joint-economic development districts and sharing costs associated with service departments. It may also involve more coordination on transportation projects that cross jurisdictional boundaries. This concept of shared services is also translating to joint planning. Cooperative planning efforts between Columbus, Dublin and Hilliard in northwest Franklin County; and between Canal Winchester, Fairfield County and Pickerington to the southeast; are preparing these areas for new job growth through infrastructure modifications and coordinated economic development strategies.

Maintaining reliable and safe thoroughfares for goods movement is crucial for the region to maintain its position as a national and international logistics hub.

Central Ohio is investing in its transportation infrastructure to support the economic vitality of the region. The logistics industry is a key economic sector that plays a pivotal role in national trade. Maintaining reliable and safe thoroughfares for goods movement is crucial for the region to maintain its position as a national and international logistics hub. While manufacturing currently represents less than eight percent of the central Ohio economy, the distribution system has a global reach and adds potential to create industrial clusters.

SIGNIFICANT PROJECTS

Central Ohio is an active planning region. Significant projects are occurring and plans are being developed to address economic challenges. Figure 2.13 shows the location of these projects.



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The information shown on this map is compiled from various sources made available to us which we believe to be reliable.
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Figure 2.13 Map of Significant Development Projects

Medical campuses throughout the region are expanding. The Ohio State University medical campus is being expanded to accommodate up to 20,000 new jobs. On the near west side, the City of Columbus is investing in the Franklinton area around Mt. Carmel Hospital. On the near southeast side of downtown, the expansion of Nationwide Children's Hospital included infrastructure improvements to galvanize investment in the surrounding neighborhoods. The area around St. Anne's Hospital in Westerville is being prepared for development, and Delaware has laid down new roadways in preparation for building a new hospital. Another hospital is scheduled near Canal Winchester.

Universities are also exploring changes to their campuses. Columbus State Community College, the Columbus College of Art and Design and Franklin University are all expanding their downtown campuses to accommodate increased enrollment and student housing needs. Along with The Ohio State University, many universities are developing branch locations to provide easy access for nontraditional students in the suburbs.

Demand for new office space has been limited by high vacancy rates for the past several years. However, the capacity is slowly being consumed and several sites are zoned and ready. In the northeast, the city of New Albany continues to attract new development, as does the city of Westerville. Dublin is pursuing a high-tech corridor along the US Route 33 corridor that leads to Marysville. The city of Hilliard continues to promote land along the west outerbelt. In the southeast, Canal Winchester and Violet Township have established a development site at the Hill/Diley interchange along US Route 33. Deeper in the urban core, Columbus is continuing the development of the demolished Northland Mall site along Morse Road.

Entertainment, residential and shopping opportunities are slowly reigniting. In Downtown Columbus, the Columbus City Center, a 1.5 million square foot shopping center that closed after less than 20 years of operation was replaced with a new city park, the Columbus Commons. Long-term plans for the site may see the creation of a mixed office-retail development that will keep open space in mind. Also downtown is the Scioto Mile, a riverside promenade that connects the Arena District at the north end of the city to the Scioto Audubon Metro Park on the Whittier Peninsula. The Arena District is a recently developed mixed use, pedestrian-friendly area that includes offices, housing and entertainment options in the form of restaurants, and concert and sports venues.

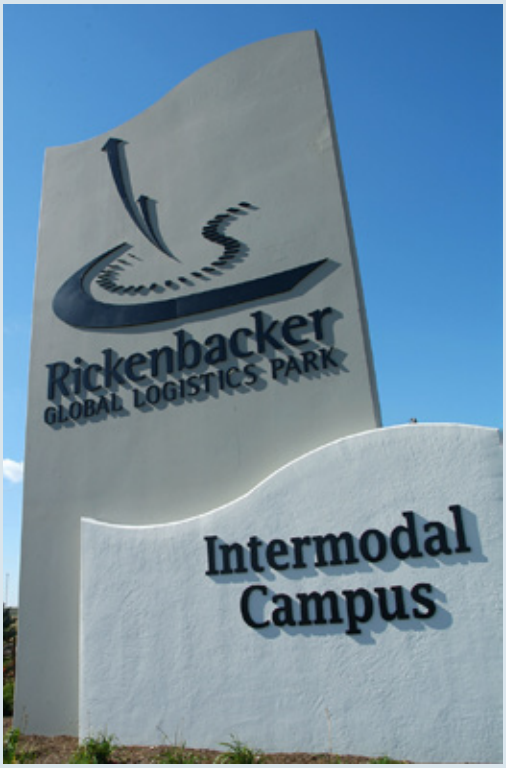
Many communities are reinvesting in and around their downtowns. As previously mentioned, the city of Dublin is planning a mixed use community along the Bridge Street corridor. The City of Columbus is dedicating significant resources to re-energizing housing and economic vitality of neighborhoods near Downtown such as Weinland Park and Franklinton. The market remains strong for converting and reusing commercial buildings and warehouses into new housing inside the innerbelt.

A new casino is scheduled to open at the end of 2012 on the west side of Columbus. It is expected to generate 2,000 jobs, and revitalize the surrounding area with restaurants, hotels, and other amenities. To lesser scales, many of the shopping centers in the region are receiving facelifts and being reorganized to offer open air shopping experiences. One example is Kingsdale, a community scale shopping center that served the central northwest neighborhoods, is being rebuilt in an open air concept and is slated to include housing for a mature clientele.

A series of brownfield infill mixed use developments are in various stages of planning. The Grandview Yards, mentioned previously, is under construction. Redevelopment of the Jeffrey Mining site in the near north, along with the Timken Site and the Columbus Coated Fabrics site, all in the near northeast, are waiting for a more lucrative market, but assumed to be completed by 2035.

The Rickenbacker Global Logistics Park, situated in south central Franklin County is one of the primary distribution hubs in the nation. This enormous development has the capacity to house up to 40 million square feet of warehousing space. Equipped with hundreds of acres of developable land, the area also hosts an international airport and a new intermodal yard for transferring goods. It lies along the Heartland Corridor rail system that will provide connectivity between the heartlands of North America and Asia by route of the expanded Panama Canal and east coast ports. In addition, warehousing hubs are emerging in central Delaware County, western Licking County, and in southwest Franklin County near Grove City where an interchange at Interstate 71 and State Route 665 is being expanded.

US Route 36/State Route 37 and Interstate 71 interchange is situated in the middle of Delaware County. The nearest interchanges, both to the north and south, are ten miles away. A large mixed use development on the northeast quadrant was approved several years ago, although the market has delayed much of its progress. Additional development interests have been under discussion on other quadrants. Recently, reconstruction of the interchange, along with development for the other quadrants, has been the topic of extensive public-private discussions.



Rickenbacker Global Logistics Park is one of the primary distribution hubs in the nation.
Source: Rickenbacker International Airport

2035 LAND USE SCENARIO

The future scenario is an adaptation of local land use plans. Each community's plans were translated into a common land use classification scheme that included varying densities of residential uses, types of industrial uses, and scales of commercial uses. Each land use type was assigned a maximum capacity of population, households and jobs. A set of criteria were developed to measure the attractiveness of grids for residential and non-residential uses. The criteria were intersected with the grid geography using GIS software. The allocation model was then used to distribute new population, housing units and employment into the grids. Existing population, households and jobs were held constant. Only the increased population, households and jobs were allocated. For more details on the process, see Appendix A.

Generally, those areas near existing developed areas, served with public infrastructure and not in environmentally sensitive areas, were considered attractive for future growth. The future population and employment of the communities in the study area were evaluated by assigning the grids to approximate community boundaries. The results were shared with local communities for comment.

As a result of the method described above, the future scenario includes repopulating areas inside the outerbelt with both jobs and people. Approximately 24 percent (46,200) of the new households and 44 percent (180,000) of the new jobs were allocated into the area inside I-270. Consequently, the number of households and jobs expected to be inside the I-270 outerbelt in 2035 will exceed what was there in 2000 by 40,000 each.

Many of the people who moved to the outer suburbs in the past ten years will have reached senior status by 2035.

Absorbing the new population will also require expansion into greenfields. Approximately 96 square miles of agricultural land are expected to be consumed over the next 25 years, compared to 99 square miles that were consumed during the last ten years. The net residential density increases slightly from 2.2 to 2.3 units per acre, putting it back to where it was in 2000. In addition, 135,250 new jobs are forecast for the area outside of the outerbelt. Some of these are needed to serve the population that is already there. One of the key development trends is the need to provide access to services for an aging population. Many of the people who moved to the outer suburbs in the past 10 years will have reached senior status by 2035. The market for retail services and personal services will result in more jobs being created in the suburban ring.

Figures 2.14 and 2.15 show the forecast change in population and jobs across the MPO area. Table 2.1 on the following pages then shows the forecasted changes at the community level. Figure 2.16 shows the forecast areas that correspond with the table.

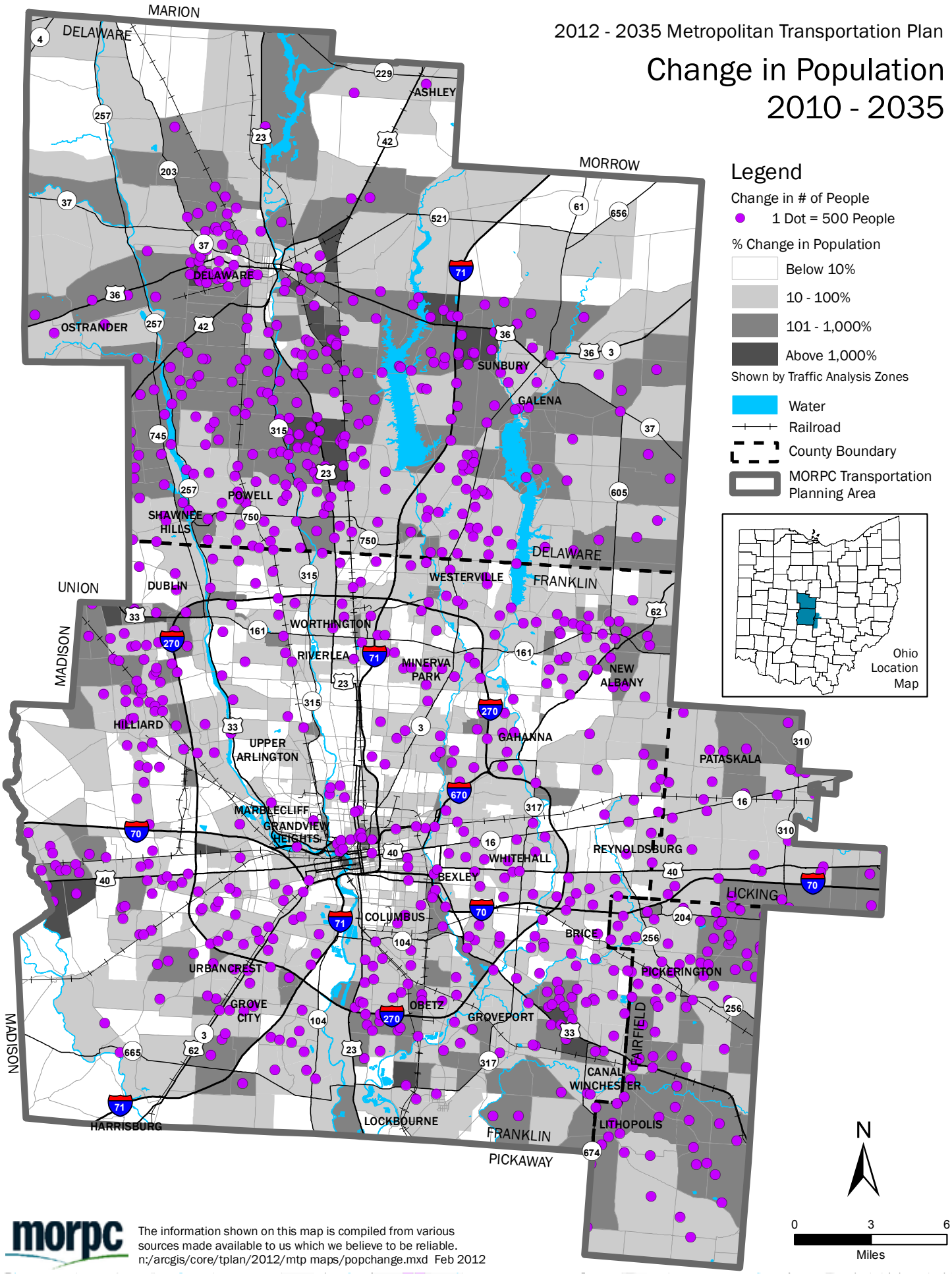


Figure 2.14 Map of Change in Population 2010-2035

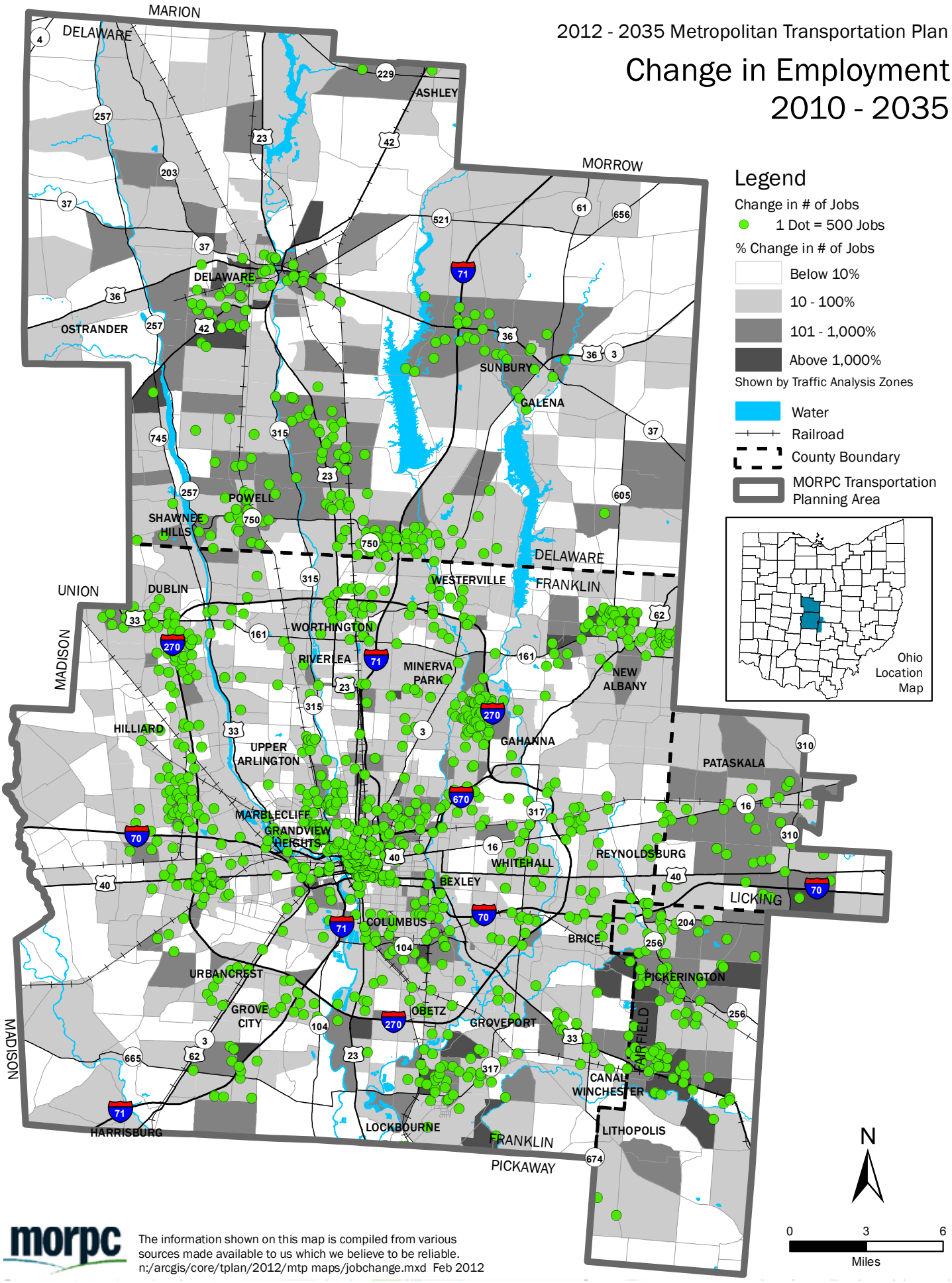


Figure 2.15 Map of Change in Employment 2010-2035

2010 Base Year and 2035 Projections by Community

	Place Name	Population 2000	Population 2010	Population 2035	Households 2000	Households 2010	Households 2035	Jobs 2000	Jobs 2010	Jobs 2035
Cities (page 1 of 2)	Bexley	12,881	13,063	13,933	4,981	4,721	5,137	3,506	3,412	4,045
	Canal Winchester	4,945	7,244	10,922	1,881	2,700	4,141	2,852	4,848	8,803
	Columbus	722,897	767,094	890,916	311,572	323,482	379,120	482,884	451,705	585,322
	Columbus - Clintonville	22,690	27,835	29,078	11,237	13,955	14,802	8,125	6,684	7,697
	Columbus - Downtown	2,310	5,563	10,249	1,690	3,942	6,165	99,232	82,894	108,208
	Columbus - Eastland/Brice	59,304	46,771	54,918	26,128	19,034	21,980	18,257	14,552	19,518
	Columbus - Eastmoor/Walnut Ridge	46,127	43,714	49,731	20,637	19,385	22,250	6,125	6,544	7,990
	Columbus - Far East	21,381	24,421	27,681	9,637	10,876	12,461	15,115	10,236	13,967
	Columbus - Far North	21,438	27,464	32,728	9,315	11,857	14,044	25,437	37,536	45,944
	Columbus - Far Northwest	29,682	32,282	35,478	11,771	13,102	14,558	7,491	8,804	10,045
	Columbus - Far South	23,488	24,625	32,946	8,954	9,528	12,982	8,504	9,280	13,879
	Columbus - Far West	24,982	25,634	28,004	10,039	9,701	10,811	12,522	14,487	21,254
	Columbus - Franklinton	10,672	9,837	12,163	3,993	3,453	4,672	20,437	9,742	14,278
	Columbus - Greenlawn/Frank Road	10,256	11,954	14,516	3,896	3,945	4,992	2,720	2,222	2,698
	Columbus - Hayden Run	11,577	11,452	16,731	4,865	5,661	8,046	4,405	7,638	9,372
	Columbus - Hilltop	52,906	58,353	66,399	21,030	21,778	25,340	16,326	17,667	20,731
	Columbus - Near East	17,365	17,996	21,452	7,503	8,086	9,743	6,689	7,282	11,012
	Columbus - Near North/University	24,555	53,462	55,677	12,167	19,792	20,902	39,080	38,753	45,062
	Columbus - Near South	38,751	38,621	43,706	16,391	16,580	18,972	31,115	24,801	32,223
	Columbus - North Linden	45,670	42,517	46,846	18,603	17,398	19,133	10,179	7,178	8,648
	Columbus - Northeast	18,689	17,893	22,580	7,236	7,231	9,296	32,110	41,752	59,686
	Columbus - Northland	68,532	68,592	77,235	30,323	28,759	32,721	34,167	22,391	26,700
	Columbus - Northwest	31,707	33,731	36,560	15,708	16,128	17,699	14,790	13,871	16,091
	Columbus - Rickenbacker	8,457	2,652	5,596	2,646	842	2,043	1,348	3,414	6,116
	Columbus - Rocky Fork-Blacklick	24,739	28,814	37,650	10,753	13,476	17,620	5,411	7,460	10,175
	Columbus - South Linden	21,021	22,560	24,762	7,962	8,700	9,722	10,534	7,928	13,570
	Columbus - Southeast	10,844	14,976	21,753	4,371	5,888	8,869	99	656	1,844
	Columbus - West Olentangy	17,253	20,715	22,388	9,691	11,762	12,738	30,815	31,163	38,322
	Columbus - West Scioto	18,120	15,728	17,602	8,824	7,388	8,204	12,069	9,598	11,419
	Columbus - Westland	40,381	38,932	46,487	16,202	15,235	18,355	9,782	7,172	8,873
	Delaware	24,817	34,282	60,181	10,098	13,068	21,994	13,040	15,205	23,976
	Dublin	33,036	42,231	56,578	11,891	15,294	21,674	38,045	42,767	54,451
	Gahanna	32,300	32,460	37,119	11,908	12,790	14,833	12,486	14,302	16,760
	Grandview Heights	7,276	7,370	7,085	3,267	3,489	3,390	5,354	3,497	5,036

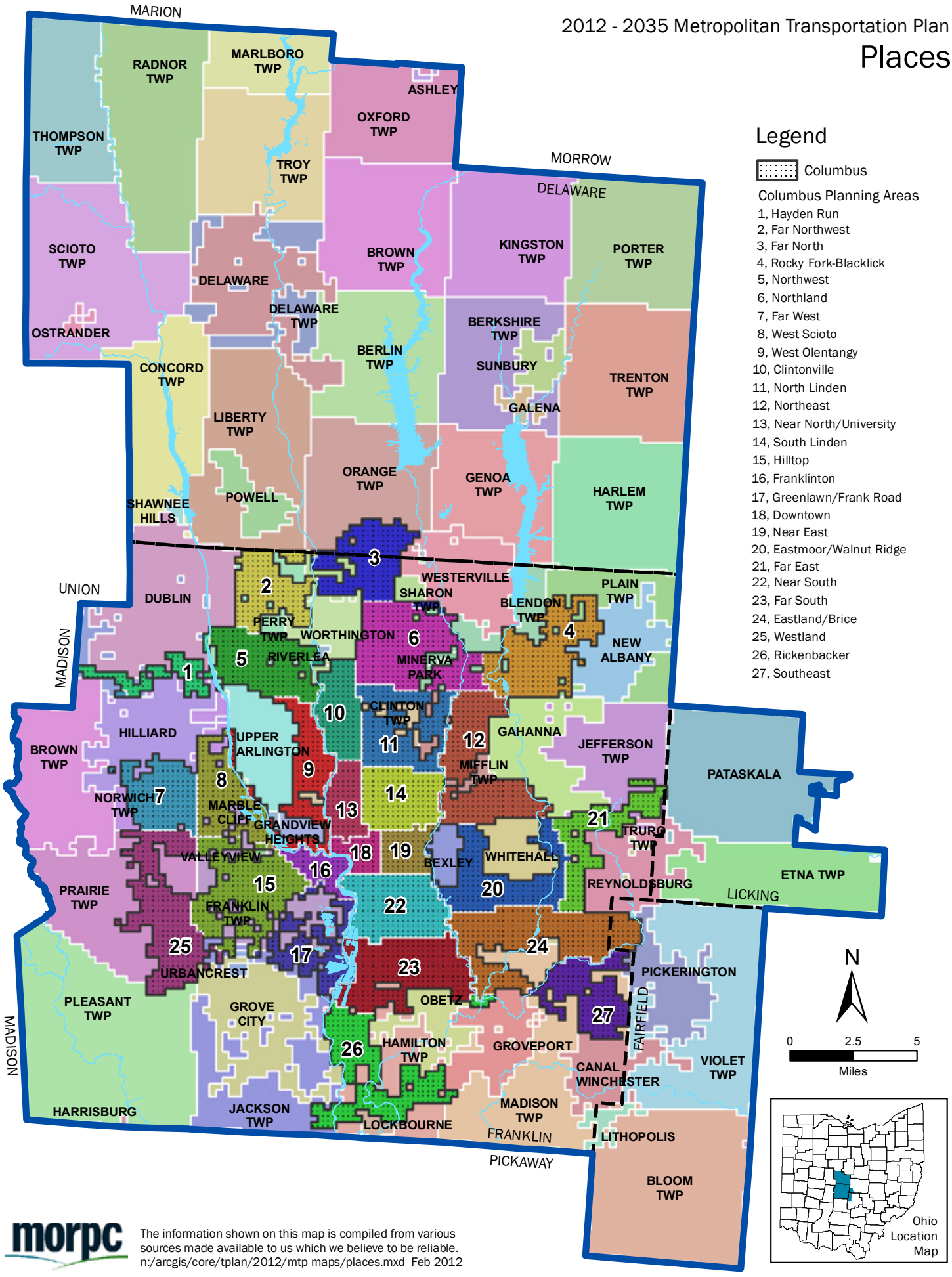
2010 Base Year and 2035 Projections by Community

	Place Name	Population 2000	Population 2010	Population 2035	Households 2000	Households 2010	Households 2035	Jobs 2000	Jobs 2010	Jobs 2035
Cities (page 2 of 2)	Grove City	29,761	35,082	44,970	11,361	13,788	18,001	14,617	19,211	24,445
	Groveport	5,447	5,700	7,766	2,161	2,243	3,117	5,067	9,344	13,423
	Hilliard	26,253	27,964	37,874	9,264	10,131	14,372	12,375	17,273	20,415
	New Albany	6,243	8,443	16,722	2,163	2,686	5,913	2,816	8,901	18,413
	Pataskala	9,280	15,046	22,921	3,527	5,620	8,069	3,579	3,803	7,060
	Pickerington	10,567	18,207	27,617	3,611	6,252	8,511	4,998	5,891	11,124
	Powell	6,587	11,113	15,934	2,100	3,654	5,237	1,502	1,600	3,947
	Reynoldsburg	31,494	35,303	39,142	12,862	14,283	15,735	8,990	13,830	17,364
	Upper Arlington	33,942	33,192	35,993	14,042	13,470	14,835	9,575	8,784	10,177
	Westerville	31,744	35,303	44,138	11,893	13,567	17,115	27,446	29,201	34,807
	Whitehall	19,740	19,245	22,835	8,645	7,976	9,493	12,451	16,707	19,275
	Worthington	14,233	13,631	15,684	5,966	5,769	6,721	18,224	15,407	18,894
Villages (page 1 of 1)	Ashley	581	651	943	220	244	336	168	115	143
	Galena	443	634	1,022	159	207	347	261	66	333
	Harrisburg	328	262	295	121	108	125	231	11	11
	Lithopolis	559	838	3,146	221	338	1,084	227	346	455
	Lockbourne	179	155	157	64	63	63	2	4	127
	Marble Cliff	589	592	677	317	324	380	923	664	736
	Minerva Park	1,127	1,030	1,281	518	438	556	430	193	253
	Obetz	5,014	4,891	10,767	1,924	1,827	4,086	4,565	4,878	7,925
	Ostrander	44	553	1,085	17	193	352	62	135	135
	Riverlea	540	562	584	244	232	245	9	11	32
	Shawnee Hills	806	766	1,902	297	289	684	78	268	370
	Sunbury	3,340	4,165	7,148	1,240	1,589	2,574	1,665	2,295	3,854
	Urbancrest	888	894	1,636	327	338	661	211	133	499
	Valleyview	439	439	447	202	178	184	46	54	68
Townships (page 1 of 2)	Berkshire (Delaware County)	2,051	2,635	15,924	744	950	5,852	891	897	4,970
	Berlin (Delaware County)	4,213	6,518	15,991	1,457	2,087	5,386	364	608	1,632
	Brown (Delaware County)	1,472	1,631	3,801	512	621	1,495	201	203	272
	Concord (Delaware County)	5,792	9,237	24,441	2,051	3,180	8,599	837	1,122	1,967
	Delaware (Delaware County)	2,027	2,425	8,089	880	975	3,300	828	351	1,553
	Genoa (Delaware County)	14,645	23,310	37,694	4,971	7,815	12,334	1,546	2,239	3,574
	Harlem (Delaware County)	3,768	3,935	7,615	1,350	1,492	2,767	322	374	546
	Kingston (Delaware County)	1,915	2,166	2,443	664	794	873	109	133	106

2010 Base Year and 2035 Projections by Community

	Place Name	Population 2000	Population 2010	Population 2035	Households 2000	Households 2010	Households 2035	Jobs 2000	Jobs 2010	Jobs 2035
Townships (page 2 of 2)	Liberty (Delaware County)	9,526	15,238	41,092	3,538	5,430	14,309	3,082	5,036	10,678
	Marlboro (Delaware County)	196	275	466	75	113	178	107	65	71
	Orange (Delaware County)	14,055	23,858	40,586	5,032	8,172	13,959	7,311	9,294	15,958
	Oxford (Delaware County)	1,554	1,677	2,494	564	631	920	80	214	496
	Porter (Delaware County)	1,919	1,956	2,270	647	714	865	112	97	96
	Radnor (Delaware County)	1,514	1,569	2,500	540	626	956	286	180	197
	Scioto (Delaware County)	2,426	2,485	5,307	882	974	1,980	243	143	286
	Thompson (Delaware County)	540	651	745	191	274	334	21	24	24
	Trenton (Delaware County)	1,965	2,289	3,987	695	836	1,446	335	451	496
	Troy (Delaware County)	1,986	2,221	5,032	818	897	1,968	481	585	737
	Bloom (Fairfield County)	5,998	7,177	15,441	2,072	2,571	4,923	652	361	893
	Violet (Fairfield County)	16,039	19,251	37,510	5,250	6,562	11,478	2,363	3,353	10,920
	Blendon (Franklin County)	10,832	10,069	12,263	4,089	3,817	4,669	4,676	4,507	5,210
	Brown (Franklin County)	2,091	2,559	3,511	705	869	1,282	197	108	142
	Clinton (Franklin County)	7,654	6,026	6,751	3,337	2,588	2,907	3,011	2,082	2,598
	Franklin (Franklin County)	15,042	12,140	15,884	5,907	4,514	6,084	14,707	8,730	12,735
	Hamilton (Franklin County)	4,331	4,855	6,895	1,645	1,894	2,714	629	931	2,003
	Jackson (Franklin County)	7,394	6,265	9,712	2,691	2,374	3,746	1,415	987	2,686
	Jefferson (Franklin County)	6,595	12,329	16,830	2,427	4,486	6,160	1,612	2,965	3,317
	Madison (Franklin County)	12,060	11,789	21,952	4,482	4,385	8,258	2,287	1,979	4,252
	Mifflin (Franklin County)	3,036	3,205	4,338	1,115	1,158	1,651	2,496	1,115	1,843
	Norwich (Franklin County)	4,584	4,420	5,086	1,721	1,830	2,134	132	324	695
	Perry (Franklin County)	4,684	4,593	5,109	1,749	1,796	2,013	833	764	993
	Plain (Franklin County)	1,933	2,754	4,296	683	1,177	1,899	356	1,028	1,855
	Pleasant (Franklin County)	6,131	6,759	8,179	2,228	2,545	3,138	519	588	724
	Prairie (Franklin County)	20,150	17,913	29,264	7,727	6,820	11,109	4,011	4,303	6,115
	Sharon (Franklin County)	3,652	3,523	4,029	1,646	1,794	2,056	3,147	2,945	3,570
	Truro (Franklin County)	1,403	1,573	2,461	522	580	897	371	409	661
	Washington (Franklin County)	700	1,119	2,263	272	477	988	663	344	525
	Etna (Licking County)	5,513	8,710	15,484	1,974	3,262	5,427	1,946	1,689	4,159

Places



The information shown on this map is compiled from various sources made available to us which we believe to be reliable.
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Figure 2.16 Map of Communities for Forecast Areas

2.5 Travel Patterns

Individuals engage in spatially separated activities. That is, some distance divides where one lives, works, shops and learns. Consequently, daily life requires travel. One's travel behaviors depend on:

- the locations of daily activities,
- socioeconomic status, and
- the transportation systems available.

This section covers regional trends in travel patterns through 2035, corresponding to the forecasted land use changes discussed in the previous section.

JOURNEY TO WORK TRENDS

The data presented here relies on figures from the US Census Bureau, using the geographic definition of the area covered by the MPO. Table 2.2 shows the "modal split." That is, it shows what percent commuters use that particular mode of travel.

Table 2.2 Mode to Work Percentage from 1990 to 2010 in MPO Area

	1990	2000	2010
Drive alone	79%	82%	83%
Carpool	11%	9%	8%
Bus	3%	3%	2%
Taxi	0%	0%	1%
Walk	0%	0%	0%
Bike	3%	2%	2%
Others	1%	0%	0%
Work at home	2%	3%	4%

Source: US Census Bureau, 1990 STF3, 2000 SF3 and American Community Survey 2006-2010

Table 2.3 shows the average travel time to work spent by all living in the MPO planning area.

Table 2.3 Travel Time to Work from 1990 to 2010 in MPO Area

	1990	2000	2010
Travel Time to Work (minutes)	20.38	22.06	20.99

Source: US Census Bureau, 1990 STF3, 2000 SF3 and American Community Survey 2006-2010

TRIP END DISTRIBUTIONS

Journey to work is only one part of one's daily travel patterns. Where one travels depends on where one lives, works, shops and eats. A variety of measures can be used to identify where people likely travel, such as population, households, jobs and floor area. The only direct way to identify where people travel is to observe the trip itself.

MORPC's Travel Demand Model is currently the best tool to translate the forecasted changes in population, households, jobs and floor area into the change in person trips for the MPO planning area. General inputs to the Travel Demand Model are land use information, broken down into small irregular geographic areas called "traffic analysis zones" (TAZs) and information about the transportation system.

The model was used to estimate the numbers of 2005, 2010 and 2035 person trips throughout the region. Every trip has two ends – origin and destination. The model-estimated trip ends (including both origins and destinations) were summed by TAZ across the region. To overcome the irregularity of TAZs, the TAZ trip end data was transferred to a quarter mile by quarter mile square grid system by using GIS. The results were then used to create a density map showing the distribution of trip ends throughout the region. As the maps in Figure 2.17 show, personal travel will continue expanding outside the I-270 outerbelt with the land use changes forecast. This will have an impact on average trip length.

AVERAGE TRIP LENGTHS

Trip length is a good indicator of travel patterns for a region. One's trip length varies based on the transportation system, the spatial structure of the urban area and one's socioeconomic characteristics. Estimates of average trip lengths and travel time for the MPO planning area are based on the results of Travel Demand Model.

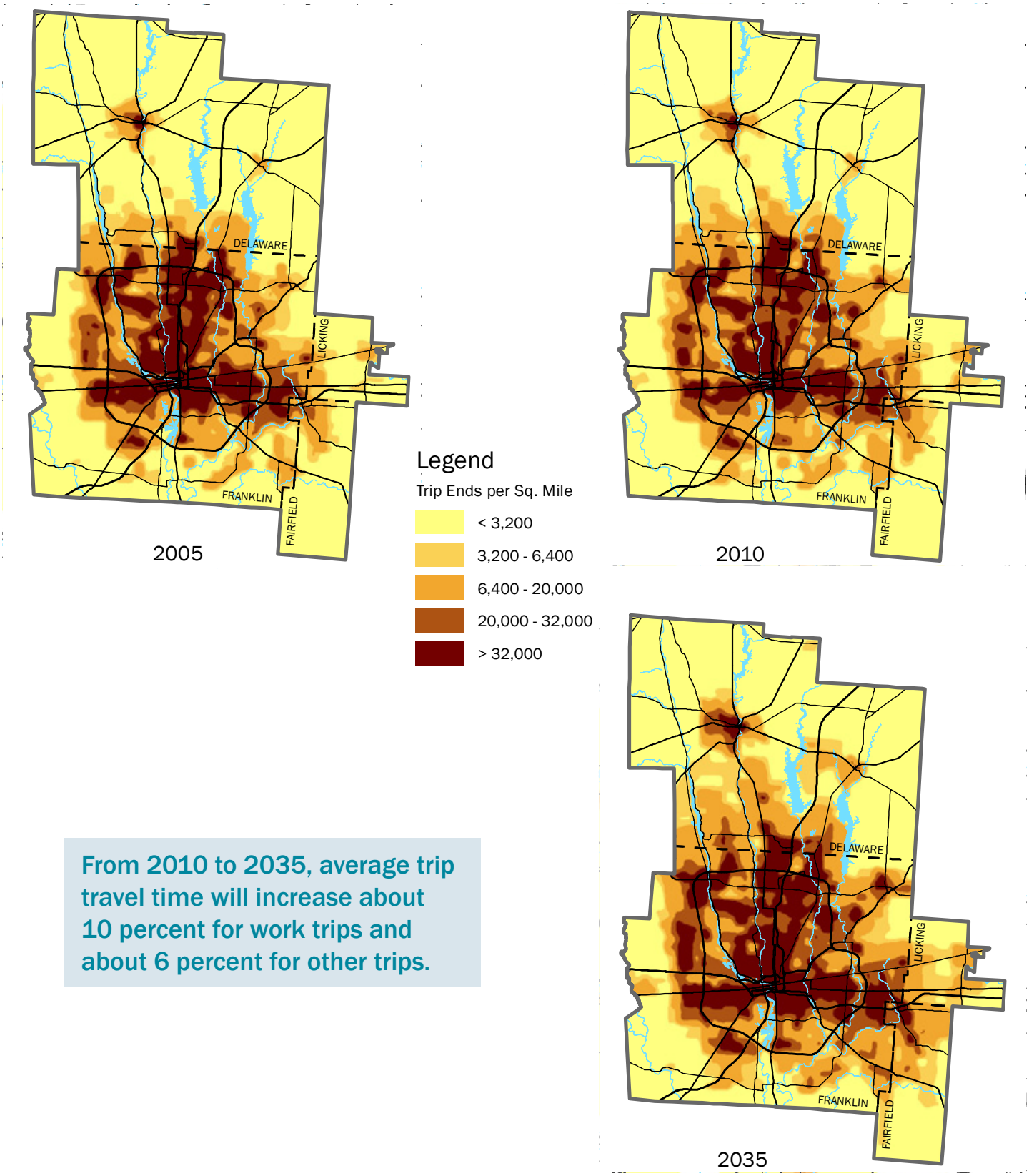
Table 2.4 shows the regional changes in average trip lengths from 2005 to 2035, for work trips and other trips, respectively. Average trip lengths for both work and other trips increase from 2005 to 2035 due to the outward growth in the land use forecast.

Table 2.4 Average Trip Lengths for Work and Other Trips in MPO Area

	2005	2010	2035
Work Trip Length (in miles)	9.89	9.96	10.11
Other Trip Length (in miles)	7.01	7.09	7.45

Source: MORPC Travel Demand Model

Trip End Density



From 2010 to 2035, average trip travel time will increase about 10 percent for work trips and about 6 percent for other trips.

The information shown on this map is compiled from various sources made available to us which we believe to be reliable.
n:/arcgis/core/tplan/2012/mtp maps/TripEnds3.mxd Feb 2012

0 7 14
Miles

N

Figure 2.17 Map of Trip End Density

Table 2.5 shows the regional changes in average trip travel from 2000 to 2035, for work trips and other trips, respectively. Average trip travel time decreased from 2005 and 2010, because of an overall drop in vehicle miles traveled (VMT) and concurrent roadway expansion. This trend may not continue. From 2010 to 2035, average trip travel time will increase about 10 percent for work trips and about 6 percent for other trips. This assumes no roadway expansion or other transportation system improvements as described in the MTP, and that travel behavior remains the same as today.

Table 2.5 Average Trip Travel Time for Work and Other Trips in MPO Area

	2005	2010	2035
Work Trip Travel Time (in minutes)	15.89	15.34	16.87
Other Trip Travel Time (in minutes)	11.53	11.43	12.16

Source: MORPC Travel Demand Model

2.6 Growth and Development Strategies and Projects

Key Goals

1. Energy
2. Natural Resources
3. Economic Opportunity
4. Sustainable Neighborhoods
5. Collaboration
6. Health, Safety and Welfare

Overall, central Ohio is projected to continue to attract new residents and jobs. The area inside of the I-270 outerbelt suffered job loss and stagnant growth between 2000 and 2010. Meanwhile, the area outside of the outerbelt experienced relatively explosive growth. Projections for 2035 assume some repopulation of the area inside the outerbelt with both jobs and households. However, the majority of new growth will occur in the suburban area. Changes in the market place include an aging population and the desire for multiple transportation options by young people. Due to these changes, development will be increasingly concentrated with a mixture of uses.

For the forecasts to be realized, central Ohio must be vigilant in attracting new employment. The ideal position of the region for logistics is an asset that can grow the technology and industrial sectors. Central Ohio is predicted to maintain its role as a hub for banking and insurance, however these sectors are not protected from economic trouble. Implementing the policies that encourage economic expansion into other technical employment sectors such as medical and information management is expected to invigorate a slow office market during the course of the next 25 years. Finally, retail growth is associated primarily with residential growth. A shift in the location of some of these services is assumed with the continued expansion of residential growth into the outlying counties.

As stated previously, the MTP does not reflect a regional land use plan. However, the way the region develops directly influences the plan's goals and objectives. Local land use decisions and site development design can affect access to transit and potential for walking or biking to destinations to reduce emissions of air contaminants and energy use. Transportation system decisions can affect development decisions. For example, minimizing water run-off from transportation surfaces, including parking lots, can influence water quality and the costs associated with removing pollutants.

Development patterns can support economic opportunity by accommodating business needs for transportation capacity and reliability through access management policies. Recognizing how land use decisions affect the quality of place can help attract and retain workers. Seamless transitions between communities through coordinated development approaches allow the transportation system of roads, bikeways and pedestrian ways to be continuous for regional connectivity. How development occurs concerning accessibility to all modes of the transportation system is based on public investment choices. What development occurs concerning market trends and demands is a driver of sustainable neighborhoods.

Because transportation and land use are connected, the MTP recommends the following strategies and projects:

1. Work with local governments to encourage reduced need for vehicle travel through local regulations.

1 2 3 4 5 6

Strengthening the relationship between development patterns and the transportation system will increase travel options for consumers and commuters. The future population may have reduced mobility capacity due to aging, or cultural characteristics that may affect people's ability or desire to drive. Many local communities administer their own land use regulations. Land use and land development patterns are controlled through zoning, subdivision and parking ordinances by local units of governments. Updating zoning codes to remove barriers to mixed use development is one way to reduce short non-vehicular trips. Devising subdivision regulations and site plan requirements to allow for increased densities, allowing for shared or reduced parking, and improving access to transit are other examples of how short auto trips can be reduced. In addition, by practicing access management principles and promoting complete streets policies, the safety of the transportation system will be improved.

Increase density of people and jobs per acre in MPO planning area that are within 3/4 mile of arterials to 6 per acre by 2035 (up from 4.5)

2. Distribute information to improve local decisionmaking.

3 5

MORPC will continue to have one-on-one meetings with local communities to gather and share information about transportation, development and various regional topics. In addition, it will continue to improve the Dataport to make information readily accessible for communities. As an example, MORPC maintains a series of interactive web maps displaying development plans and demographic data. In addition, progress towards reaching the targeted performance measures identified in the 2012-2035 MTP, as well as other indicators of how the transportation system is performing will be reported annually in the State of the Region report posted on the MORPC website. Easy access to this information will allow communities to evaluate the effects of their infrastructure investments on the regional transportation system.

3. Facilitate multi-jurisdictional dialogue to improve opportunities for collaboration.

3 5

MORPC coordinates the North Franklin/Southern Delaware County summit meetings. The summit has been a valuable tool for keeping neighboring communities aware of transportation projects and schedules. Similar coordinated multi-jurisdictional efforts will be undertaken to increase collaboration of neighboring communities.

100 percent of communities conducting studies with multi-jurisdictional participation.