

PROJECT PURPOSE

The Miami Valley Land Use Demand Assessment, as part of Going Places: An Integrated Land Use Vision for the Miami Valley Region, presents the results of the 2040 population and employment forecasts and future land use demand based on the projected continuation of existing demographic, economic, and development trends.

DATA SOURCES

- U.S. Census Bureau
- Ohio Department of Development
- Ohio Department of Jobs and Family Services
- Ohio EPA, Division of Surface Water
- National Center for Educational Statistics
- Greene, Miami, Montgomery, and Warren counties
- The cities of Carlisle, Franklin, and Springboro
- Water facilities superintendents
- School districts
- Ohio-Kentucky-Indiana (OKI) Regional Council of Governments
- MVRPC

METHOD

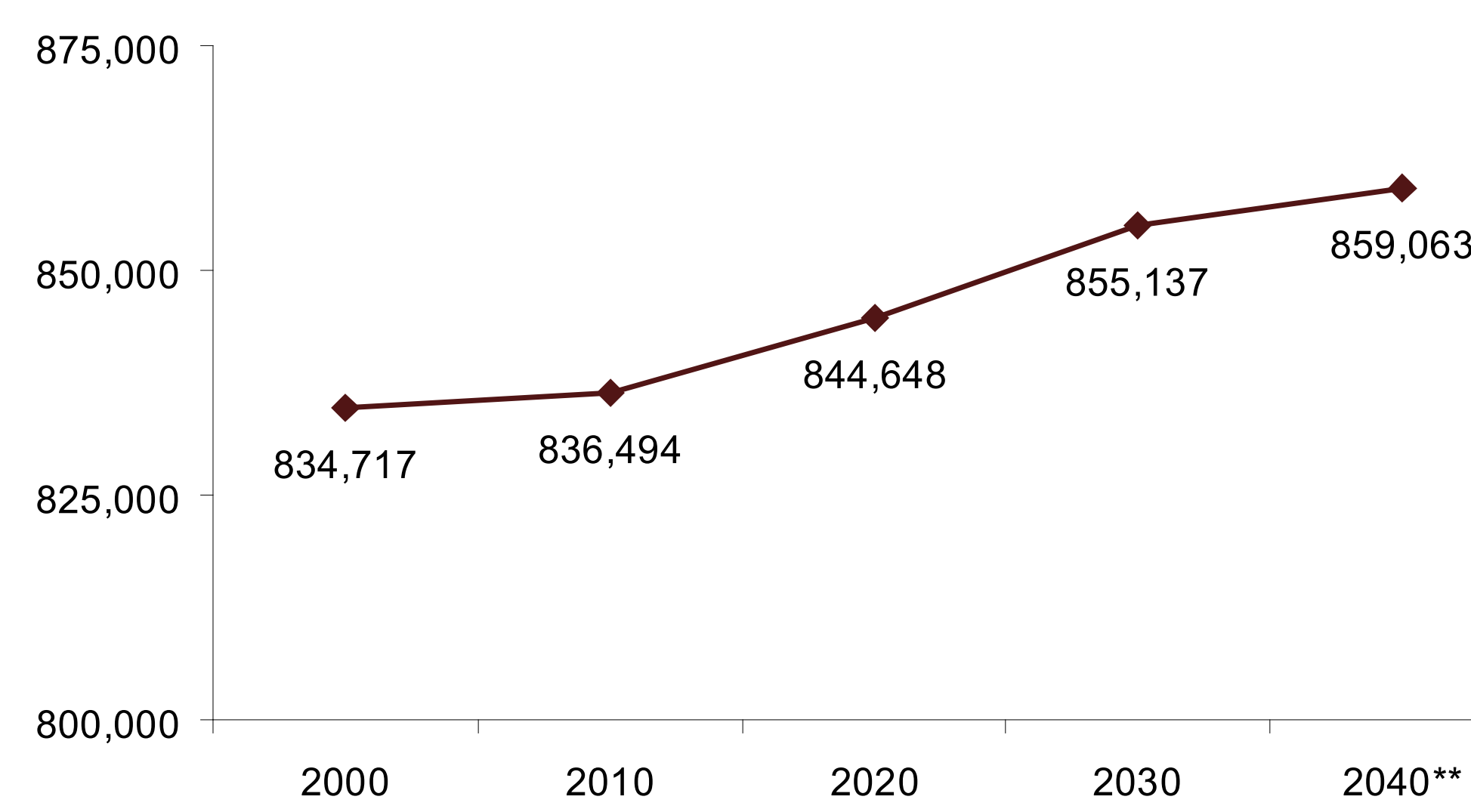
The projections for this study were conducted in two stages. First, population and employment projections were developed for the Region. Second, these two sets of projections were used to calculate land use demands for the Region. For both the socioeconomic and the land use demand projections, the year 2040 was the planning horizon year.

CONCLUSIONS

- The population in the Region is expected to grow by less than 3% between 2000 and 2040, while employment is expected to grow between 5% and 19% during the same period.
- If the Region continues to develop at the same densities and intensities that were present in 2007, a moderate amount of additional land will be required to accommodate the future demands of the Region.
- For the Region as a whole, developed land acreage may need to increase by between 2.7% and 6.0%, or between 7,544 and 16,412 acres.
- In 2007, the total acreage of developed land in the Region was 275,709 acres.

SOCIO-ECONOMIC FORECASTS

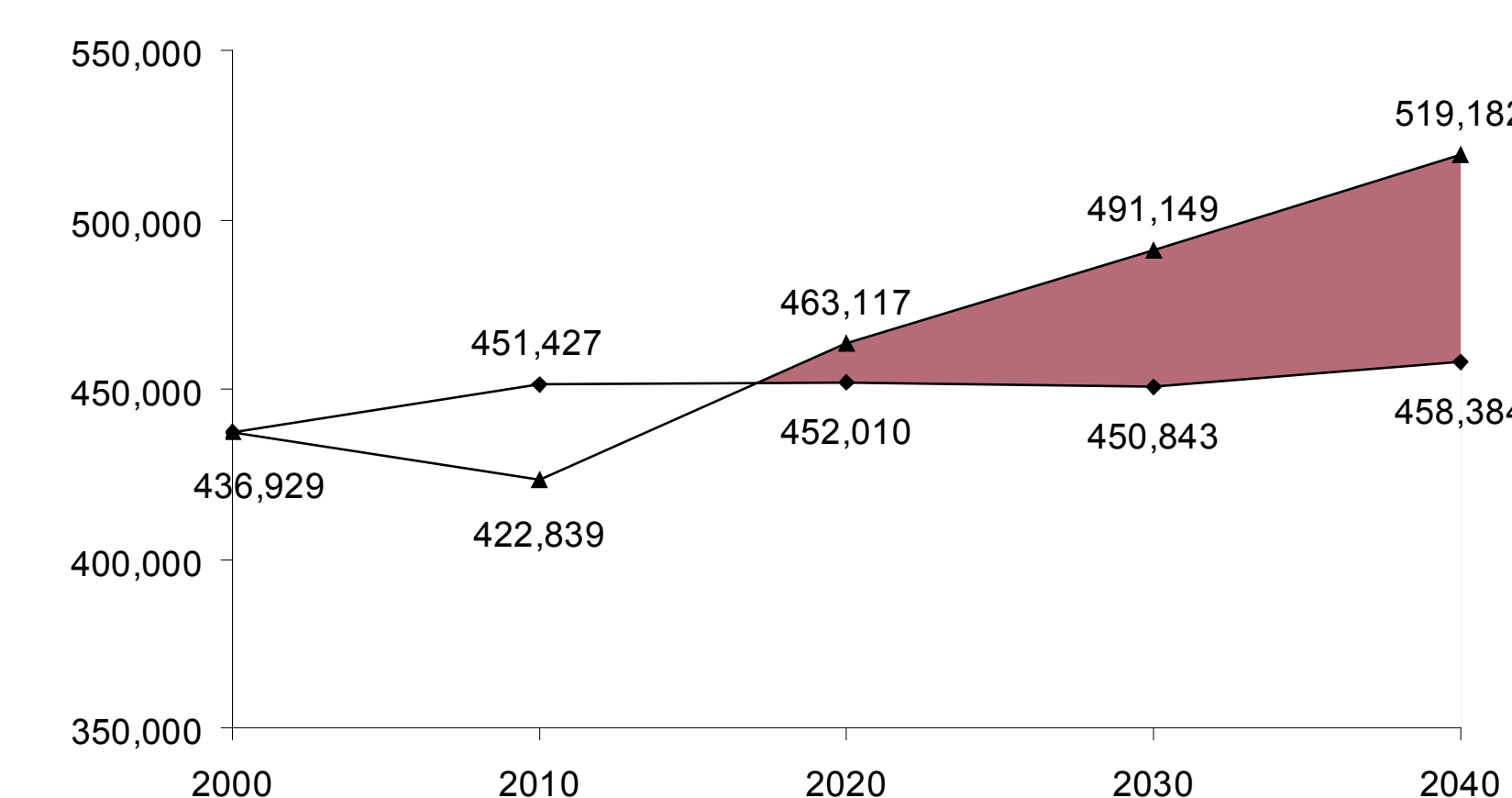
Regional Population Projections: 2000-2040



Source: Ohio Department of Development, 2003; MVRPC
Note: **MVRPC projected

Between 2000 and 2040, the Region's population is expected to grow by less than 3%. All counties but Montgomery are projected to gain population, with the three cities in Warren County expected to nearly double in population between 2010 and 2040.

Regional Employment Projections: 2000-2040



Source: MVRPC; OKI

Two employment projections were developed, one lower and one upper. At the lower end of the range, employment could reach 458,384 by 2040, an increase of only 5%. Alternatively, at the upper end of the range, regional employment could reach 519,182 by 2040, an increase of almost 19% from 2000.

EXISTING LAND USE

Regional Residential Land Use Data: 2007

	Housing Units	Acres	Vacancy Rate	Estimated Household Size
Single Family				
<1 Units Per Net Acre	36,116 (10.7%)	80,740	6.61%	2.65
1-2 Units Per Net Acre	86,769 (25.8%)	46,140	6.61%	2.66
3-5 Units Per Net Acre	92,659 (27.6%)	23,756	6.61%	2.58
6+ Units Per Net Acre	59,666 (17.7%)	8,344	6.61%	2.55
Subtotal Single Family	275,210 (81.9%)	158,979	6.61%	2.61
Multi-Family				
Total Multi-Family	61,026 (18.1%)	8,466	18.96%	2.81
Total Residential	336,236 (100%)	167,446	9.36%	2.64

Source: MVRPC; U.S. Census Bureau, 2008

In 2007, almost 82% of the housing units in the Region were single family residences. In terms of acreage, those single family housing units with less than one unit per acre (<1 Unit per net acre) occupy the largest amount of land. Vacancy rates for single family housing units are much lower than those for multi-family units. Household sizes for single family units are lower as well.

Regional Employment-Related Land Use Data: 2007

	Facility Sq. Ft.	Sq. Ft. Per Employee (Lower Projection)	Sq. Ft. Per Employee (Upper Projection)	Acres	Vacancy Rate	FAR
Total Industrial	80,045,176	958.9	1,029.8	10,712	19.3%	0.172
Manufacturing	79,007,280	1,250.5	1,341.8	9,990	19.3%	0.182
Total Commercial	147,116,302	397.8	426.4	24,596	14.6%	0.137
Retail	56,877,180	676.1	723.7	6,527	12.7%	0.200
Office*	32,560,782	149.0	160.0	3,169	18.2%	0.236
Total	227,161,478	501.2	537.4	42,969	16.8%	0.148

Source: MVRPC; Gem Real Estate Group, 2007
Note: *Includes FIRE, Services, and Government SIC categories

Commercial land makes up over half of all employment-related land use in terms of acreage and in terms of facility space. Industrial facilities, however, have a larger amount of square feet per employee than commercial facilities, and the vacancy rates are higher as well.

LAND USE DEMAND PROJECTIONS

Regional Land Use Projection Results by County

	Total Developed Acreage 2007	Lower Level Total Acreage Needed 2040	Percent Change 2007-2040	Upper Level Total Acreage Needed 2040	Percent Change 2007-2040
Region	275,709	283,253	2.7%	292,121	6.0%
Greene	73,696	77,799	5.6%	78,958	7.1%
Miami	63,512	67,080	5.6%	68,394	7.7%
Montgomery	130,715	130,956	0.2%	134,593	3.0%
Warren*	7,786	13,038	67.5%	13,038	67.5%

Note: *Warren County includes only the cities of Carlisle, Franklin, and Springboro

The land use demand projections were based on the assumption that the Region would continue to develop at the same densities and intensities that were present in 2007, and on an assumed 3% growth in the Region's population between 2000 and 2040. For the Region as a whole, developed acreage may need to increase by between 2.7% and 6.0%, or between 7,544 and 16,412 acres. This is approximately equivalent to one to two times the size of Wright Patterson Air Force Base.

Only a selection of land use categories were projected. For those not projected, such as water and wastewater facilities, it is acknowledged that even though at a regional level it is realistic to assume that no additional land will be needed, at a local level this may not be realistic and additional land for these types of development may be needed.

Regional Land Use Projection Results by Land Use Category

	Lower Level Additional Acreage Needed 2040	Upper Level Additional Acreage Needed 2040
Residential	6,421.1	
Employment	0.0	8,859.2
Facilities	11.5	20.6
Education	1,111.3	
Water and Wastewater	0.0	
Total	7,543.9	16,412.1

Note: Not all elements of the five land use categories were projected. For example, only two categories of facilities were projected, and no projections were made for water and wastewater facilities.

Residential Land Use Projection Results by County

	Developed Residential Acreage 2007	Residential Acreage Needed 2040	Additional Acreage Needed	Percent Change 2007-2040
Region	167,446	173,867	6,421	3.8%
Greene	39,772	41,457	1,685	4.2%
Miami	45,428	48,601	3,173	7.0%
Montgomery	78,103	75,458	-2,645	-3.4%
Warren*	4,142	8,351	4,209	101.6%

Source: MVRPC
Note: *Warren County includes only the cities of Carlisle, Franklin, and Springboro

Overall, the Region is expected to need 3.8% more residential land in 2040. The three cities in Warren County are expected to need the largest increase in residential land (101.6%). On the other hand, the amount of residential land needed in Montgomery County is expected to decrease by -3.4%.

The Region's demand for employment-related land use in 2040 is expected to change between -3.3% and 25.1%. This is due to the fact that the dominant sectors of employment will change as the manufacturing sector continues to decline and the commercial sectors, particularly the services sector, continue to increase. This, combined with the fact that different employment sectors have different space requirements, means that even though at the lower projection level employment is expected to increase by 5%, no additional land is expected to be required. At the upper projection level, employment-related land use needs are expected to increase by 25%.

Employment-Related Land Use Projection Results by County

	Developed Employment-Related Acreage 2007	Lower Level Employment-Related Acreage Needed 2040	Percent Change 2007-2040	Upper Level Employment-Related Acreage Needed 2040	Percent Change 2007-2040
Region	35,308	34,151	-3.3%	44,167	25.1%
Greene	4,646	6,306	35.7%	7,464	60.6%
Miami	5,673	5,898	4.0%	7,211	27.1%
Montgomery	23,445	19,535	-16.7%	27,081	15.5%
Warren*	1,544	2,412	56.2%	2,412	56.2%

Source: MVRPC
Note: *Warren County includes only the cities of Carlisle, Franklin, and Springboro