

COMPREHENSIVE ECONOMIC DEVELOPMENT STRATEGY FOR ALLEN COUNTY, OHIO 2021



Prepared by:

Lima-Allen County Regional Planning Commission
130 W. North Street
Lima, Ohio 45801
Phone: 419-228-1836
Fax: 419-228-3891

The preparation of this document was financed in cooperation with Allen County local units of government. The contents of this report reflect the views of the Lima-Allen County Regional Planning Commission, which is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official view and policies of the United States Department of Commerce Economic Development Administration. This report does not constitute a standard specification or regulation.

TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE</u>
TABLE OF CONTENTS	i
 SECTION I INTRODUCTION	
1.1 History of Economic Development & Planning	1
1.2 Planning Philosophy.....	1
1.3 CEDS Process	2
Map 1 Lima-Allen County MPO Planning Area.....	3
 SECTION II ORGANIZATION & MANAGEMENT	
2.1 CEDS Committee.....	4
2.2 Role of the Regional Planning Commission	5
2.3 LACRPC Membership Profile.....	5
2.4 Chronology of Events.....	5
2.5 Local Economic Development Initiatives	6
2.6 Major Economic Development Issues	7
 SECTION III SITE & SITUATION	
3.1 Locational Attributes & Composition.....	7
3.2 Climate & Natural Features	8
Map 2 Ten County Trade Area.....	9
Map 3 Proximity to Major Markets.....	10
Map 4 Allen County Topography.....	13
Map 5 Allen County Floodplain & Watershed	14
Map 6 Allen County Floodplain & Wetlands	15
3.3 Mineral Resources	16
3.4 Soils, Hydric Soils, & Prime Farmland	16
Map 7 Mines & Quarries	17
Map 8 Allen County Soil Classification	18
Map 9 Allen County Hydric Soils	20
3.5 Land Use Patterns and Conversion.....	21
Map 10 Allen County Prime Farmland by LESA.....	22
Map 11 Generalized Land Use	23
Table 1 Land Use by Type, Acre, & Parcel	24
Table 2 Allen County Land Use Change 2014-2021	24
3.6 Summary	25
 SECTION IV POPULATION	
4.1 Population Change	26
III. 1 Allen County Population Trends.....	27
III. 2 Population Change by Component.....	27
Table 3 Population 1960-2012.....	28
4.2 Households & Household Size.....	28
Table 4 Total Households & Average Household Size by Political Subdivision	29
2000-2010	
4.3 Age & Age Cohorts	29
Table 5 Allen County Population by Age Cohorts & Gender	30
III. 3 2010 Allen County/Ohio Population by Age Cohort.....	31
4.4 Race & Ethnic Diversity.....	31
Table 6 2010 Population by Race	33
4.5 Educational Attainment	33
Table 7 Educational Attainment for the Population 25 Years & Over	34

4.6	Income: Household, Family & Per Capita	34
Table 8	Comparative Income Measures by Decennial Census & American	35
Table 9	Income in 2013 by Allen County Household Type	36
	Community Survey	
4.7	Poverty Status: Persons & Families Below Poverty Level	36
Table 10	Poverty Status by Family Status.....	37
Table 11	Ratio of Income to Poverty Level Among Individuals.....	37
4.8	Labor Force Profile	37
Table 12	Occupation by Type & Percentage of Labor Force	38
Table 13	2013 Allen County Employment by Sector	39
III. 4	Unemployment Rates 2004-2014.....	40
Table 14	Employment & Business Establishments in Allen County.....	41
III. 5	Establishments in Allen County	41
III. 6	Employees in Allen County	42
4.9	Summary	42

SECTION V ENVIRONMENTAL FACTORS

5.1	Solid Waste Issues	44
5.2	Air Quality Issues	46
5.3	Water Quality Issues	47
5.4	The Natural Environment	49
Map 12	Allen County Natural Environment	50
5.5	Historical & Archaeology Sites	52
5.6	Planning for Sustainable Growth & Development.....	52
Map 13	Allen County Historical & Archaeology Sites	54

SECTION VI INFRASTRUCTURE FACTORS

6.1	Water & Wastewater Infrastructure	59
6.2	Industrial Sites	60
Map 14	Allen County Industrial Parcels	61
6.3	Transportation.....	62
Map 15	Allen County Railroads.....	65
Map 16	Allen County Pipelines	67
Map 17	Allen County Transportation & Warehousing.....	68
Table 15	Cartage, Freight, & Warehousing by Class	69
6.4	Summary	69

SECTION VII ECONOMIC OVERVIEW & ANALYSIS

7.1	Non-Agricultural Employment.....	71
Table 16	Non-Agricultural Employment by Primary Sector & Year	72
7.2	Agriculture.....	73
Table 17	Allen County Farm Production 2012-2017.....	74
Table 18	Allen County Farm Production by Commodity 2007-2012	74
7.3	Gross Domestic Product	75
Table 19	Allen County GDP by Sector 2007-2014 (In Millions)	75
7.4	Summary	75

SECTION VIII ACTION PLAN & VISION FOR THE FUTURE

8.1	Community Vision	76
8.2	Establishing Community Economic Goals	76
Table 20	Goal Statements	78
8.3	Strategies.....	79
Table 21	Allen Economic Development Strategy Strategic Goals	79
8.4	Milestones & Measures.....	80

8.5	Summary	80
	Table 22 Allen Economic Development Goals & Strategies	81
	Table 23 Allen County Economic Development Goals by Measures of Success.....	82

APPENDICES

A.	Appendices.....	83
----	-----------------	----

SECTION I INTRODUCTION

The United States Department of Commerce Economic Development Administration (USEDA), under P.L. 105-393, The Economic Reform Act of 1998, that comprehensively amended the Public Works and Economic Development Act of 1965, requires a strategy to qualify for assistance under most programs administered by USED A.

The Lima-Allen County Regional Planning Commission (LACRPC) prepared the Comprehensive Economic Development Strategy (CEDS) by a continuing effort to comply with the legislative and administrative requirements of the USED A on behalf of its member political subdivisions in Allen County, Ohio.

1.1 History of Economic Development Planning

The local government units rely upon the Allen Economic Development Group (AEDG) to market and guide local economic development initiatives. In addition, the LACRPC has historically had a supportive role concerning demographic, transportation, and land-use analyses. The City of Lima and the Board of Allen County Commissioners have supported both institutions financially and politically.

The community submitted to the public planning process and prepared a Community Economic Development Strategy (CEDS) in 2005, 2010, 2015, and 2021. This update is the fourth CEDS document prepared by the Allen County community.

1.2 Planning Philosophy

This document was prepared based upon long-standing relationships that LACRPC has forged with its member political subdivisions since 1964. The strength of the LACRPC lies in the insights gained over 57 years of serving its membership in planning and implementation of specific programs, projects, and activities.

The LACRPC planning philosophy is both inclusive and cumulative. Inclusive, concerning the number of individuals and interests represented and considered during the planning process; cumulative, it embodies the past planning efforts of various entities and agencies. That planning philosophy respects the diversity of its 21-member political subdivisions and recognizes the region's diversity in terms of population characteristics, economic base, and infrastructure. The LACRPC accepts this diversity and embraces it as a strength of the area. The LACRPC also recognizes that each political subdivision possesses its strengths and weaknesses but shares similar problems and aspires to new opportunities. The community wants to capitalize upon shared concerns and ambitions.

The task assigned to the LACRPC was to support and engage existing community leaders in the preparation of a CEDS to further cooperative efforts that would address local and regional needs. In addition, the LACRPC was tasked with providing technical resources/assistance to assure local units of government within Allen County that their respective concerns were identified and addressed. Thus, as stated in the Community Economic Development Strategy, the ultimate objective of the planning process is to "assess the current conditions of the area as it relates to developing a plan that best utilizes local resources for the positive development of the Allen County community." The various political subdivisions within Allen County are depicted in Map 1.

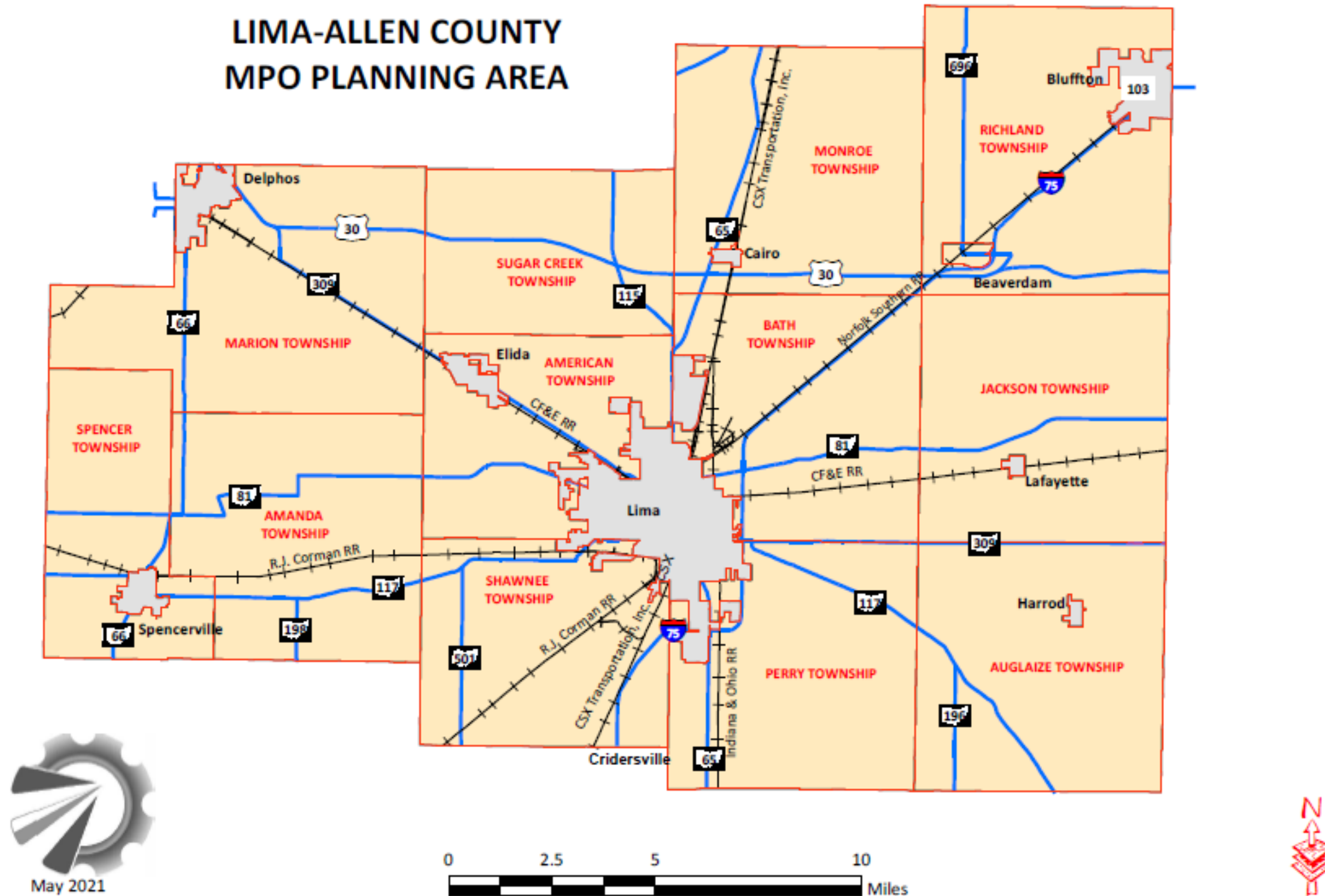
1.3 CEDS Process

According to the requirements set forth by the United States Economic Development Administration, a CEDS must be the result of a continuing participatory economic development planning effort completed by participants representing the diverse interests of the community. In addition, the CEDS must contain, at minimum, the following:

The CEDS process is a continuing and participatory process representing the diverse interests of the community.

- Background and history of the area's economic situation covered with a discussion of the economy, including as appropriate: geography, population, labor force, resources, and the environment.
- An analysis of economic and community development problems and opportunities includes incorporating relevant materials and suggestions from other government-sponsored or supported plans.
- Discussions establishing goals and objectives to take advantage of opportunities and solve the area's economic problems.
- Discussions surrounding community participation in the planning efforts.
- A plan of action, including suggested projects necessary to implement the objectives and goals outlined in the strategy.
- Performance measures to evaluate whether and to what extent goals and objectives have been or will be met.

MAP 1 LIMA-ALLEN COUNTY MPO PLANNING AREA



SECTION II ORGANIZATION & MANAGEMENT

The original Comprehensive Economic Development Strategy was prepared by the staff of the LACRPC based on input from the CEDS Advisory Committee. The Advisory Committee approved the draft CEDS document and presented it to the LACRPC for review and subsequent approval. In addition, the draft document was circulated to local stakeholders before the final draft was approved. Therefore, this document section provides the reader with an overview of the planning process and the stakeholders involved in developing the community's economic development strategy.

2.1 CEDS Committee

The CEDS Advisory Committee comprises members of the Regional Planning Commission's Community Development Committee and representatives of each economic development organization supported or sponsored by local government units, including chambers of commerce.

Members of the Committee represent all major economic development partner organizations, including the various political subdivisions, sectoral representatives from the business community, and academia. Therefore public, non-profit, and private-for-profit perspectives have been considered and incorporated.

- | | | |
|------------------------------------|---|---------------------------|
| ▪ Amanda Township | ▪ Perry Township | ▪ Village of Bluffton |
| ▪ American Township | ▪ Richland Township | ▪ Village of Cairo |
| ▪ Auglaize Township | ▪ Shawnee Township | ▪ Village of Harrod |
| ▪ Bath Township | ▪ Spencer Township | ▪ Village of Elida |
| ▪ Jackson Township | ▪ Sugar Creek Township | ▪ Village of Spencerville |
| ▪ Marion Township | ▪ Allen County | ▪ City of Delphos |
| ▪ Monroe Township | ▪ Village of Beaverdam | ▪ City of Lima |
| ▪ Allen Economic Development Group | ▪ Regional Planning Commission | |
| ▪ Allen County Port Authority | ▪ Transportation Advisory Committee | |
| ▪ Convention & Visitors Bureau | ▪ Transportation Coordinating Committee | |
| ▪ Lima Area Chamber of Commerce | ▪ Developmental Controls Committee | |
| ▪ Delphos Chamber of Commerce | ▪ Community Development Committee | |
| ▪ Bluffton Chamber of Commerce | ▪ Citizens Advisory Committee | |
| ▪ Spencerville Chamber of Commerce | ▪ Environmental Advisory Committee | |
| ▪ Jobs Ohio | | |
| ▪ The Ohio State University | ▪ Apollo Career Center | |
| ▪ Rhodes State College | ▪ University of Northwestern Ohio | |

2.2 Role of the Regional Planning Commission

The CEDS Advisory Committee prepared and submitted the *draft* CEDS – its report, attachments, and appendices with its recommendation to the LACRPC for consideration. The LACRPC reviewed the ***final draft document*** and issued final approval of the CEDS. The CEDS Advisory Committee works with LACRPC staff in monitoring the implementation of specific projects and strategies. Upon adoption, the Regional Planning Commission also submits the approved CEDS to all political subdivisions within Allen County for monitoring purposes. Approval of the CEDS document established the actions, deliverables/accomplishments, and performance measures by annual element.

2.3 LACRPC Membership Profile

The LACRPC comprises delegates appointed by member political subdivisions. The representatives are charged with representing their respective communities. Representation is weighted by population, whereby each member political subdivision is authorized a delegate for each 5,000 in population. Those communities whose population reaches 10,000 and 15,000 have 2 and 3 delegates, respectively. Allen County Commissioners appoint six representatives to the LACRPC, but in no case would a member political subdivision have less than one delegate to the Commission.

The strength of the LACRPC lies in its membership and the municipalities and other constituencies they represent. Delegates are often elected officials. However, non-elected citizen members needed to meet various community interests are also included. As demonstrated by the information presented in the LACRPC roster, members represent a broad and diverse population segment. In addition, the members are engaged in a large number of occupations and serve on a large number of government-sponsored agencies and committees.

2.4 Chronology of Events

The following is a summary of events leading to the final approval of this

CEDS:

- **Issues of Concern.** Thirty industry leaders, academicians, and elected officials attended a two-day workshop facilitated by IQ Partners and the Allen Economic Development Group in April 2015. Issues of concern revolved around the interplay between workforce readiness, innovation, economic resiliency, broadening the economic base, and establishing information networks. The Community Development Committee reviewed and refined these concerns over the summer of 2015. Additionally, in 2017, IQ Partners helped complete the 'Greater Lima Region Collaborative Growth Plan' to ensure the continued prosperity of the Great Lima Region. Finally, in the fall of 2020, the Allen Lima Leadership (ALL) Class developed and conducted a regional survey designed to gather information about livability in the Greater Lima Region. AEDG conducted a Business Outlook Survey in 2021. An internal analysis used this collective data to develop a roster of the critical problems.

Preparation Process:

- Obtain input
- Identify issues
- Set Goals and Objectives
- Prepare Action Plan
- Obtain Approvals

- **Goals, Objectives & Performance Measures.** Based on the issues and concerns identified previously and the SWOT analysis and scenario planning results, the Allen Economic Development Group developed various goals and objectives as a part of its strategic planning process. Using advisory committee discussions and recommendations, goals, objectives, and performance measures were ratified in the spring of 2021.
- **Action Plan.** The Allen Economic Development Group incorporated these recommendations, goals, objectives, and performance measures into its three-year strategic plan. This plan then became the impetus for the final CEDS document created by the LACRPC.
- **Public Participation.** LACRPC staff met with various members of the CEDS committee throughout June and July 2021 to review the CEDS document, its purpose, and the update process. In addition, a draft was presented to the various LACRPC committees for comment and feedback during the update process.
- **Final LACRPC Adoption.** The LACRPC adopted the Allen County 2021 Comprehensive Economic Development Strategy on August 26, 2021

2.5 Local Economic Development Initiatives

A founding principle of the CEDS process recognizes the economic development strategies developed by the various community stakeholders and individual economic development organizations. Currently, the Allen County community is served by: the Allen County Convention & Visitors Bureau, the Allen County Port Authority, the Allen Economic Development Group, the Bluffton Chamber of Commerce, the Delphos Chamber of Commerce, the Lima Area Chamber of Commerce, and the Spencerville Chamber of Commerce as well as the regional offices of Jobs Ohio.

Historically, the local community has relied upon improving infrastructure to support or expand its economic base. Such support was limited mainly to infrastructure improvements supportive of public roads, water, sanitary, and storm sewers and typically utilized multiple funding sources. Still, it included Community Development Block Grants (CDBG), Ohio Public Works Commission (OPWC) Grants and Loans, Issue I Program monies, Economic Development Administration monies, State Infrastructure Bank Loans, and General Fund monies. The State of Ohio has also helped local development initiatives with funding for other public infrastructure improvements, including airport runways, rail siding, roadway improvements, and utility extensions.

More recently, the community has utilized its limited financial resources to acquire and develop industrial parks. Various public-private partnerships have successfully established spec buildings to assist local development initiatives. As a result, publicly supported industrial/commercial parks have been successfully sited and developed in Perry Township, City of Lima, City of Delphos, and Shawnee Township. Bluffton and Spencerville have also worked to examine the feasibility of developing industrial/commercial parks.

In addition, area officials have successfully negotiated Free Trade Zone status for PPG Industries and the now Cenovus Refinery facility and utilized tax abatements for local industrial employers as an economic incentive and development tool.

2.6 Major Economic Development Issues

Multiple issues were identified and forwarded from various stakeholders since the 2015 update and include:

- The ability of the local industry to attract and maintain a qualified workforce with job skills necessary to meet employers' current and future needs.
- Recognizing the importance of existing industrial clusters.
- Building a resilient workforce that can better shift between jobs or industries when economic downturns occur.
- The ability of local communities to attract new investment, new technologies, and new employers to the region.
- The ability to retain and expand upon existing employers to provide jobs for current and future residents.
- The ability to attract and retain younger, well-educated, skilled, and civic-minded residents within the community.
- Recognition that the historical pattern of agricultural land use and the natural resources that contribute to the quality of life sought by some residents is threatened, in some cases, by the expansion of urban development away from the more populated cities and villages.
- The need for increased governmental cooperation and attention to relationships that will nurture and improve the economic environment will foster new businesses, as evidenced by an expansion of existing employment opportunities for residents.
- The ability of local communities to provide infrastructure at specific locations is necessary for the expansion of existing businesses and to attract new business investment in the future.
- The need to integrate new technologies and training opportunities into local academic institutions and industries.

Major Issues:

- *An Aging Population*
- *Undereducated & Under Skilled Workforce*
- *Sustainable Growth*
- *Infrastructure Needs*
- *Urban Sprawl*

SECTION III

ALLEN COUNTY: SITE & SITUATION

3.1 Locational Attributes & Composition

Allen County is 407 square miles in total area, with 12.6 square miles situated within the municipal corporate limits of Lima. Lima, the county seat of Allen County, is located at 40.77 N latitude and -84.13 W longitude. The relative location of the City of Lima is adjacent to I-75, 10 miles south of the junction of US

Lima is the largest inland metro area in West Central Ohio serving 478,000 people.

30. Map 2 suggests that Lima is the largest inland metropolitan area in West Central Ohio. Therefore, it acts as the center for a 10-county trading area serving approximately 478,000 people, including the adjacent counties of Hancock, Van Wert, Hardin, Putnam, and Auglaize. Map 3 shows Lima, located within 500 miles of the ten (10) largest cities of the central states. Located midway between Detroit/Cincinnati, Toledo/Dayton, Cleveland/Indianapolis, and Columbus/Fort Wayne, Lima is positioned strategically to raw materials, transportation facilities, labor supply, and trade markets.

Allen County, Ohio, comprises 12 townships: Amanda; American; Auglaize; Bath; Jackson; Marion; Monroe; Perry; Richland; Shawnee; Spencer; Sugar Creek and two cities, Lima and Delphos. Within the townships are seven incorporated villages: Beavertown, Bluffton, Cairo, Elida, Harrod, Lafayette, and Spencerville. In addition, nine unincorporated Hamlets exist, including Gomer, Hume, Rockport, Westminster, Kemp, Conant, Rockport, Allentown, and Landeck. Their forms of government represent the following types: Allen County - County Commissioners and Administrator; Cities and Villages - Mayor and Council; and, Townships - Trustees.

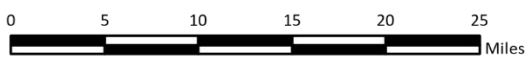
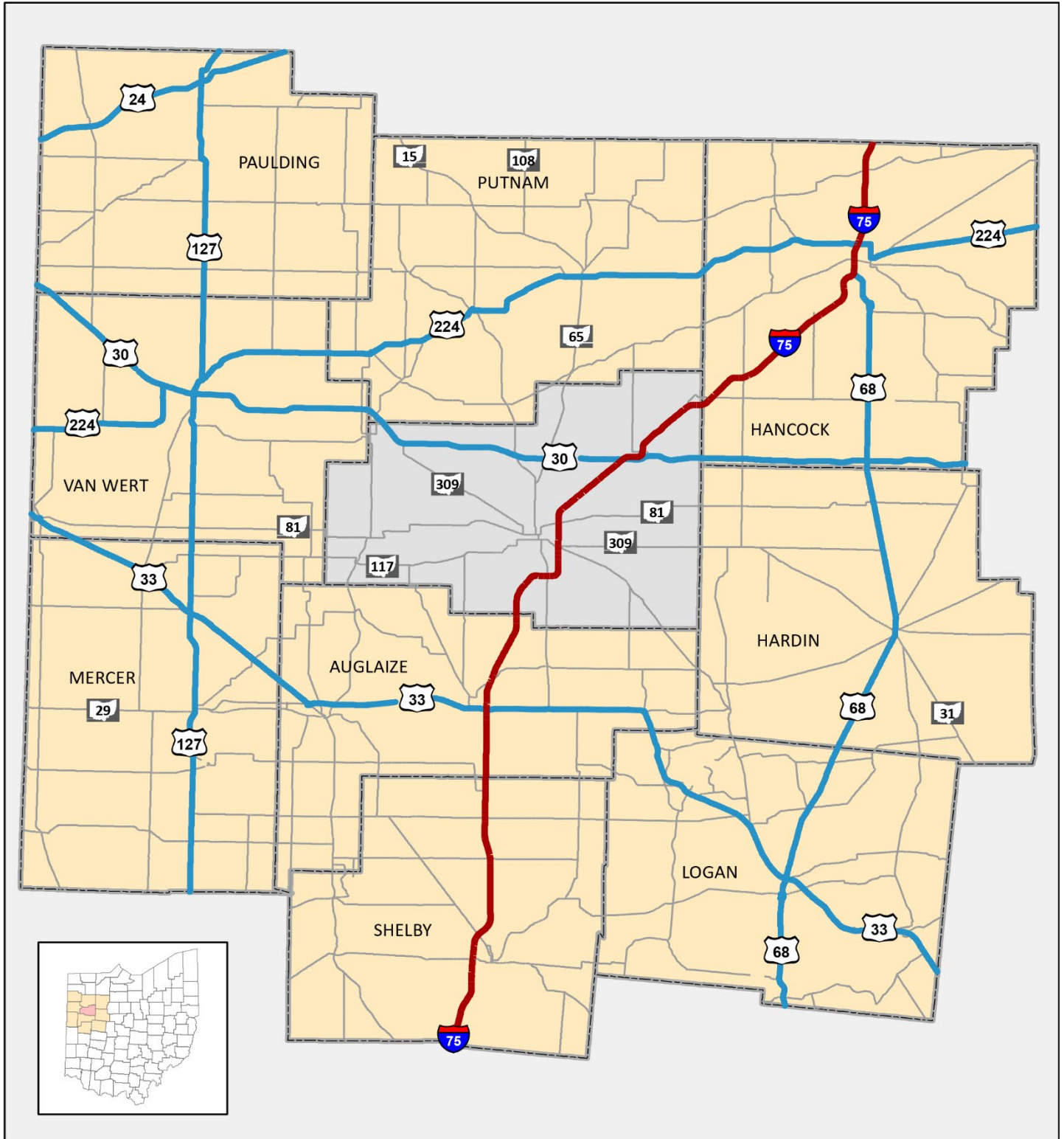
3.2 Climate & Natural Features

Allen County's geographical location results in a moist, mid-latitude climate with relatively cold winters, characteristics of Dfa climates in North America. The weather in Allen County is warm summers and cold winters, primarily because of its general location on the North American landmass with respect to the jet stream. In addition, the climate is somewhat moderated because of its proximity to the Great Lakes. The community generally experiences distinct warm summers that contribute to a growing season of 5 to 6 months. Summers are complete with humid evenings, with the occasional thunderstorm. Winters are relatively cold with blustery winds and snowfall, sometimes with severe blizzards.

Allen County is an area of 260,366 acres located in West Central Ohio. The County is primarily level or gently sloping and is excellent for agriculture. Historically, the most significant geographical feature of Allen County is its rich soils due, in part, to its location within the Great Black Swamp. The Great Black Swamp encompassed almost 7,000 square miles of prime timber and flooded prairies. Once nearly a glacial lake, northwest Ohio harbored immense tracts of maple, hickory, birch, oak, and ash trees. Unfortunately, little could be done to timber the stands of trees or utilize the prosperous soils until the swamp was drained.

There are 30 separate watersheds in Allen County. The primary waterways include the Auglaize and Ottawa rivers, but several major and minor tributaries require bridges, drainage ditches, and specialized maintenance. The Allen County Engineer is currently responsible for maintaining 377 bridges, 1,400 miles of culverts, *(per Allen County Engineer Website) 204 miles of open ditches, 34 miles of conduit, and 15 miles of waterways on permanent maintenance. Bridges are discussed further in section 6.3.

MAP 2 TEN COUNTY TRADE AREA



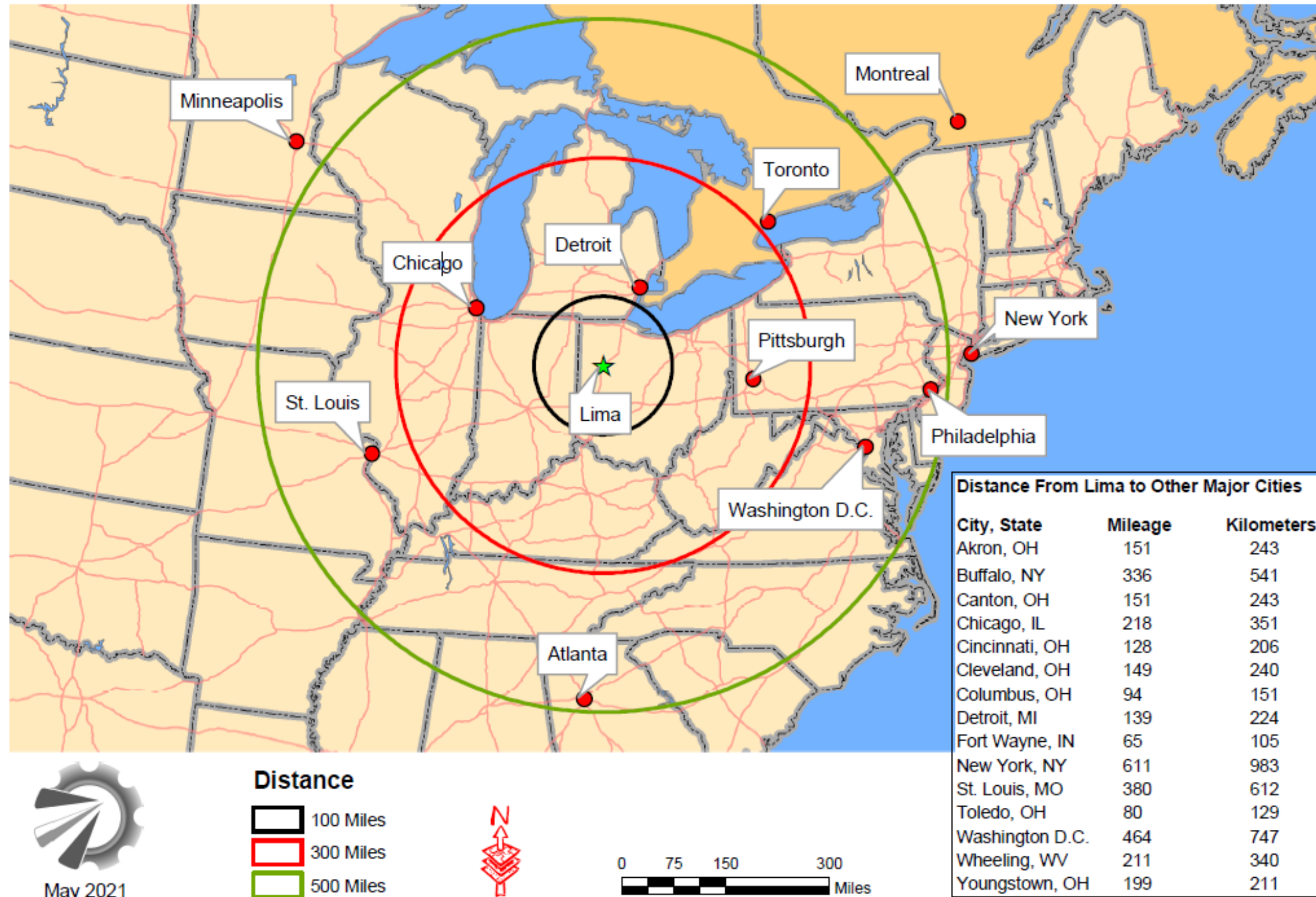
May 2021



Roadways

- Interstate Route
- U.S. Route
- State Route

MAP 3 PROXIMITY TO MAJOR MARKETS



3.2.1 Climate

Allen County is relatively cold in winter and hot in summer. The average temperature is 27.9 degrees Fahrenheit in winter, and the average daily minimum temperature is 19.9 degrees. The lowest temperature on record, which occurred in Lima on January 19, 1994, is -21 degrees. The average temperature is 72.0 degrees in summer, and the average daily maximum temperature is 83.0 degrees. The highest recorded temperature, which occurred on July 15, 1936, is 109 degrees.

The average total annual precipitation is about 35.98 inches. Of this, 19.94 inches, or 55.4 percent, usually falls from May through October. Therefore, the growing season for most crops falls within this period. The heaviest 1-day rainfall was 4.38 inches on June 14, 1981. Thunderstorms occur on about 39 days each year, and most occur between April and September.



The average seasonal snowfall is 19.2 inches. The most significant snow depth at any one time during the period of record was 19 inches. On average, 40 days of the year have at least 1 inch of snow on the ground. The number of such days varies significantly from year to year. The heaviest 1-day snowfall on record was more than 18.0 inches on January 13, 1964.

The average relative humidity in the mid-afternoon is about 60 percent. Humidity is higher at night, and the average at dawn is about 82 percent. The sun shines 74 percent of the time in summer and 45 percent in winter. The prevailing wind is from the west/southwest. The average wind speed is highest from January through April, at 12 miles per hour.

3.2.2 Physiography, Relief & Drainage

Allen County was once beneath a large ice sheet; as the glacier melted and retreated, a large lake formed and covered much of northwest Ohio. Over time, the geological processes resulted in a gently sloping terrain and productive soils but relatively poor drainage. Map 4 illustrates local relief patterns.



Allen County lies in two parts of the Central Lowland Physiographic Province. The extreme northwest part of the county is in the Erie-Huron Lake Plain; the rest of the county is on the Indiana and Ohio Till Plain. The relief in the county is quite variable. In the northwest, near Delphos, the landscape is subdued. This area was once part of a large glacial lake that covered part of Allen County. Hoytville and Nappanee soils are on the flat lake plains of the County.

The most significant part of the County is part of the Indiana and Ohio Till Plain. The more sloping relief is along the major rivers and on dissected portions of the three end moraines: Fort Wayne, Wabash, and St. Johns moraines. These formed

during the last ice age, when the ice front remained stationary for some time. Blount and Pewamo soils are found on the flatter ground moraines. Glynwood and Lybrand soils are on the more rolling terrain of the county. Other soils are on the ground moraines, deltas, and floodplains.

The highest elevation in Allen County is 1,061 feet above sea level in Auglaize Township. The lowest elevation is 760 feet, in Marion Township, where the Auglaize River exits the County. The Auglaize and Ottawa rivers and their tributaries drain most of Allen County. These two rivers flow northward and are part of the Maumee River basin. In addition, a small amount of southeastern Allen County drains into the Scioto River watershed located in Auglaize County.

3.2.3 Floodplains & Wetlands

The relatively flat topography and riverine system of Allen County, coupled with the local climate and moderate precipitation, results in localized flooding and seasonal ponding. Given the community's relative position with respect to other West Central Ohio counties in the Maumee River watershed, the community occasionally experiences severe flooding.

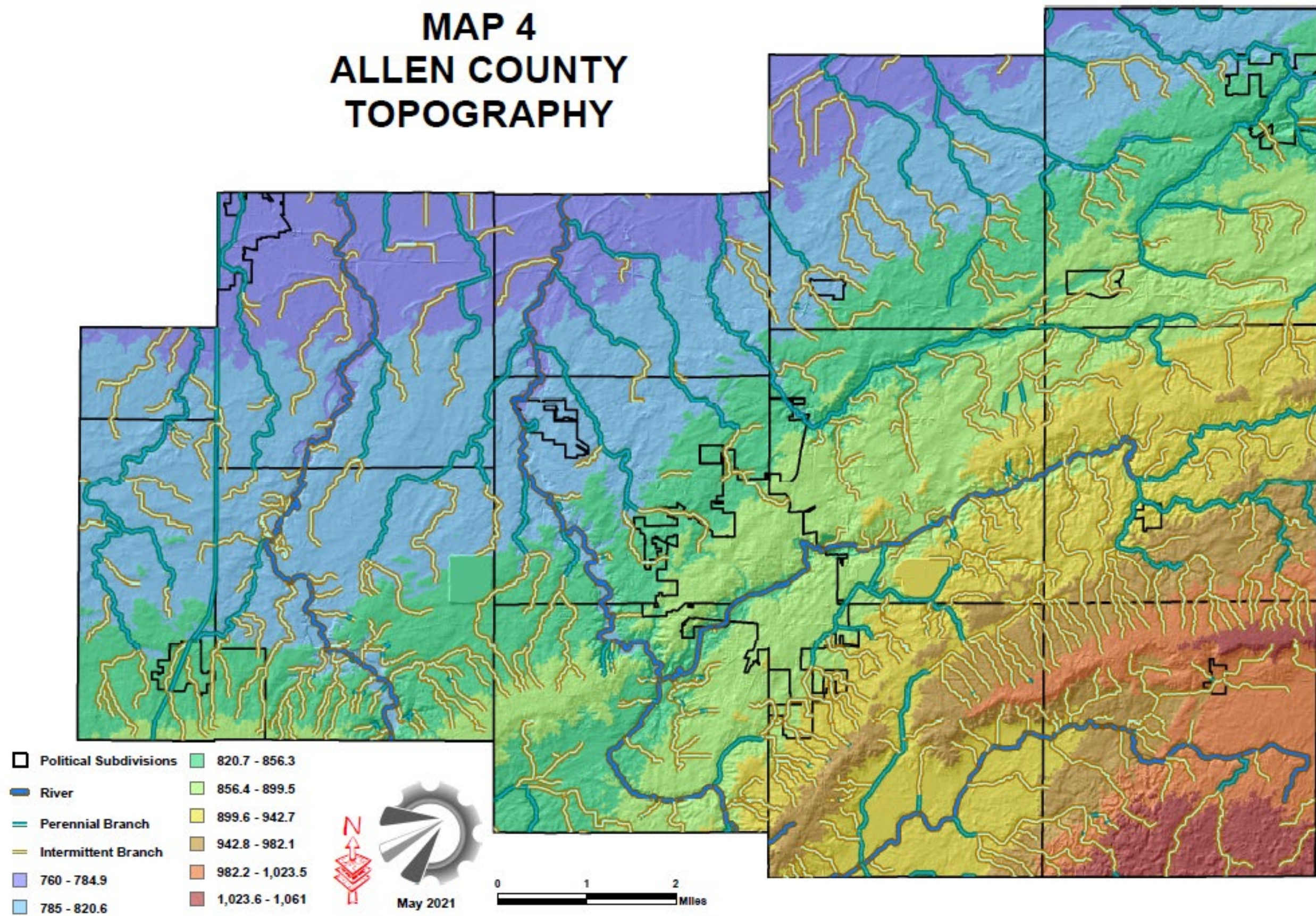


Floodplains are those high hazard areas identified by the Federal Emergency Management Agency (FEMA) as areas with a 1 percent chance per annum of flooding. FEMA has identified 13,028 acres of high-hazard flood areas in Allen County. *(per floodplain map) The FEMA Flood Insurance Rate Maps (2013) are predicated on detailed reports compiled by the United States Army Corps of Engineers (1967) and the United States Department of Agriculture's Soil Conservation Service (1979) and detailed hydrologic and hydraulic studies conducted by the US Geological Survey (USGS (2011)) and the Natural Resource Conservation Service (NRCS (2006)). Map 5 details the parameters of the floodplains by their respective sub-watershed area. Flooding has mainly been confined to locations outside of the City of Lima since the flood of 1913. As a result of that flood, channels of the Ottawa River were realigned, and new bridges were built, minimizing flooding.

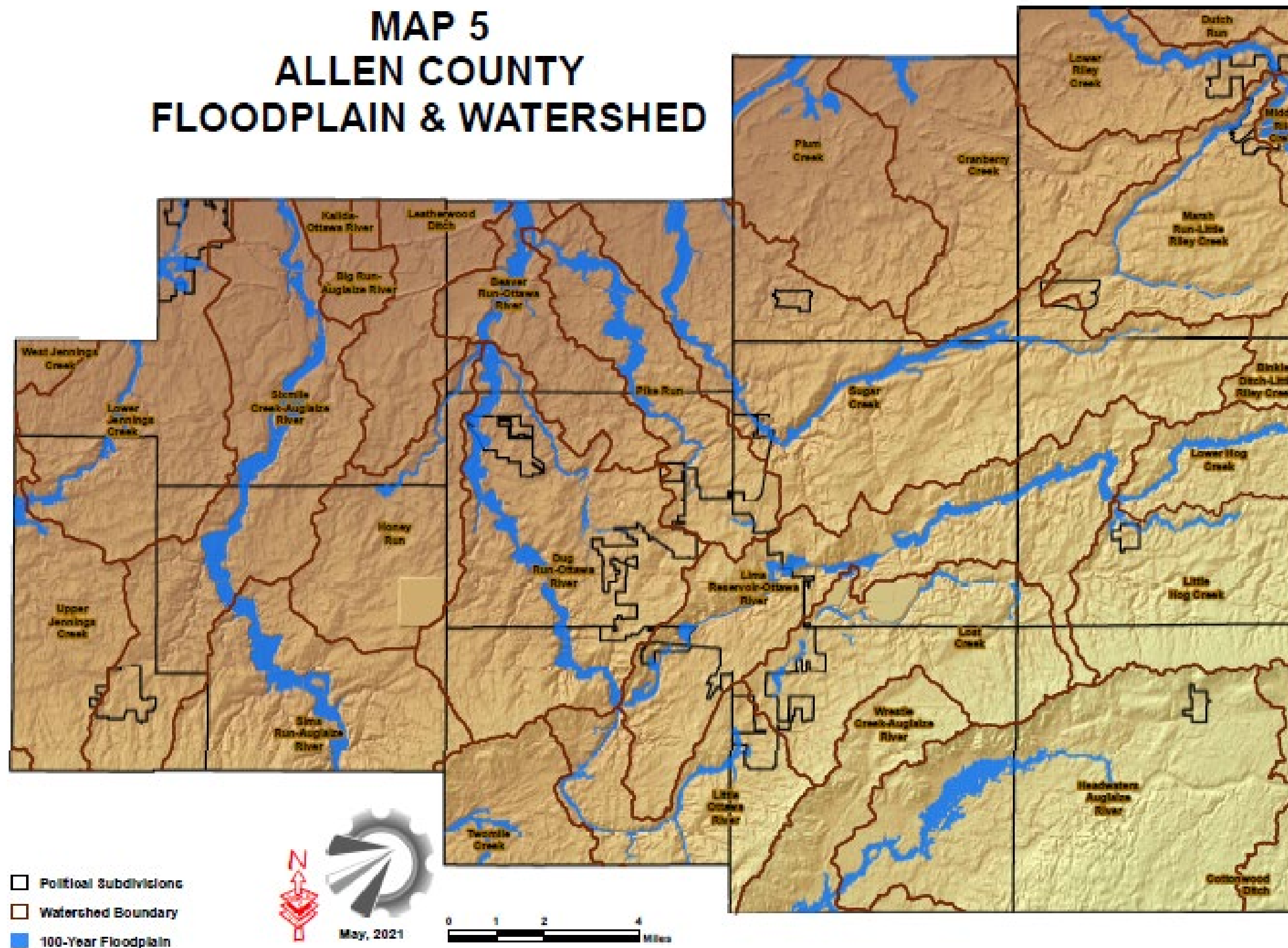
Allen County hosts 15,194 acres of high hazard flood areas and occasionally experiences severe flooding.

Wetlands are lands flooded or saturated at or near the ground surface for varying periods during the year. Wetland delineations are based upon the United States Department of the Interior (USDI) and the National Wetlands Inventory. The mapped results of the USDI Wetlands Inventory (1994) are based upon survey work conducted by the United States Fish & Wildlife Service (FWS) using remote sensing and information obtained from United States Geological Survey (USGS) quadrangle maps. The FWS considers wetlands as lands transitional between terrestrial and aquatic systems where either (a) hydrophytes exist, (b) hydric soils are located, and/or (c) non-soil substrate is saturated or covered with water at some time during the growing season. Map 6 identifies wetlands documented by the USDI with FEMA-identified floodplains. Because of the nature and size of the respective floodplain delineations, many wetland areas are indistinguishable from the larger floodplain areas.

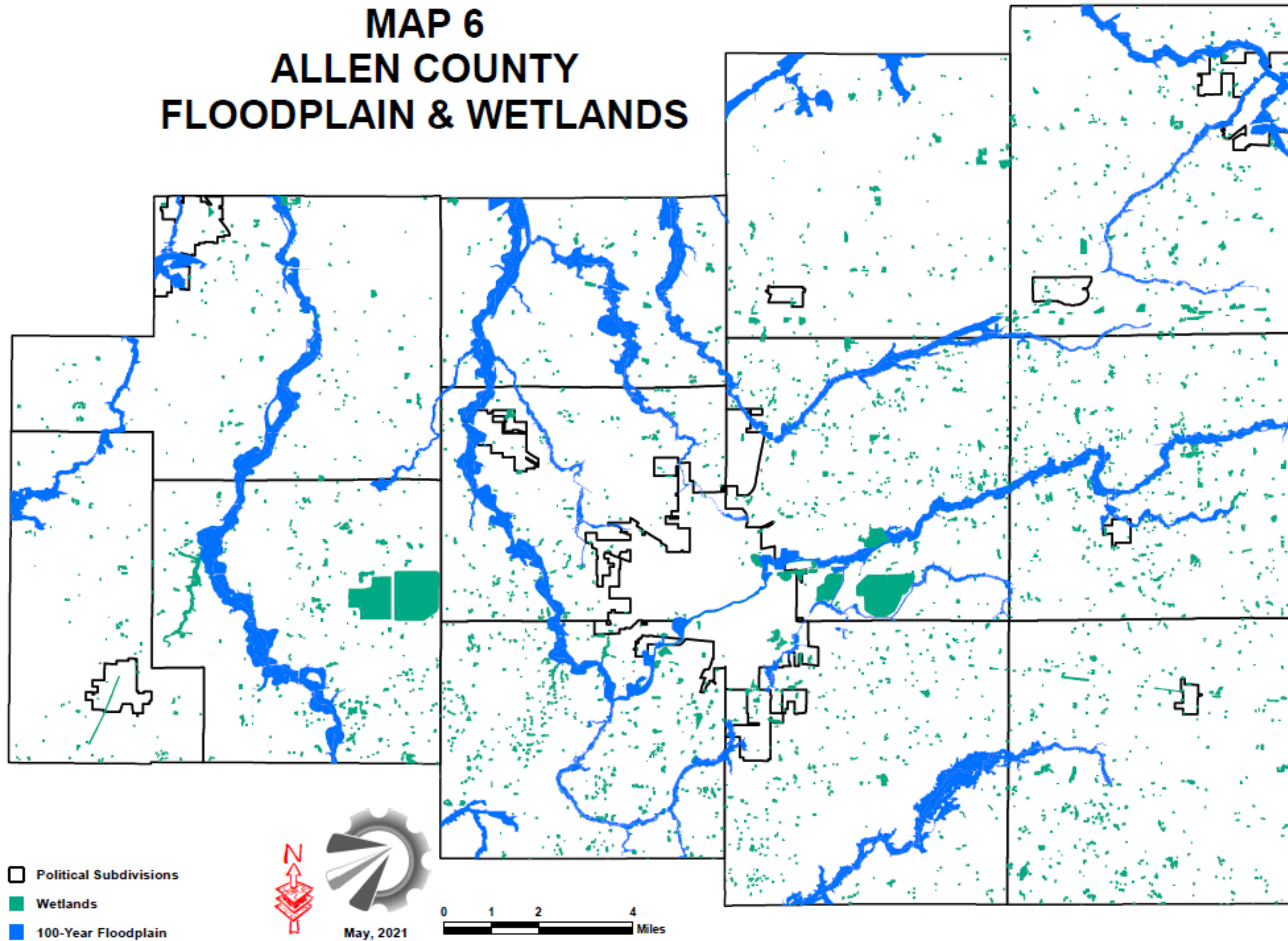
MAP 4 ALLEN COUNTY TOPOGRAPHY



MAP 5 ALLEN COUNTY FLOODPLAIN & WATERSHED



MAP 6 ALLEN COUNTY FLOODPLAIN & WETLANDS



3.3 Mineral Resources

The mineral resources of Allen County include bedrock, sand, and gravel. Most of these resources are of minor importance because of the relatively thin deposits of high-quality materials for general commercial use. Dolostone is the significant component of bedrock in Allen County, although limestone is also present. Dolomite and limestone have been mined from several formations across the county. Quarries near the east side of Lima, Bluffton, and Delphos are currently active. In addition, Dolostone has been quarried from the floor of the Auglaize River during dry years for local use. Since bedrock is at/near the surface in Allen County, many inactive quarries are scattered throughout the county. Most of the Dolostone is used for agricultural or industrial uses or used in the transportation industry. In addition, 267 inactive small sand and/or gravel pits are scattered throughout the county, usually along rivers and small creeks. The Ohio Department of Natural Resources (ODNR) has issued permits to quarry upon 18 parcels totaling 410.99 acres*(per "active" layer in quarry map) in Allen County. Map 7 identifies the location of the various parcels engaged in quarrying/mining.

3.4 Soils, Hydric Soils & Prime Farmland

The vast majority of land in Allen County is considered agricultural; agriculture remains a significant economic activity in the community. Most local agriculture focuses on grain production, primarily soybeans, corn, and wheat, and its productivity depends, in part, on soil characteristics, including type by parent material, slope, and drainage. Further analysis of Allen County reveals broad areas with distinctive soils, relief, and drainage patterns. Although specific soil types may vary within, as will slope and depth of the grounds, general soil patterns help compare the suitability of large tracts for broad land uses, including agriculture.

3.4.1 Soil Types & Limiting Factors

A detailed soil analysis, completed in 1996 and published in 2002 by the United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS), found 69 different soil types in Allen County. The soil analysis helps assess the characteristics of the various soils for (1) characteristic properties, including permeability, depth, parent material, organic matter, and slope; (2) agricultural uses, including soil management concerns; and (3) urban uses, including load-bearing capacities, septic system suitability, and permeability. Allen County soils are presented by type on Map 8. Soil surveys classify soils by limiting factors that restrict their ability to support specific applications or uses. Three principal limiting factors occur in the soils of Allen County, according to the USDA-Soil Conservation Service (SCS), and include ponding, compaction, and erosion.

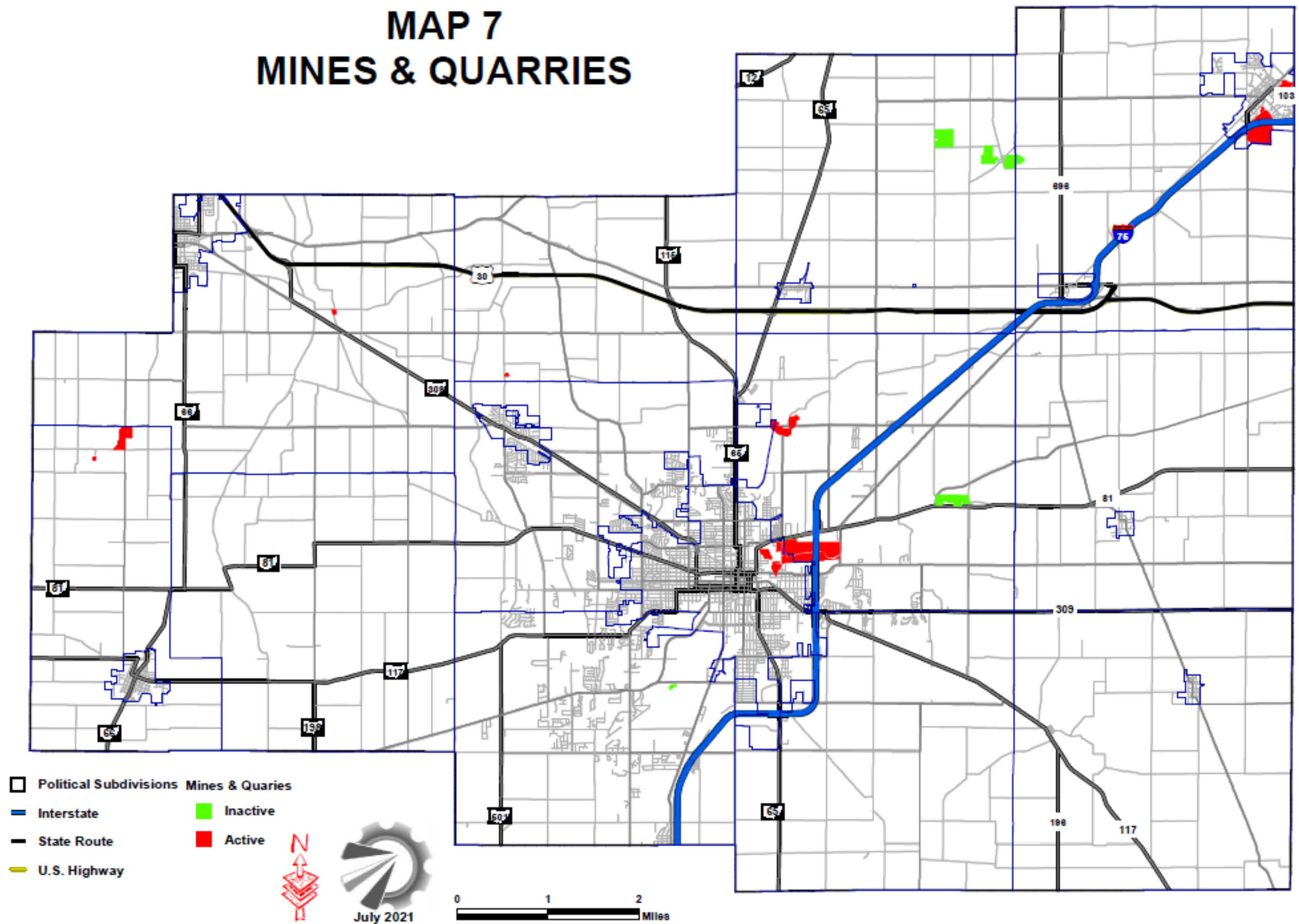
Ponding, compaction and erosion are 3 principal limiting factors occurring in Allen County Soils.

Collapsing the various soil types into more general soil classifications furthers the comparison between tracts of land. There are seven general soil types found to be representative of Allen County, including the following:

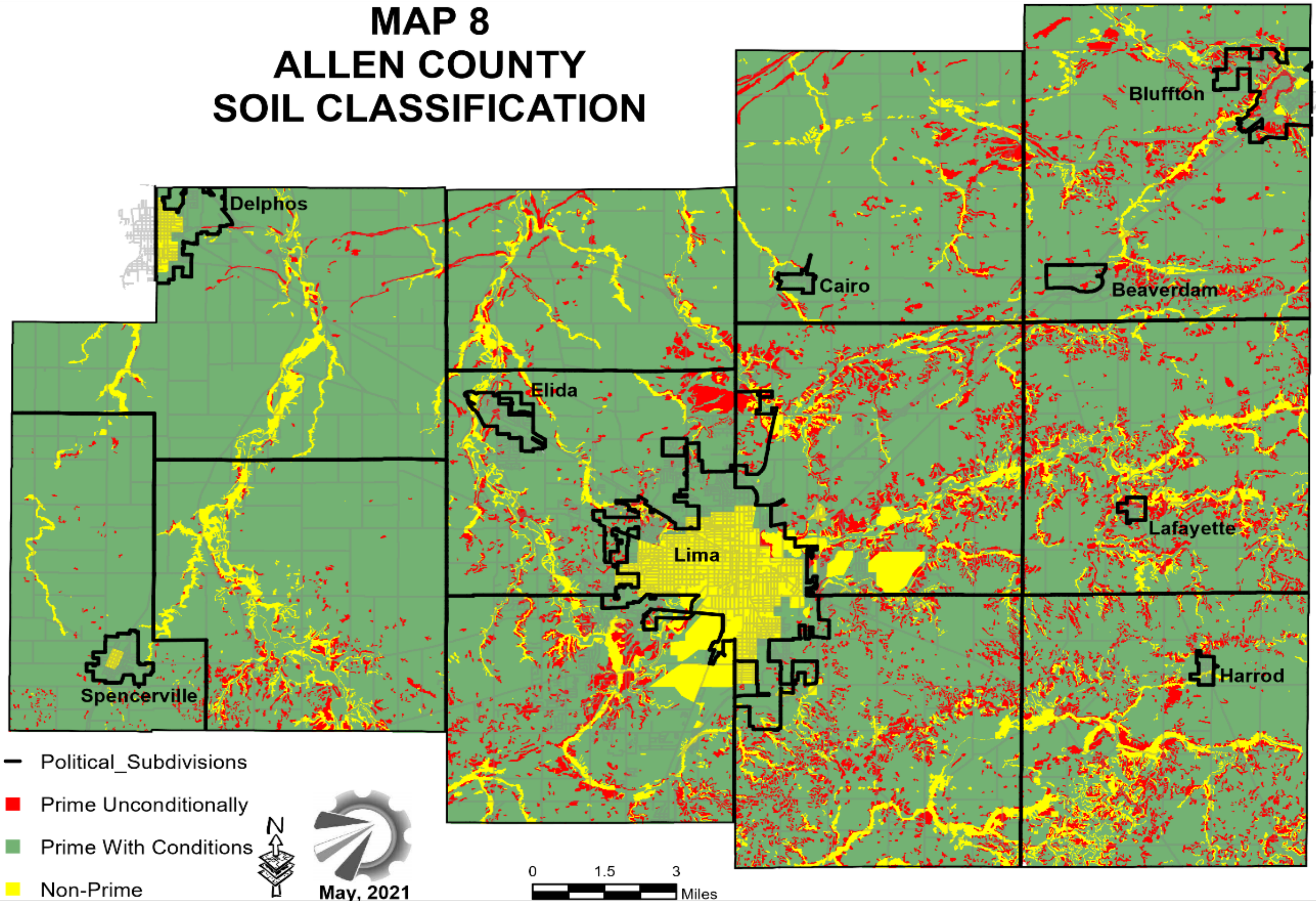
- **Blount-Pewamo:**

Intense, level to gently sloping, somewhat poorly drained, and very poorly drained soils formed in the till. Such grounds are suitable for cropland, pasture, and woodlands. Concerns include seasonal wetness, erosion, ponding, and compaction.

MAP 7 MINES & QUARRIES



MAP 8 ALLEN COUNTY SOIL CLASSIFICATION



- **Blount-Glynwood-Pewamo:**
Very deep, level to strongly sloping, somewhat poorly drained, moderately well-drained, and very poorly drained soils that formed in the till. Such grounds are suitable for cropland, pasture, woodland, and urban uses. Concerns include erosion, seasonal wetness, ponding, and compaction.
- **Pewamo-Blount:**
Very deep, level to gently sloping, poor, and very poorly drained soils formed in the till. Such grounds are suitable for cropland, pasture, and woodland. Concerns stem from seasonal wetness, erosion, compaction, and ponding.
- **Cygnnet-Renssler-Alvada:**
Very deep, level or nearly level, moderately well-drained and very poorly drained soils that formed in loamy deposits and underlying till. Such grounds are suitable for cropland and woodland. Concerns stem from seasonal wetness, compaction, and ponding.
- **Renssler-Cygnnet-Gallman:**
Very deep, level-to-strongly sloping, very poorly to moderately drained and well-drained soils formed in loamy deposits largely and/or underlying till. Suitable uses include cropland, pasture, and woodland. Concerns include seasonal wetness, erosion, and ponding.
- **Hoytville-Shawtown:**
Very deep, level-to-gently sloping, very poorly and moderately drained soils formed in till or in stratified water-sorted deposits overlying till. Such soils are suitable for cropland. Concerns include seasonal wetness, ponding, high clay content, erosion, and compaction.
- **Westland-Gallman-Thackery:**
Very deep, level-to-strongly sloping, very poorly and moderately drained soils that formed in loamy deposits and the underlying outwash. Such soils are suitable for cropland and woodland. Concerns include seasonal wetness,

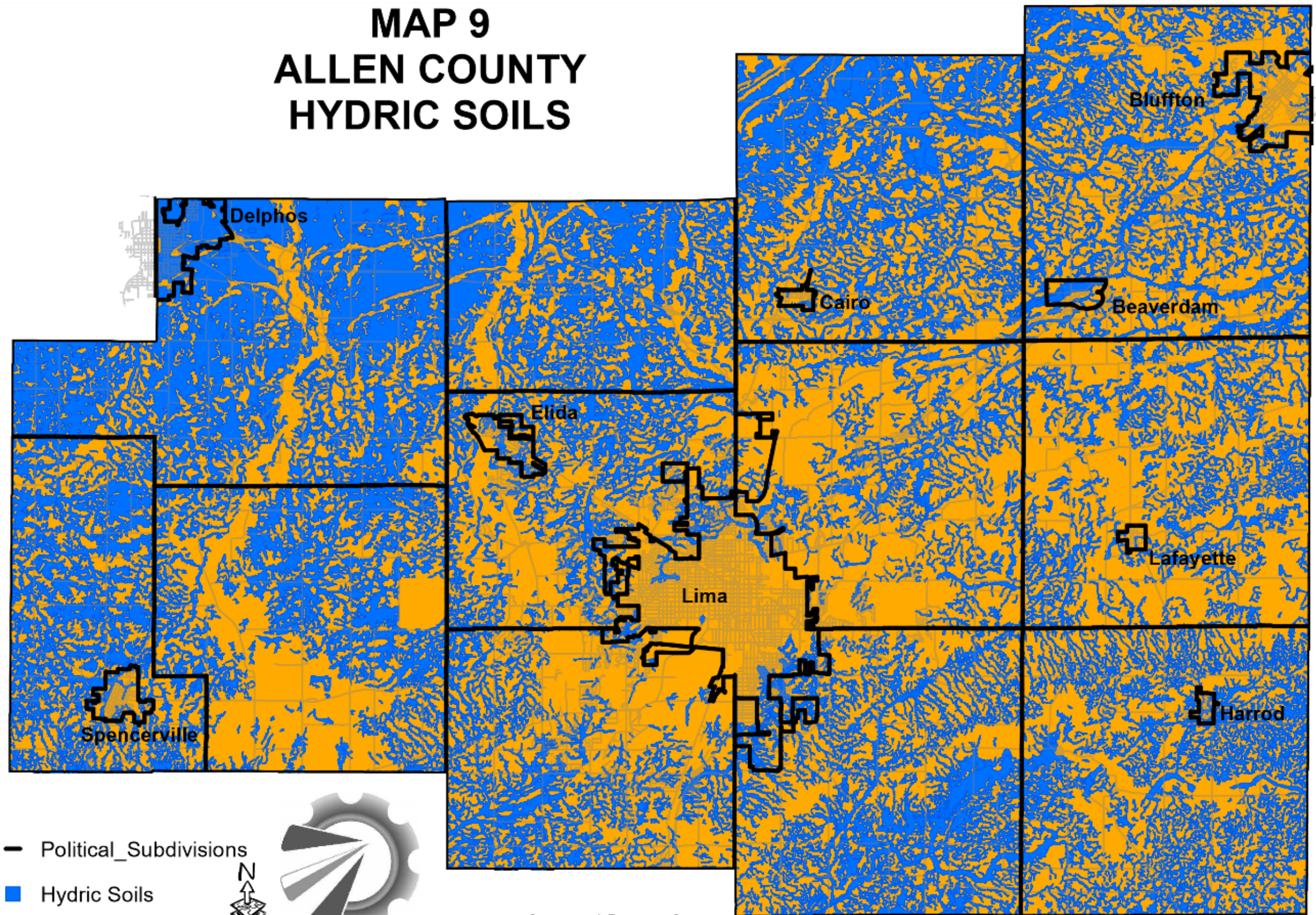
3.4.2 Hydric Soils

Based on a soil analysis completed by the USDA-NRCS, 17 soil types were classified as hydric soils. Hydric soils are soils that formed under conditions of saturation, flooding, or ponding. Such soils tend to support the growth and regeneration of vegetation that depend on continued high-water saturation. Some hydric soil types encounter periods when they are not saturated and depend on the existing water table, flooding, and ponding for survival. The presence of hydric soils is an indicator of wetlands and floodplain areas. However, hydric soil criteria must also meet EPA criteria for it to be classified as a wetland.

Hydric soils have several agricultural and nonagricultural limitations. Such limitations can be minimized with sound policy decisions predicated upon local land-use planning, conservation planning, and assessment of potential wildlife habitats. Hydric Soils are presented in Map 9. Notice the correlation between the location of hydric soils in Map 9 and wetlands and floodplains identified earlier in Map 6.

Limitations of hydric soils can be minimized with sound policy decisions.

MAP 9 ALLEN COUNTY HYDRIC SOILS



- Political_Subdivisions
- Hydric Soils
- Non-Hydric Soils



June, 2021

0 1.5 3
Miles

3.4.3 Prime Farmland

The USDA has defined prime agricultural land as the land best suited for the production of food, feed, forage, fiber, and oilseed crops. Prime farmland is defined as areas of land that possess the ideal combination of physical and chemical properties necessary for crop production. Prime farmland is predicated upon soils with air and water permeability but retains adequate moisture-holding capacity. Prime soils are those which are not prone to flooding or are protected from flooding. Such soils have natural fertility and an acceptable level of alkalinity or acidity. Prime soils have limited relief, typically slopes of 0 to 6 percent. Prime farmland produces the highest yields with minimal inputs of energy and economic resources; farming prime farmland results in the least damage to the environment.

Approximately 234,400 acres or 90.02 percent of the total acreage in Allen County meets the general soil requirements for prime farmland as defined by the USDA-NRCS. However, examining specific limitations, we find that most of that prime farmland is prone to occasional flooding and standing water and requires drainage improvement. Classifying soil by crop productivity capabilities and site limitations, Allen County has 23,773 acres of prime farmland and 210,621.4 acres of prime farmland with conditions. Map 10 depicts the ranked location of prime farmland by condition as identified using USDA Land Evaluation and Site Analysis (LESA) variables. Of note is the fact that less than 200,000 acres are still in agricultural production.

Less than 200,000 acres are still in agricultural production.

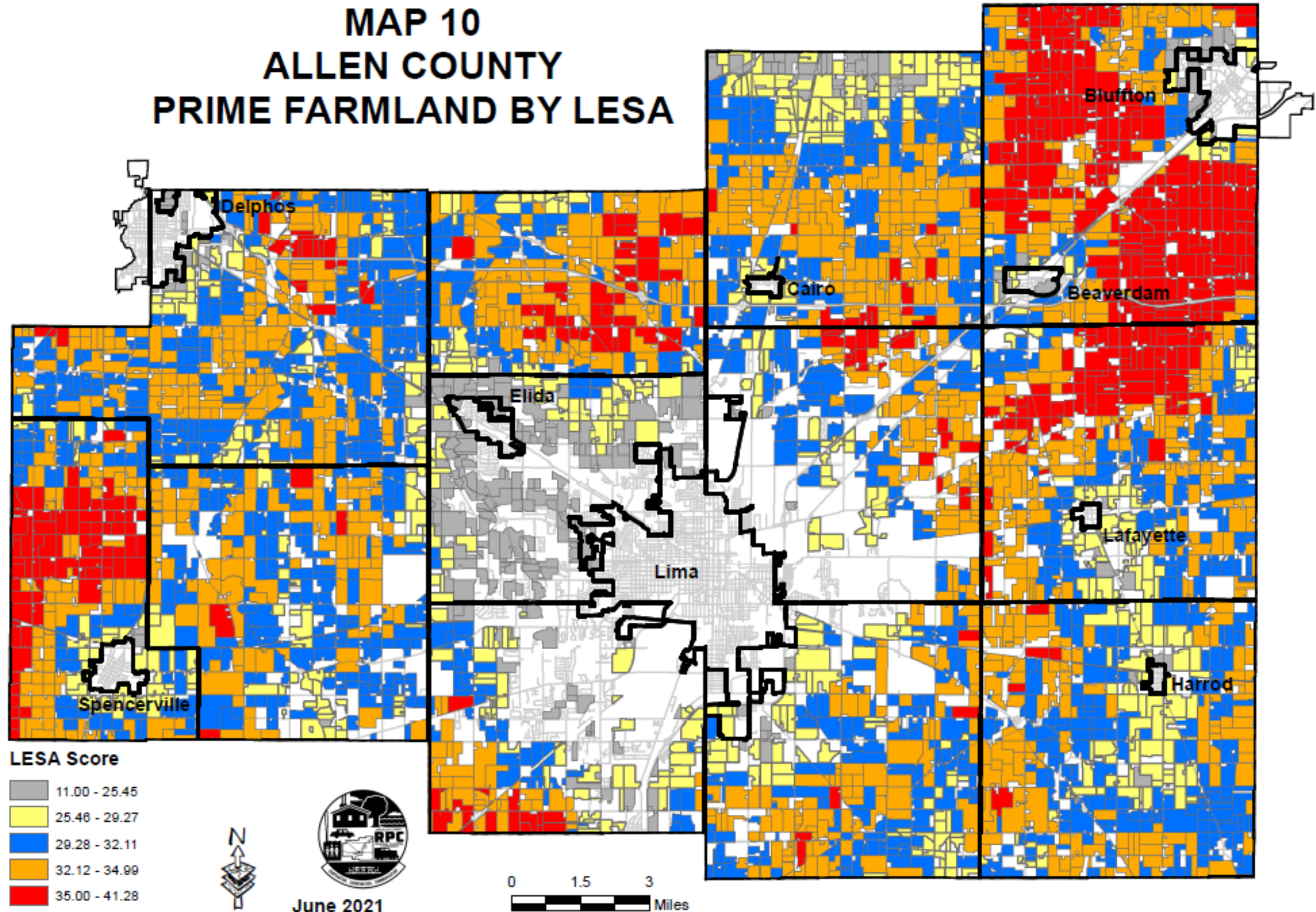
3.5 Land Use: Patterns & Conversion

Land use depends on particular attributes, including its size, shape, and relative location. In addition, land use is affected by a parcel's access or proximity to utilities, roadways, waterways, services, and markets. Finally, environmental attributes and constraints, such as minerals, topography, scenic characteristics, flooding, poor soils, etc., can also influence land use.

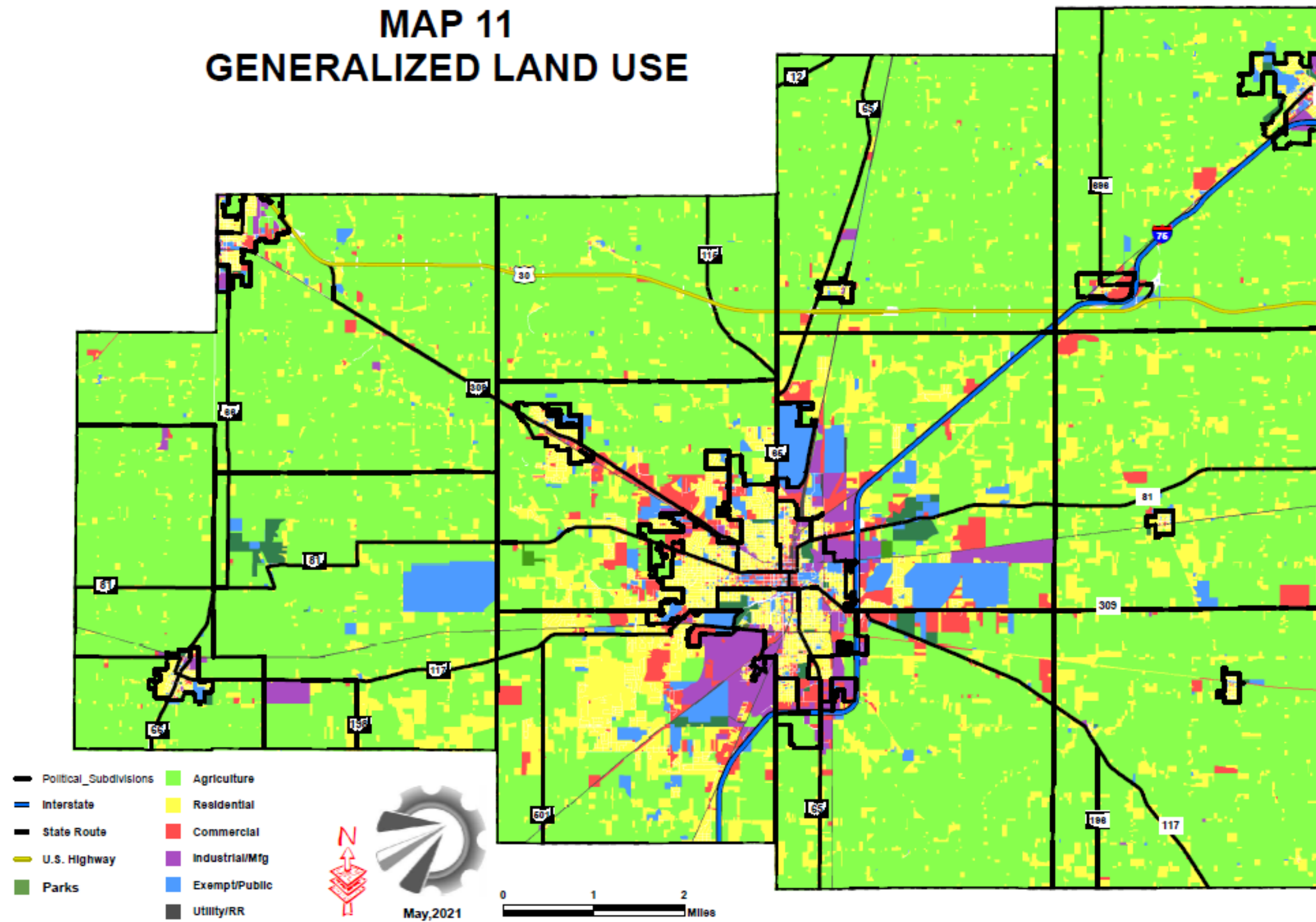
An analysis of the manner and extent to which land is used or employed over a period of time results in distinct land use patterns. General economic uses typically reflect agricultural, commercial, industrial, residential, recreational, utility/transportation, and public/quasi-public land use patterns. Table 1 identifies the extent of specific land-use activities by type and acreage. Map 11 identifies general patterns of land use in Allen County.

Over the last 40 years, land-use conversion in Allen County has largely been confined to the Lima Urbanized Area. However, low-density residential strip developments are evident throughout the County. Significant residential subdivision developments have occurred exclusively within the urbanized areas, nearly all within 3 miles of the City of Lima. The FIRE industries, Finance, Insurance, and Real Estate, coupled with the government, have remained anchors within central business districts (CBDs) of Lima, Delphos, Bluffton Spencerville, and Elida. Commercial and service activities, although once exclusively limited to urban confines, have spread to suburban areas. Clustered retail activities have migrated almost exclusively to two of the region's shopping centers located on the fringe of municipal utility service areas. Aging shopping centers more centrally located are currently in a state of decline. And, although manufacturing activities have been mainly limited to older, more developed tracts within or adjacent to the City of Lima, newer, more modern industrial sites have been designed with ready access to I-75 and the area's state routes.

MAP 10 ALLEN COUNTY PRIME FARMLAND BY LESA



MAP 11 GENERALIZED LAND USE



**TABLE 1
LAND USE BY TYPE, ACRES & PARCEL**

Land Use Type	Total Acres	Percent of Total Area	Total Parcels	Percent Total Parcels	Mean Parcel Size
Agricultural Uses	196,849.08	74.77	4,631	8.78	42.51
Commercial Uses	8,322.99	3.16	4,239	8.04	1.96
Industrial Uses	5,342.88	2.03	526	1.00	10.16
Residential Uses	40,895.99	15.53	40,885	77.6	1.00
Public/Quasi Public Uses	9,699.30	3.68	2,219	4.21	4.80
Recreational Uses	884.07	.34	42	.08	38.63
Railroad/Utilities	1,265.96	.48	175	.33	7.23
Total	263,260.27	100.00	52,717	100.0	206.33

Note: Land use, acreage, and parcel data reflect December 2020 Allen County Auditor data. Such data incorporates acreage consumed by land supporting transportation activities; some overlap exists between industrial and utility acreage and between agricultural and residential due to residential and farming uses occurring on the same parcels. Statistical accuracy is assumed at the 98th percentile.

Furthered by easy access, utilities, and developable land, urban sprawl has slowly etched its presence across most of Allen County. Residential land use has been responsible for the bulk of rural to urban conversion. Between 1970 and 2000, platted residential subdivision developments consumed 2,252.7 acres outside of municipal boundaries. Such developments provided land for 4,324 residential units, using an average of .52 acres per lot. Data for the same period reflected that 4,080.5 acres of undeveloped property were consumed for residential using the minor subdivision process. This process, which facilitates uncontrolled "shotgun" type development, provided 2,532 units, resulting in an average lot size of 1.61 acres.

Based on mapped parcel analysis, a more recent study of land-use changes across Allen County for the 2014-2021 period revealed an over 4,600 acres increase in residentially zoned parcels. The total acreage dedicated to industrial uses was reduced by 250 acres and is down from almost 5,600 acres to a little over 5,300. Agricultural land uses decreased by nearly 1,700 acres. Table 2 identifies the components of change over the study period.

**TABLE 2
ALLEN COUNTY LAND USE CHANGE 2014-2021**

Year	Land Use by Type and Acreage			
	Residential	Commercial	Industrial	Agricultural
2014	36,244.67	8,337.88	5,593.26	198,528.21
2021	40,895.99	8322.99	5342.88	196,849.08
Net Gain/Loss	4,651.42	-14.89	-250.38	-1,679.13

The relationship between the process of suburbanization, urban decentralization, and land-use conversion is complicated at best. Although regulatory controls, such as zoning and subdivision codes, and policies developed to control access management and infrastructure investments have the means to control such sprawl, sprawl continues largely unabated due to fragmented legislative control and disjointed or nonexistent policies.

3.6 Summary

The unique natural features of the community contribute to a wide variety of available services and manufacturing pursuits. While traditional manufacturing and other industrial business operations are scattered throughout the community, the retail and service sectors often locate themselves in suburban locations. As a result, services are now the leading sector of employment within Allen County. The mixture of manufacturing, technology, and retail businesses serving residents, businesses, and visitors alike, contributes to a rich quality of life, a struggling but relatively stable economy, and an aging labor force needing increased educational attainment and technical training.

Growth in population and employment opportunities are not uniform across the community, however. For example, the percentage of population growth in several townships is experiencing double-digit increases while some urban centers are experiencing double-digit declines. And, while employment in the community is experiencing growth, the central city area suffers from historically high unemployment, the loss of manufacturing jobs, and a declining tax base.

In recent years, prime farmland has been used indiscriminately for development, especially single-family home sites. Such unplanned development has resulted in uncoordinated and haphazard development along once rural roadways. It now ultimately requires the extension of expensive municipal infrastructure to address health, safety, and environmental hazards.

A rural to urban conversion is underway. Fueled by hundreds of acres of available farmland, the lack of coherent land use policies is resulting in a haphazard pattern of urban sprawl.

With utilities extended and available, greenfield developments (residential and commercial) are increasingly located in more rural locations than in the older brownfield sites located in the urban centers. The cumulative impact reveals urban centers are struggling to provide safe, affordable housing while maintaining adequate public services for an increasingly more impoverished and typically minority-based population. In the townships, the demands of a more urban/suburban population are depleting the townships' fiscal resources and ability to provide needed services, including basic street maintenance and snow removal and police, fire, and emergency medical services.

SECTION IV POPULATION

Historically populations changed rather slowly over time when left to their own accord. However, based on various competing and intervening factors, populations can now change with relative speed and catch a community off guard and unprepared. Moreover, in today's economic climate and social conditions, populations are much more fluid. Therefore, a better understanding of the local population is warranted to address this community's financial well-being. In this report, population refers to the number of inhabitants in a given place during the 2010 Census. Herein, population data reflects the total number of residents in a specific political subdivision at that given time. A thorough analysis of the Allen County population requires the use of demographic constructs as well. Demographics include migration, household size, age, race/ethnicity, educational attainment, income, and employment.

Assessing a community's population and its respective demographic measures is vital to understanding the demand for and consumption of products and services. This understanding is also necessary to broaden the community's economic base and support the local labor force. Moreover, population data and demographic characteristics provide good indicators of future population growth/decline and allow communities to assess better policy decisions/development and the wise expenditures of public funds.



The population of Allen County in 2010, according to the Census, was 106,331 persons. This population, however, is not uniform in its demographics, distribution, or density. Therefore, this section attempts to highlight specific characteristics of the community's population and provide broad generalizations that will further the strategic planning process.

4.1 Population Change

As demonstrated in Illustration 1, the population of Allen County has continued to experience a general decline since 1980, when it reached a population plateau of 112,241 persons. Comparison to the 1980 population reveals the current population has declined by 5,910, or 5.3 percent. Conversely, the Ohio population growth rate over the same period was 6.8 percent.

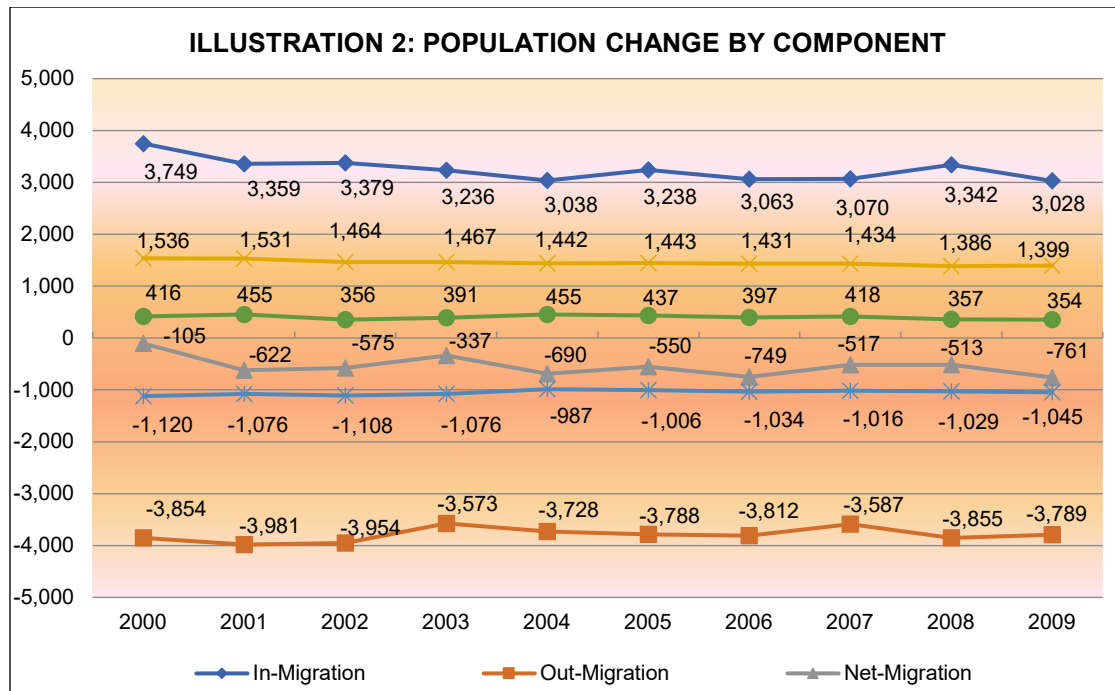
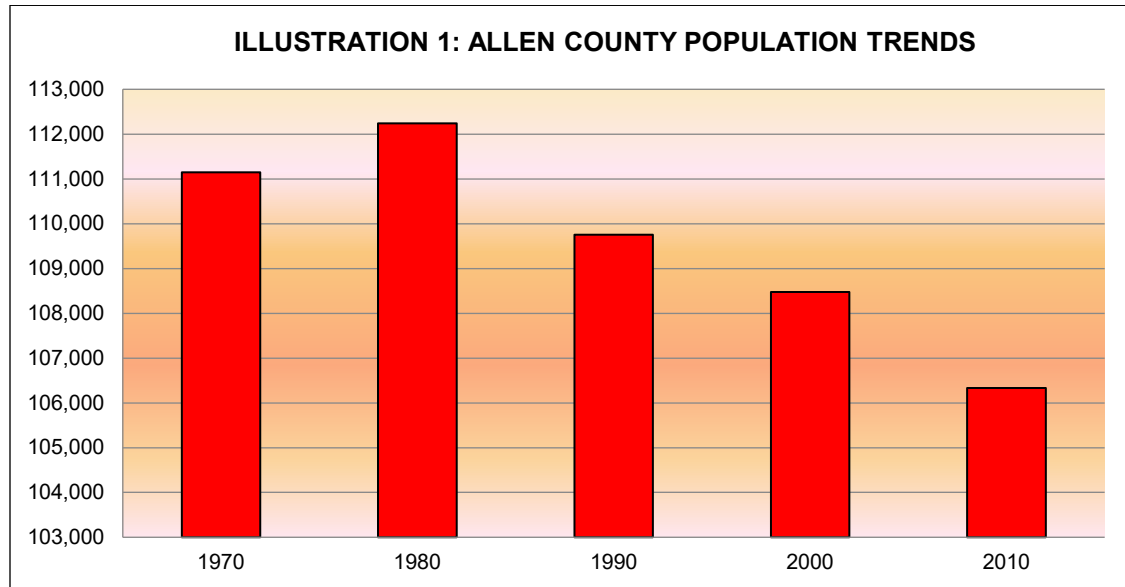
Population change is the net result of the relationship between the number of births and the number of deaths in a population, and the gross migration rate within the community. Examining 2010 Census data, Allen County has lost 2,142 residents since the 2000 Census, a loss in population of -2.0 percent (primarily from out-migration as indicated in Illustration 2). For comparison purposes, the State of Ohio grew by only 1.7 percent during this same period.

Since 2000, a 2.0% population loss is due to out-migration.

From a historical perspective, Allen County has experienced a 2.4% increase in population over the 1960 to 2010 period.

Population change, whether growth or decline, is not static, nor is it uniform. For example, with the decline since 1980 noted, the County has experienced an overall population increase of 2.4 percent when extending the period from 1960 to 2010. Many political subdivisions within Allen County have experienced an extended period of continued growth,

while others have experienced overall growth in cyclical spurts since 1960. Table 3 identifies each of the various political subdivisions by population and decennial census period.



Given the State's rate of population growth since 2000 (1.6%), it is interesting to point out that several local government units have experienced population growth equal to or greater than the rate of growth for the State. Other urban areas within the region

experienced increases/decreases based on the growth/decline of their industrial sector's employment base. Cities such as Wapakoneta (4.1%) and Findlay (5.7%) saw solid population gain while others (Bellefontaine, 2.3%; Ottawa, 2.1%; Van Wert, 1.5%) realized only marginal increases, and others in the region, including Kenton (-0.9%), and Leipsic (-6.4%) lost population.

**TABLE 3
POPULATION 1960-2010**

Political Subdivision	1960	1970	1980	1990	2000	2010	Percent Change
Allen County	103,691	111,144	112,241	109,755	108,473	106,331	2.5
Beaverdam	514	525	492	467	356	382	-25.7
Bluffton	2,591	2,935	3,310	3,367	3,896	4,125	59.2
Cairo	566	587	596	473	499	524	-7.4
Delphos	6,961	7,608	7,314	7,093	6,944	7,101	2.0
Elida	1,215	1,211	1,349	1,486	1,917	1,905	56.8
Harrod Village	563	533	506	537	491	417	-25.9
Lafayette Village	476	486	488	449	304	445	-6.5
Lima City	51,037	53,734	47,817	45,549	41,578	38,771	-24.0
Spencerville Village	2,061	2,241	2,184	2,288	2,235	2,223	7.9
Amanda Township	1,217	1,498	1,769	1,773	1,913	2,071	70.2
American Township	9,184	8,766	11,476	10,921	13,599	12,476	35.8
Auglaize Township	1,740	2,245	2,042	1,936	2,359	2,366	36.0
Bath Township	8,307	9,323	9,997	10,105	9,819	9,725	17.1
Jackson Township	1,523	1,761	2,214	2,288	2,632	2,611	71.4
Marion Township	2,222	2,644	2,734	2,775	2,872	2,777	25.0
Monroe Township	1,386	1,490	1,621	1,622	1,720	1,702	22.8
Perry Township	5,045	3,751	3,586	3,577	3,620	3,531	-30.0
Richland Township	1,530	1,515	1,628	1,821	2,015	1,955	27.8
Shawnee Township	9,658	9,734	12,344	12,133	12,220	12,433	28.7
Spencer Township	863	960	925	832	871	844	-2.2
Sugar Creek Township	1,166	1,209	1,242	1,311	1,330	1,283	10.0
*As of November 2012, Fort Shawnee ceased to exist							

4.2 Households & Household Size

Another population-related factor to recognize is the change in the total number and size of households. This measure is essential since each household requires a dwelling unit. In most cases, the size of the household will determine specific housing components such as the number of bedrooms, bathrooms, square footage, play area, etc. Therefore, as the number of households changes in number or character, housing consumption changes. If the number of units increases, then the housing supply must reflect the growth. As the characteristics of the household change, new residency patterns are established. From a public policy perspective, balancing the available housing supply with the housing demand; otherwise, voids develop whereby housing remains unoccupied/vacant, and household needs go unmet.

Between 2000 and 2010 the number of households in Allen County increased 0.1%.

Census data reveals the total number of households, and the rate of change in the total households reported between 2000 and 2010 is changing. For example, table 4 indicates the total number of Allen County households in 2010 was

40,691, an increase of 0.1 percent over the 2000 figure of 40,646 households. This increase compares to a similar but significantly larger statewide increase of 3.5 percent.

Household size is also a factor. Table 4 also presents information relative to the changing status of household size. In 1990, the average household size in Allen County was 2.52 persons per household. 2010 Census data documents the average household size in the County as 2.47 persons, a decline of 2.0 percent in size but still larger than the State mean size of 2.44 persons per household. Notice also that household size varies by political subdivision across Allen County. This data may very well indicate that a historical trend of families with children is changing to more two-person households, single-parent households with children under the age of 18 years, and households comprised of retirees. The implications of smaller households should be monitored as household, and demographic characteristics will affect travel characteristics and land use patterns.

TABLE 4 TOTAL HOUSEHOLDS & AVERAGE HOUSEHOLD SIZE BY POLITICAL SUBDIVISION 2000-2010						
Political Subdivision	2010 Total	2000 Total	% Change	2010 Avg Size	2000 Avg Size	% Change
Allen County	40,691	40,646	0.1%	2.47	2.52	-2.0%
City of Lima	14,221	15,410	-7.7%	2.39	2.42	-1.2%
American Township	5,344	4,933	8.3%	2.46	2.38	3.4%
Bath Township	3,827	3,815	0.3%	2.52	2.54	-0.8%
Shawnee Township	3,327	3,097	7.4%	2.59	2.64	-1.9%
City of Delphos	2,893	2,717	6.5%	2.41	2.52	-4.4%
Marion Township	1,016	1,012	0.4%	2.6	2.84	-8.5%
Village of Fort Shawnee*	1,506	1,524	-1.2%	2.49	2.53	-1.6%
Perry Township	1,453	1,417	2.5%	2.49	2.5	-0.4%
Village of Bluffton	1,428	1,329	7.4%	2.31	2.32	-0.4%
Jackson Township	1,003	956	4.9%	2.61	2.75	-5.1%
Village of Spencerville	817	845	-3.3%	2.62	2.54	3.1%
Auglaize Township	893	843	5.9%	2.69	2.8	-3.9%
Village of Elida	708	698	1.4%	2.67	2.75	-2.9%
Amanda Township	759	684	11.0%	2.72	2.76	-1.4%
Richland Township	604	658	-8.2%	2.64	2.98	-11.4%
Monroe Township	634	607	4.4%	2.7	2.83	-4.6%
Sugar Creek Township	495	476	4.0%	2.54	2.79	-9.0%
Spencer Township	326	304	7.2%	2.61	2.87	-9.1%
Village of Cairo	198	181	9.4%	2.70	2.76	-2.2%
Village of Harrod	143	173	-17.3%	2.87	2.84	1.1%
Village of Beavercreek	144	140	2.9%	2.6	2.54	2.4%
Village of Lafayette	161	118	36.4%	2.72	2.58	5.4%
*As of November 2012, Fort Shawnee ceased to exist and has been absorbed by Shawnee Twp						

4.3 Age & Age Cohorts

Age is a critical characteristic of a community's population. Age reflects certain attitudes and beliefs. Age also reflects demands for education, employment, housing, and services. Age cohorts attempt to identify a specific population within a particular age grouping and are important in determining particular needs or the degree to which that specific population segment will require particular services. The construction of a population pyramid furthers an analysis of age and age cohorts by gender differences. Such a

construction provides valuable insights into fertility and morbidity issues and includes data on workforce availability by age and gender.

Consistent with national trends, the County's population is aging. The population's median age is 38.3 years, which compares with a median of 38.8 and 37.2 years with Ohio and the United States, respectively. Table 5 provides a breakdown of age cohorts by gender for the County.

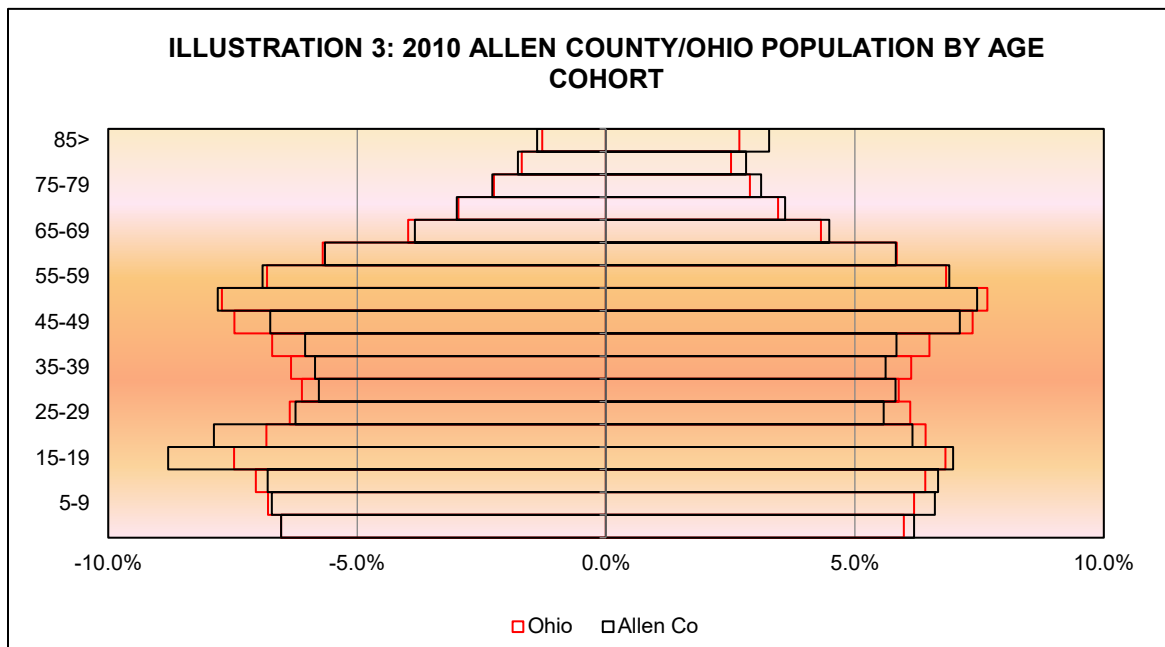
More than a third of the population is not able to fully contribute to the economic growth and earning power of the community.

Age data reveals that one in five of the County's population (21.1%) is below the age of 16, and another seventh (14.8%) is past retirement age. Data suggests that simply due to the age of the population, more than a third of the population cannot fully contribute to the economic growth and earning power of the community. In addition, data shows that an additional 5.7 percent of the population is categorized in the pre-retirement age group (60-64) and may be readying for retirement.

TABLE 5 ALLEN COUNTY POPULATION BY AGE COHORTS & GENDER						
Cohort	Male	Percent	Female	Percent	Total	% Total
< 5	3,501	6.5%	3,260	6.2%	6,761	6.4%
5 to 9	3,602	6.7%	3,481	6.6%	7,083	6.7%
10 to 14	3,645	6.8%	3,515	6.7%	7,160	6.7%
15-19	4,719	8.8%	3,675	7.0%	8,394	7.9%
20-24	4,226	7.9%	3,245	6.2%	7,471	7.0%
25-29	3,345	6.2%	2,938	5.6%	6,283	5.9%
30-34	3,095	5.8%	3,065	5.8%	6,160	5.8%
35-39	3,136	5.8%	2,960	5.6%	6,096	5.7%
40-44	3,241	6.0%	3,075	5.8%	6,316	5.9%
45-49	3,619	6.7%	3,746	7.1%	7,365	6.9%
50-54	4,185	7.8%	3,929	7.5%	8,114	7.6%
55-59	3,701	6.9%	3,635	6.9%	7,336	6.9%
60-64	3,027	5.6%	3,068	5.8%	6,095	5.7%
65-69	2,061	3.8%	2,362	4.5%	4,423	4.2%
70-74	1,609	3.0%	1,896	3.6%	3,505	3.3%
75-79	1,225	2.3%	1,641	3.1%	2,866	2.7%
80-84	950	1.8%	1,482	2.8%	2,432	2.3%
85+	743	1.4%	1,728	3.3%	2,471	2.3%
Totals	53,630	100.0%	52,701	100.0%	106,331	100.0%



An examination of the community's population reveals an increasing senior population. Concerns center on the availability of a younger workforce and the need for appropriate senior housing and services to accommodate pre-retirement and post-retirement households. The following construct, Illustration 3, depicts an age/gender profile of Allen County's population as documented in the 2010 Census against the State of Ohio for the same period.



4.4 Race & Ethnic Diversity

Businesses have been forced to search for ways to make themselves more competitive and maintain any economic advantage they currently enjoy due to changing domestic and global economies. Strategies to address the needs of multi-national companies, foreign markets, and cultural pluralism require diverse thinking, new marketing schemes, and different ways of dealing with diverse people.



Demographic changes are also taking place across our domestic markets. Within the United States, minority populations are making up a more significant proportion of local consumer markets. In 2010, the country's white non-Hispanic population totaled 196 million, or roughly 64 percent of the nation's population. Hispanics are now the largest minority with a population of 50 million. The minority population of the United States represents 36 percent of the country's 2010 population. Given such, businesses must realize that racial and ethnic diversity is necessary for good business in an increasingly culturally and racially pluralistic marketplace.

The community has followed national trends and grown more racially diverse.

The County's population has grown more racially and ethnically diverse during the past decade. Racially, whites comprise the largest percentage of the population at 83.8 percent. However, the largest minority group within Allen County is African American, which comprises 11.9 percent of the total population. All other minority groups comprise approximately 4.3 percent of the total County population.

Although dispersed across the County, the County's largest minority, the African American population, is primarily concentrated in the City of Lima, where it constitutes 26.5 percent of the City's population. Table 6 reveals the extent of racial diversity across Allen County compared to the State of Ohio.

**TABLE 6
2010 POPULATION BY RACE**

Race	Allen County	Percent	Ohio	Percent
Total:	106,331	100.0%	11,536,504	100.0%
White alone	89,089	83.8%	9,539,437	82.7%
Black or African American alone	12,639	11.9%	1,407,681	12.2%
American Indian or Alaskan Native alone	207	0.2%	25,292	0.2%
Asian alone	740	0.7%	192,233	1.7%
Native Hawaiian or Other Pacific Islander alone	15	0.0%	4,066	0.0%
Some other race alone	845	0.8%	130,030	1.1%
Two or more races	2,796	2.6%	237,765	2.1%
Hispanic	2,513	2.4%	354,674	3.1%

4.5 Educational Attainment

Many factors affect employment rates among adults. None, however, may be as important as educational attainment levels. Higher levels of educational attainment have repeatedly demonstrated higher income earnings regardless of gender. In addition, positions that require higher educational attainment levels tend to offer more job satisfaction. Moreover, individuals with lower educational attainment levels, those with no high school diploma or GED, experience higher rates of unemployment (nearly three times the rate for those that have completed a bachelor's degree) and less income (-60.4%) when they are employed. Therefore, it is crucial to support local school initiatives, post-secondary advancement, and continuing education programs to strengthen the skill sets of the local population and labor force.

Although higher educational attainment levels have demonstrated higher income earnings, only 17.1% of residents have completed a 4-year college degree program.

Locally accessible post secondary schools include:

- The Ohio State University
- Ohio Northern University
- Rhodes State College
- Bluffton University
- University of Northwestern Ohio
- University of Findlay
- Tiffin University
- Mt. Vernon Nazarene University



Table 7 presents data summarizing the educational attainment levels of the Allen County population aged 25 years or more. This data shows that over 7,701 individuals, or 11.1 percent of all individuals 25 years of age or older, have not completed a high school education. This statistic compares favorably against state and national attainment levels where 11.7 and 14.1 percent of the respective populations fail to earn high school diplomas. However, given that there are several very

reputable post-secondary schools locally accessible, it is somewhat disappointing that only 11,868 adult residents have completed a 4-year and/or master college degree

programs (9.7% and 7.4%, respectively) when compared to State and national data (24.6% and 28.5% respectively).

TABLE 7 EDUCATIONAL ATTAINMENT FOR THE POPULATION 25 YEARS & OVER						
Educational Attainment	White Population		African American Population		Total Population	
	Persons	Percent	Persons	Percent	Persons	Percent
Less than High School Diploma	5,984	10.1%	1,377	19.0%	7,701	11.1%
High school graduate, GED	25,093	42.3%	3,311	45.7%	29,252	42.1%
Some college, or Associates degree	17,593	29.6%	2,122	29.3%	20,685	29.8%
Bachelor's degree or higher	10,673	18.0%	439	6.1%	11,868	17.1%
Totals	59,343	100.0%	7,249	100.0%	69,506	100.0%
*ACS 2011 1-Year Estimates						

4.6 Income: Household, Family & Per Capita

Data for the three (3) most widely used indices of personal income, including per capita income, household income, and family income, are displayed in Table 8. The data suggests Allen County's income has continued to lag behind state and national income trend lines.

Allen County is lagging behind the state and national income levels with respect to household, family, and per capita income.

The median household income within Allen County has lagged behind Ohio and the United States since the 2000 decennial census period. As a result, the income gap has increased slightly from -9.3 percent in 1999 to -11.4 percent in 2013 when comparing median household incomes across the State. However, the results are not as drastic compared to the United States; the deficit increased from -11.5 percent in 1999 to -18.3 percent in 2013.

A similar pattern exists when examining family median income. When comparing them to national trend lines, median family incomes across the County slipped over the last decennial period. For example, median family income in Allen County declined to 84.7 percent of the nation's median family income in 2013, a decrease of 4.7 percent compared to the 1999 level (89.4%). However, comparing Allen County's median family income against the State income stayed the same between 1999 (89.4%) and 2013 (89.4%).

TABLE 8 COMPARATIVE INCOME MEASURES BY DECENNIAL CENSUS & AMERICAN COMMUNITY SURVEY					
Income: By Type & Year	United States	Ohio	Allen County	Allen County as % of US	Allen County as % of Ohio
2013*					
Median Household	\$53,046	\$48,308	\$42,823	80.7	88.6
Median Family	\$64,719	\$61,371	\$54,846	84.7	89.4
Median Non-Family	\$31,864	\$28,128	\$23,232	72.9	82.6
Per Capita	\$28,155	\$26,046	\$22,295	79.2	85.6
1999					
Median Household	\$41,994	\$40,956	\$37,048	88.5	90.7
Median Family	\$50,046	\$50,037	\$44,723	89.4	89.4
Median Non-Family	\$25,705	\$24,005	\$20,426	79.5	85.1
Per capita	\$21,587	\$21,003	\$17,511	81.1	83.4
*ACS 2013 5-Year Estimates					

The median non-family income for the County followed a downward trend during the decennial period. In 2013, the median non-family income was 82.6 percent of the State's median value and 72.9 percent of the entire nation. While in 1999, the County's proportion of median non-family income levels was higher at 85.1 percent and 79.5 percent of the state and national levels, respectively.

Per capita income for Allen County in 2013 was \$22,295, a jump of 27 percent from 1999 figures. This compares favorably with state per capita figures of \$26,046 and national per capita income levels of \$28,155, or an increase from 1999 of 24 and 30 percent, respectively. Therefore, per capita income level growth increased compared to state levels but fell just shy of national growth trends over the decennial period. In 2013 Allen County's per capita income was 88.6 percent of the state and 83.4 percent of the national figures.

Table 9 provides a detailed breakdown of household income by type and income levels for 2013. Households with incomes less than \$15,000 in 2013 totaled 15.8 percent of all households in Allen County. An examination of family and non-family households provides greater detail. Data suggests that 9.9 percent of all families and 30.3 percent of non-family households earned less than \$15,000 in 2013.

TABLE 9
INCOME IN 2013 BY ALLEN COUNTY HOUSEHOLD TYPE

Income Range	Household		Families		Non-Family Household	
	Number	Percent	Number	Percent	Number	Percent
Less than \$10,000	3,854	9.50%	1,735	6.39%	2,440	18.18%
\$10,000 - \$14,999	2,560	6.31%	944	3.48%	1,622	12.09%
\$15,000 - \$24,999	5,527	13.63%	2,612	9.62%	3,111	23.18%
\$25,000 - \$34,999	4,831	11.91%	2,961	10.91%	1,931	14.39%
\$35,000 - \$49,999	6,210	15.31%	4,159	15.32%	1,944	14.49%
\$50,000 - \$74,999	7,791	19.21%	6,013	22.15%	1,569	11.69%
\$75,000 - \$99,999	4,376	10.79%	3,825	14.09%	442	3.30%
\$100,000 - \$149,999	3,790	9.35%	3,468	12.78%	241	1.80%
\$150,000 - \$199,999	882	2.17%	796	2.93%	27	0.20%
\$200,000 or more	731	1.80%	630	2.32%	94	0.70%
Totals	40,552	100.00%	27,143	100.00%	13,422	100.00%

*ACS 2013 5-Year Estimates

Examination of income by household type reveals that the largest concentration of households and family incomes were found in the \$50,000 to \$74,999 income bracket with 19.2 and 22.2 percent respectively; the incomes of one in two (53.5%) non-family households were concentrated below \$25,000.

4.7 Poverty Status: Persons & Families Below Poverty Level

The 2013 ACS provides information for the number of individuals and families whose incomes fall below the established poverty level. ACS 2013 5-year estimates revealed that 18,850 individuals or 18.6 percent of all individuals, 7,109 households or 17.5 percent of all households, and 3,693 families or 13.6 percent of all families were below the established poverty level on income and household size.

In 2011, 19.3% of all individuals, 18.9% of all households and 14.1% of all families in Allen County were below poverty level.

Families with children were more likely to encounter poverty status than those families without children. In fact, of all families suffering poverty conditions, 85.7 percent had children, and 17.0 percent had children under 5-years of age. For comparison purposes, data indicates that 15.0 percent of all households and 11.6 percent of all families within the State of Ohio were below the established poverty level.

Examining income data from the 1999 census report reveals an alarming trend in the proportion of individuals and families in poverty. 7,407 individuals and 1,169 families entered poverty status between census tabulations, representing an increase of 7.2 percent and 4.5 percent, respectively. Households with public assistance increased slightly from 3.1 percent in 1999 to 3.5 percent in 2013. For comparison purposes, the percentage of households receiving public assistance in Ohio is 8.1 percent.

Relevant information on family households and poverty status are presented in Table 10. Table 11 provides an overview of poverty as a percentage of income for all 18 years of age or older

**TABLE 10
POVERTY STATUS BY FAMILY STATUS**

Family Type by Presence of Related Children

Total Families	27,143	
Married - Related Children	7,607	28.0%
Male Alone - Related Children	1,230	4.5%
Female Alone - Related children	4,449	16.4%
Family - No Children	13,857	51.1%

Poverty Status of Families with Related Children

Total Families	3,693	
Married - Related Children	593	2.2%
Male Alone - Related Children	339	1.2%
Female Alone - Related children	2,235	8.2%
Family - No Children	526	1.9%

*ACS 2013 5-Year Estimates

**TABLE 11
RATIO OF INCOME TO POVERTY LEVEL AMONG INDIVIDUALS**

Below 50% of Poverty Level	8,464	8.3%
50% to 99% of Poverty Level	10,386	10.2%
100% to 149% of Poverty Level	10,021	9.9%
150% to 199% of Poverty Level	11,004	10.8%
200% of Poverty Level or more	61,737	60.8%
*ACS 2013 5-Year Estimates		

4.8 Labor Force Profile

The total labor force in Allen County, reflecting those 16 years of age and over, numbered 52,166 persons according to the ACS 2013 5-year estimates; those not in the labor force reflected 31,702 or 37.8 percent of the total available labor force.

A perspective on the labor force can be gained by examining the number of employed persons by type of occupation. Table 12 uses 2013 ACS data to identify the dominant occupations in the region; management, professional, and related occupations closely followed by sales and office occupation and production, and finally, transportation and material moving occupations.

**TABLE 12
OCCUPATION BY TYPE & PERCENTAGE OF LABOR FORCE**

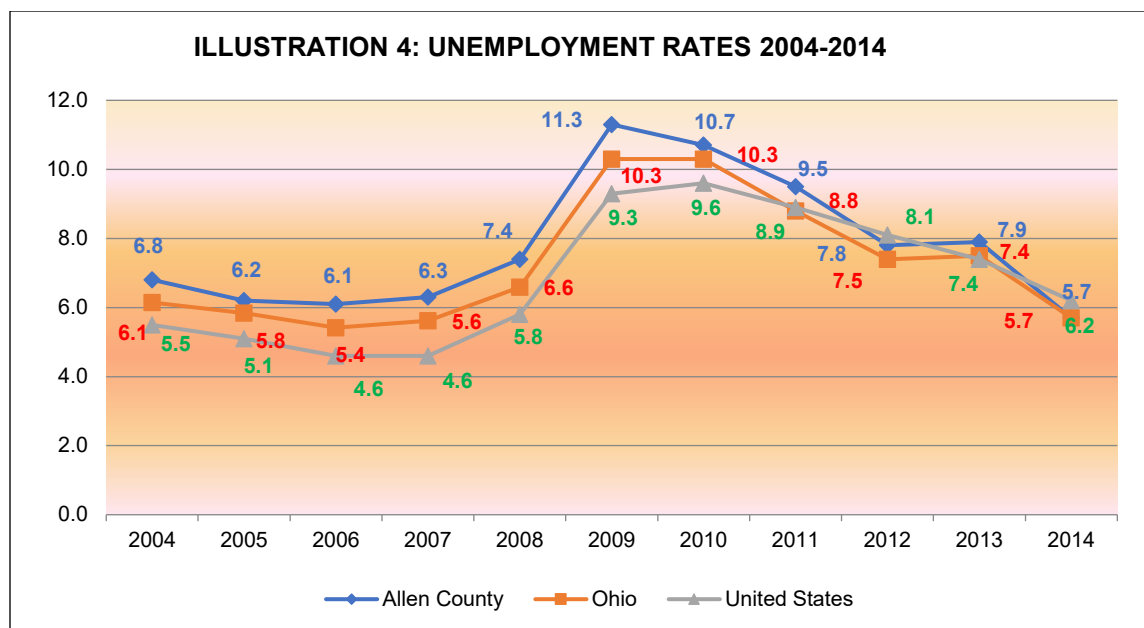
Occupation	Number	Percent
Agriculture, Forestry, Fishing, Mining, Hunting	452	1.0%
Construction	2,022	4.4%
Manufacturing	8,798	19.1%
Wholesale Trade	1,397	3.0%
Retail Trade	5,100	11.1%
Transportation, Warehousing and Utilities	1,765	3.8%
Information	602	1.3%
Finance, Insurance, Real Estate, Renting, Leasing	2,151	4.7%
Professional, scientific, Mgmt, Admin., Waste Mgmt.	3,273	7.1%
Educational, Health Care, Social Assistance	11,773	25.5%
Arts, Entertainment, Accommodation, Food Services	4,448	9.6%
Other Services	2,649	5.7%
Public Administration	1,677	3.6%
Total	46,107	100.0%
*ACS 2013 5-Year Estimates		

ACS 2013 5-year estimates provided employment information using the North American Industrial Classification System (NAICS), by which the number of Allen County residents employed in specific economic activities within Allen County may be better analyzed. Data contained in Table 13 reflects Allen County residents 16 years of age or older by sector of employment.

TABLE 13
2013 ALLEN COUNTY EMPLOYMENT BY SECTOR

Sector	NAICS	Employees	Percent
Agricultural, Forestry, Fishing & Hunting – Services	11	357	0.8%
Mining	21	95	0.2%
Utilities	22	273	0.6%
Construction	23	2,022	4.4%
Manufacturing	31-33	8,798	19.1%
Wholesale Trade	42	1,397	3.0%
Retail Trade	44-45	5,100	11.1%
Transportation & Warehousing	48-49	1,492	3.2%
Information	51	602	1.3%
Finance & Insurance	52	1,361	3.0%
Real Estate and Rental & Leasing	53	790	1.7%
Professional, Scientific & Technical Services	54	1,244	2.7%
Management of Companies/Enterprises	55	13	0.0%
Administrative Support & Waste Management Services	56	2,016	4.4%
Education Services	61	4,115	8.9%
Health Care/Social Assistance	62	7,658	16.6%
Arts/Entertainment/Recreation	71	699	1.5%
Accommodation & Food	72	3,749	8.1%
Non-Public Other Services	81	2,649	5.7%
Public Administration	92	1,677	3.6%
Total		46,107	100.0%
*ACS 2013 5-Year Estimates			

In Allen County, the employment-population ratio of 16 years of age and over in the workforce has risen over the last decade, up from 60.9% in 2000 to 62.2 percent in 2013. This dependency ratio follows the state trend line (64.8%, 63.9%) and seems reasonable given the economic recession and community's dependency on the industrial sector. In comparison, the rate for the United States has risen from 63.9% in 2000 to 64.3% in 2013. Over the past ten years, the unemployment rates reflect the impact of major employers relocating or instituting major cutbacks in response to market events or economic trends. Illustration 4 suggests that Allen County typically experiences higher unemployment rates than that experienced by the State of Ohio or the Nation as a whole. After severe stress from 2008 to 2009, 2010 witnessed some relief, unemployment in Allen County in 2011 experienced its first full year of decline since 2004.



Allen County has witnessed a shift within its economic base. The County is currently experiencing growth in the Service, Construction, Finance, Insurance & Real Estate, Transportation & Warehousing, Agriculture, and Mining sectors with the increased labor force. As a whole, the total labor force in Allen County has increased between 1980 and 2010. Table 14 reveals employment of 48,693 in 1980, with jobs rising to 63,802 in 2010, an increase of 31.0 percent. The number of business establishments has also increased over 1980 through 2010, increasing from 2,378 firms in 1980 to 2,644 in 2010. Over the 30 years, there was an 11.2 percent increase in firms.¹ Illustrations 5 and 6 reveal change by sector over 1980 through 2010 period.

As depicted in Illustrations 5 and 6, the most significant change in employment has been a shift from the manufacturing sector to the service sector. Local employment in the manufacturing sector decreased from 16,385 in 1980 to 8,495 in 2010, a reduction of nearly half (-48.2%). And, although total employment within the sector fell drastically, the total number of manufacturing establishments increased by 2.1 percent. Persons employed within the service sector increased 237.9 percent between 1980 and 2010, while the number of service-related establishments increased by nearly one-half (48.2%) over the same period. Establishments in other sectors over the same period indicate declines in retail (-11.2%) and government (-34.2%). Growth was realized in wholesale (0.9%), construction (28.1%), finance, insurance and real estate (FIRE) (10.8%), transportation and Warehousing (10.1%), agricultural services (233.1%), mining & utilities (391.9%), and the nebulous category of "other" (1,497.2%). Based on historical antecedents along with the recent downturn in the economy, employment growth is expected to be stagnant for the near future.

¹ES-202, Economic Survey, 1997, 2002; and, Regional Economic Information System, 1969-2002, and QCEW 2010 data.

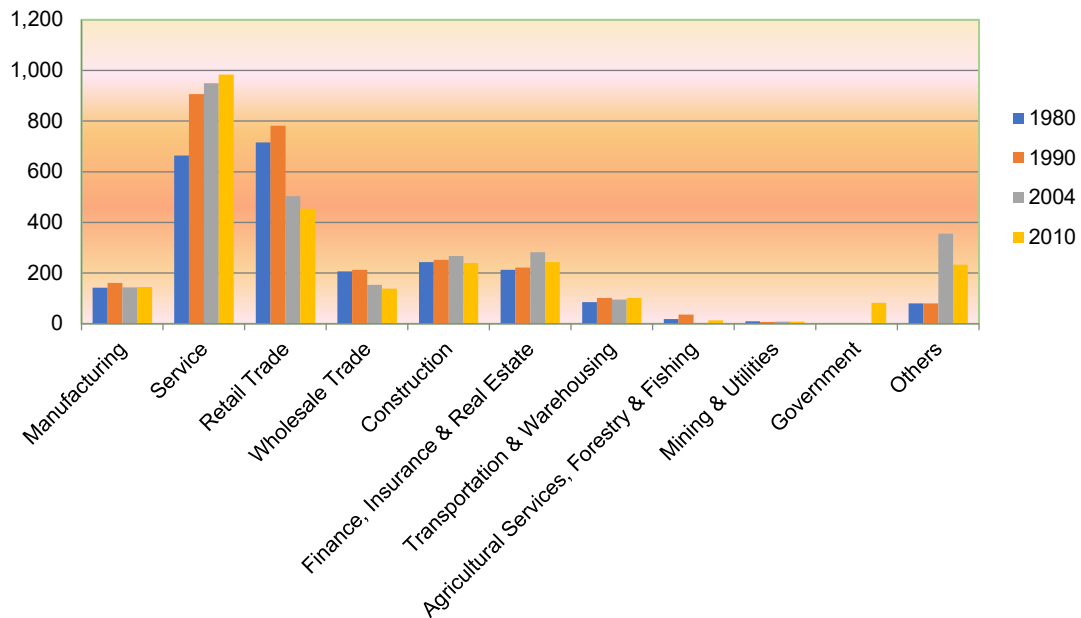
TABLE 14
EMPLOYMENT & BUSINESS ESTABLISHMENTS IN ALLEN COUNTY

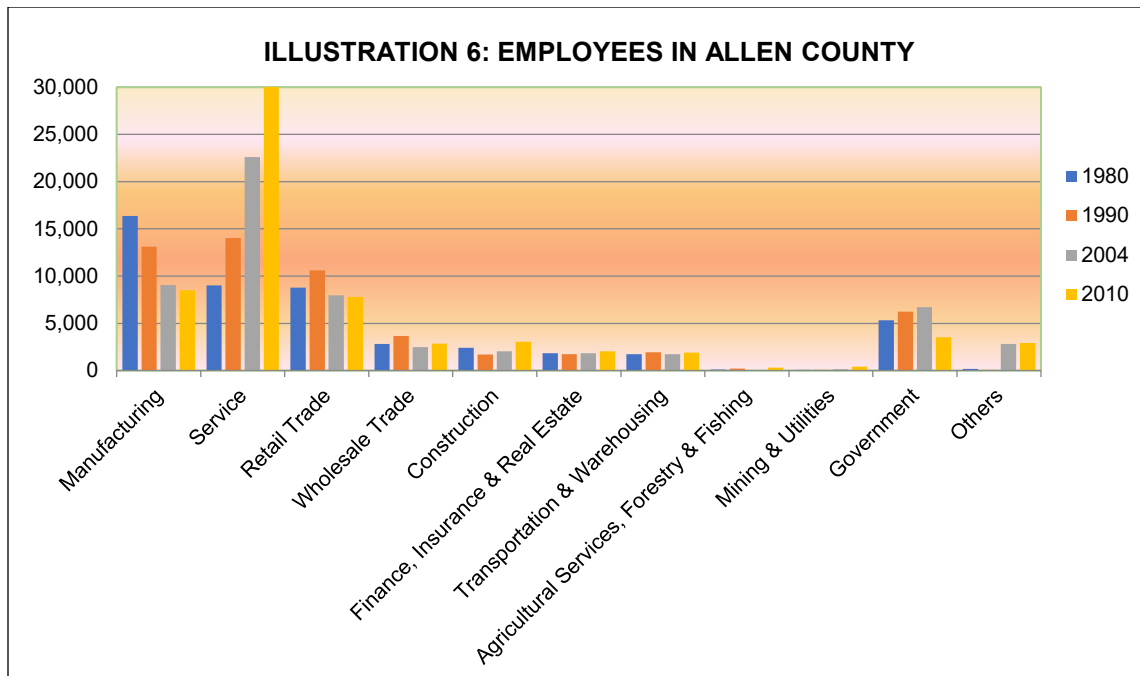
Type of Business	1980		1990		2004*		2010**	
	Workers	Firms	Workers	Firms	Workers	Firms	Workers	Firms
Manufacturing	16,385	142	13,134	161	9,058	143	8,495	145
Service	9,027	664	14,042	907	22,611	950	30,505	984
Retail Trade	8,792	716	10,624	781	7,978	504	7,809	454
Wholesale Trade	2,823	207	3,669	213	2,472	154	2,847	139
Construction	2,393	243	1,713	252	2,033	267	3,065	239
Finance, Insurance & Real Estate	1,844	213	1,720	222	1,841	283	2,043	243
Transportation & Warehousing	1,737	85	1,928	102	1,744	96	1,912	102
Agricultural Services, Forestry & Fishing	90	18	200	36	7	4	300	13
Mining & Utilities	83	10	55	7	134	8	408	9
Government	5,337	--	6,239	--	6,730	--	3,511	83
Others	182	80	79	80	2809	356	2,907	233
Total	48,693	2,378	53,403	2,761	57,417	2,765	63,802	2644

*2004 County Business Patterns

**QCEW 2010

ILLUSTRATION 5: ESTABLISHMENTS IN ALLEN COUNTY





4.9 Summary

The population of Allen County had experienced a general decline since 1980 when it reached a population plateau of 112,241 persons. Comparison to the 1980 population reveals the current population has decreased by 5,910, or 5.3 percent. Examining more recent data, Allen County has lost 2,142 residents, a loss in population of 2.0 percent primarily from out-migration. However, population change is not static, nor is it uniform. Some of the political subdivisions within Allen County have experienced an extended period of continued growth, while others have experienced overall growth in cyclical spurts since 1960.

Another demographic factor to consider is a change in the total number and size of area households. Census data reveals the composition, size, and number of households are changing. The total number of Allen County households in 2010 was 40,691, an increase of 0.1 percent over the 2000 figure. Of note, while the population has declined since 2000, the number of households has increased. In 2010, the average household size in the County was only 2.47 persons, a decline of 2.0 percent in size. The implications of smaller households are essential and should be monitored by local policy experts and reflected in the local housing policies, building codes, and zoning regulations.



Consistent with national trends, the county's population is aging. The median age of the population is 38.3 years. That compares with a median of 38.8 and 37.2 years with Ohio and the United States, respectively. Data suggests that simply due to the age of the

population, more than a third of the population cannot fully contribute to the economic growth and earning power of the community.

The County's population has grown more racially and ethnically diverse during the past decade. Racially, whites comprise the most significant percentage of the population at 83.8 percent. However, the largest minority group within Allen County is African American, which comprises 11.9 percent of the total population. All other minority groups comprise approximately 4.3 percent of the total County population. Although dispersed across the County, the County's largest minority, the African American population, is primarily concentrated in the City of Lima, where it constitutes 26.5 percent of the City's population.

Many factors affect employment rates among adults. None, however, may be as important as educational attainment levels. Data shows that over 7,701 individuals, or 11.1 percent of those 25 years of age or older, have not completed high school. However, given several very reputable post-secondary schools are readily accessible, it is disappointing that less than 11,868 adult residents have completed a 4-year and/or master's college degree program.

Allen County income has continued to lag behind that of State and national income trend lines. The median household income gap as identified in 2013 was 11.4 percent and 19.3 percent, respectively. The gap nationally was 11.5 percent in 2000. Median family income in Allen County was only 89.4 percent of Ohio's median family income in 2013 and only 84.7 percent of the national median income. The median non-family income was 82.6 percent of the State's median value and 72.9 percent of the entire nation. In 2013 Allen County's per capita income was only 85.6 percent of the state and 79.2 percent of the national figure.

The 2013 ACS revealed that 18,850 individuals or 18.6 percent of all individuals, 7,109 households or 17.5 percent of all households, and 3,693 families or 13.6 percent of all families were below the established poverty level based on income and household size. For comparison purposes, data indicates that 15.0 percent of all households and 11.6 percent of all families within the State of Ohio were below the established poverty level. Locally, families with children were more likely to encounter poverty status than those families without children. In fact, of all families suffering poverty conditions, 85.7 percent had children, and 17.0 percent had children under 5-years of age.

SECTION V ENVIRONMENTAL FACTORS

Much of Allen County remains relatively rural, with large tracts of land still engaged in agricultural pursuits outside municipal, corporate limits. But the community is changing; as stated earlier, several smaller cities and villages are experiencing population decline and deteriorating economic conditions.

Several statewide studies have concluded that the greatest threats to the State of Ohio and its population centers are the loss of farmland and an absence of land use planning that considers the ecosystems' resources and integrity. Recognizing that a sizable portion of Allen County's economy relies upon the region's agricultural base, the community may be subject to a higher level of risk than other geographic areas of Ohio.

Allen County's natural resources may be at greater risk than other geographic areas of Ohio. The future pattern of development must protect natural resources and sustain the economy for a 25-year period.

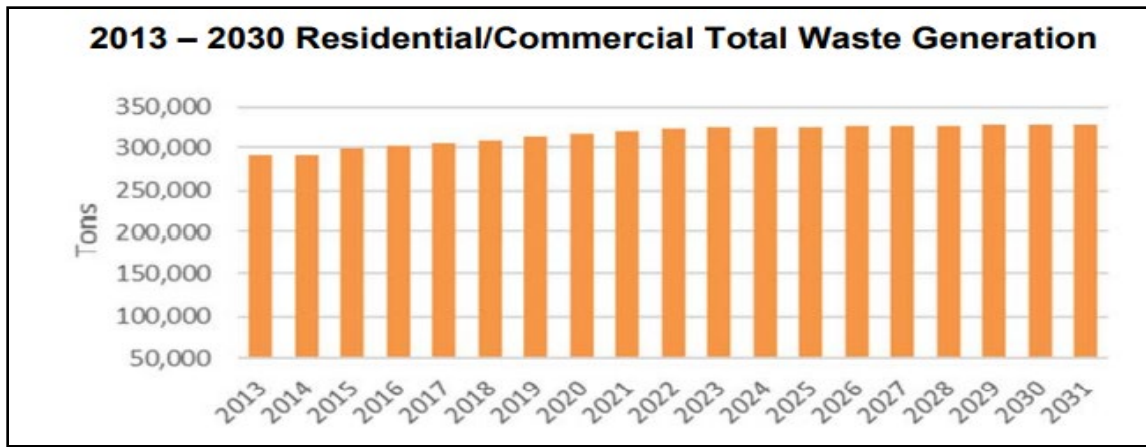
Managing future growth comprehensively and cooperatively among cities, villages, and townships is highly desirable. Land areas designated for future development should be identified and reserved for protecting the natural landscape and the community's resources. The goal of every local future land use planning process is to achieve a future pattern of development that protects our natural resources, allows the economic base to expand, and population to grow with good infrastructure investments over a 25-year plan horizon.

5.1 Solid Waste Issues

The State of Ohio requires each county of Ohio to maintain a current County Solid Waste Plan. Allen County is a member of the 6-county North Central Ohio Solid Waste District (NCOSWD). The 6-county consortium developed an inclusive, cooperative, district approach to solid waste disposal problems. Local representation in the solid waste planning process is provided by the Allen County Commissioners, voting members of the NCOSWD.

In June of 2017, the NCOSWD published a Solid Waste Management Plan Update. Based on the reference year of 2007, the previous Plan was approved by Ohio EPA on December 22, 2010, and includes a fifteen-year planning period from 2010 to 2024. This most recent Plan Update uses the reference year of 2013 and contains a fifteen-year planning period from 2017 to 2031.

According to the 2017 Solid Waste Management Plan, in 2013, on average, residents generate 4.90 pounds of waste per person per day. Thus, the impact of retail and manufacturing interests coupled with household-generated waste amounts to roughly 97,112 tons of solid waste generated (calculation from formula determined by NCOSW) annually in Allen County. There are currently 18 different licensed waste haulers based in Allen County. And while there are numerous small independent haulers, the community is served by several of the larger corporate solid waste service providers, including Allied Waste Systems, Allen County Refuse, and Waste Management, Inc.



There are no landfills located within the NCOSW District. The closest landfill to Allen County is the Hancock County Landfill, located 35 miles from Lima. The Cherokee Run landfill, located in Bellefontaine, Ohio, is the second closest and is utilized by all six counties within the district. There are four other landfills within the district. Three of those are used by the City of Lima. Six transfer stations are located within the district; two, the Lima Transfer Station and the Allen County Refuse Transfer Station, are operated and utilized in Lima. EOLM, Inc. is a private facility designed and approved to dispose of construction and demolition waste only.



The NCOSWD and the Ohio Department of Natural Resources (ODNR) provide an anti-litter program to reinforce educational outreach efforts, public awareness activities, and media releases. In addition, the NCOSWD supports household hazardous waste and electronic recycling to help eliminate the dumping of illegal toxins. Such services are available at the NCOSWD facility located at 815 Shawnee Road in Lima

year-round. Allen County has recently become involved with Keep America Beautiful, Inc (KAB) to assist the local communities in developing a cleaner and safer environment.

Local leaders must acknowledge that solid waste, which can be seen as litter, reaches into every aspect of the planning/regulatory process, including stormwater management, building codes, zoning regulations, exterior maintenance codes, etc. Principles to address stormwater management and zoning do exist to support solid waste management. However, many smaller and rural communities lack exterior maintenance and building codes, nor do they bid/let municipal waste contracts. However, as noted above, many do provide drop-off recycling opportunities for their residents regularly. The County is also serviced by several community-wide cleanup events supported in part by the NCOSWD. In addition, both KAB and regularly conducts roadside litter cleanups with the Allen County Sheriff's Office.

Solid Waste Concerns:

- Long Term Disposal Capacity
- Collection Capacity
- Yard Waste
- Recycling Opportunities
- Reduction in disposal volume
- Closure of Bath Township landfill

The effects of litter are pervasive and far-reaching, especially along the rural corridors. Developing environmentally sound methods for disposal of non-hazardous solid waste is challenging for townships with constrained budgets. However, acknowledging such challenges is the beginning of the solution. Residents must realize that annual litter cleanups are not long-term litter prevention programs. And, although there are local programs that address litter cleanup, including Adopt-a-Highway, Adopt-a-Roadway, Adopt-a-Waterway, and neighborhood cleanups, such activities do not contribute in a significant way to litter prevention. Litter prevention must be addressed at its source with jurisdictional controls and enforcement balanced with public education.

Of specific concern are: the continued provision of adequate disposal capacity for the long-term future, especially for commercial/industrial development; the lack of recycling service and facilities; and the inability to promote renewable resource use and post reductions in disposal volumes

5.2 Air Quality Issues

One of the most critical issues of today is Air Quality. Allen County is located between major urban areas Fort Wayne, Indiana, Toledo, Ohio, and Dayton, Ohio, adjacent to Interstate 75 and US 30. The proximity to such large urban manufacturing-based communities placed Allen County in a precarious position with tightening environmental regulations. The EPA determined Allen County to be in ozone nonattainment in 2001. Specifically, it was found to be in non-compliance with the Clean Air Act and the National Ambient Air Quality Standards (NAAQS) for ground-level ozone, comprised of Volatile Organic Compounds (VOC) and Nitrogen Oxide (NOX). Later in 2007, the County was reclassified in an 8-Hour Ozone Maintenance status based on new data. Not until July 2013 did the EPA re-designate Allen County as compliant with National Ambient Air Quality Standards. Ohio EPA monitors ambient air for PM2.5, SO2, and O3 concentrations at a permanent monitoring site northeast of Lima, Ohio, Bath Township. Specifically, the site is at Bath High School, 2650 Bible Road. This site was chosen for three main reasons.

USEPA issuance of "full compliance" status has eliminated additional environmental compliance regulations and any negative impact on development recruiting efforts.

- It is located downwind from the predominant southwest winds experienced in the area.
- It is located at a distance from the urban area of Lima that will allow ample time for the formation of O3 from the photochemical reaction of VOC and NOx.
- It provides a location that addresses security concerns such as vandalism, sabotage, etc. PM2.5 and SO2 are monitored continuously year-round, and O3 is monitored from March 1 through October 31.

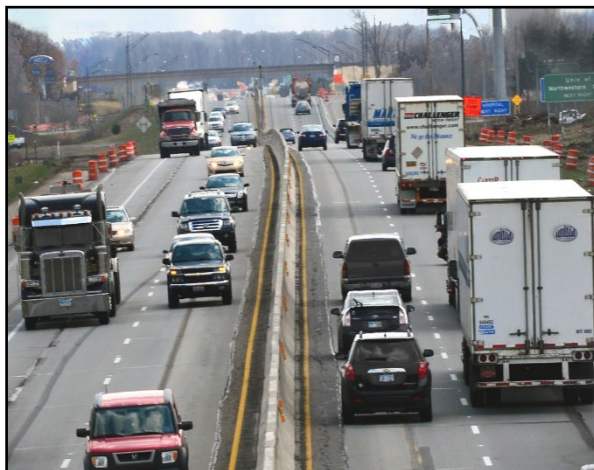
Given the type of industry and mobile sources in Allen County, specifically in the Lima area, the criteria pollutants of most concern are particulate matter (specifically PM2.5), sulfur dioxide, and ozone. Between November 2016 and the end of April 2017, The Ohio EPA tested and monitored the air quality on three sites on the southwest side of Lima.

- Test 1 was done between the 2200-2300 block of Adgate Rd.
- Test 2 was done in the 400 block of Paul St.
- Test 3 was done on the 1000 block of Oxford Ave.
- These sites are located less than 1 mile from the Husky Refinery.

Ohio EPA air toxics monitoring results from the three samples collected between November 17, 2016, and April 25, 2017, indicate that results for the 65 air toxic compounds are all within the acceptable limits for ambient concentration.

While local air quality has improved, given the presence of the Husky Refinery, Ineos, Potash, BP Chemical, PCS Nitrogen, Amanda Specialty Products, General Dynamics, WHEMCO, etc., located in south-central Allen County, air quality remains a constant concern in regards to the community's health and safety. According to the EPA, the number of unhealthy days for sensitive groups due to PM^{2.5} was documented at three in 2016, one in 2017, and five in 2018. Over the same period, ozone was shown to be the primary pollutant. [2016-Allen-County-Air-Quality-Report.pdf \(allencountypublichealth.org\)](https://allencountypublichealth.org/2016-Allen-County-Air-Quality-Report.pdf)

Allen County industry remains a vibrant source of employment as well as point source pollutants. And, as a result, one of the essential functions of the Allen County Public Health and the Regional Planning Commission is to monitor, document, and educate the community on air quality standards associated with the Clean Air Act requirements and balance job growth with environmental and health concerns. In addition, both agencies work with the EPA to address mobile and stationary sources of air pollution to improve the community's health, safety, and welfare.



Allen County officials remain committed to working with the EPA and DOT representatives in interagency consultation to define parameters for maintaining air quality conformity under federal requirements as established under Section 40 of the Congressional Federal Register 93.119.

5.3 Water Quality Issues

In 2019, Ohio Governor Mike DeWine implemented a comprehensive \$172 million water quality initiative called H2Ohio. This program aims to address serious water quality issues such as harmful algae blooms on Lake Erie caused by phosphorus runoff from farm fertilizer, failing drinking water, wastewater, and home sewage treatment systems due to aging infrastructure, and lead contamination from old water pipes and fixtures. This program also offers funding to local communities that need help upgrading water infrastructure and helps in the development of other innovative water quality solutions.

Allen County is served by two primary watersheds, the Ottawa and Auglaize rivers, and for local, state, and federal officials, water pollution is a significant concern. Various water quality studies were conducted on the Ottawa and Auglaize rivers over 2000 thru 2013 period. In 2012, a US Environmental protection Agency (EPA) study found that water

Water quality in the Ottawa River watershed met only 9% recreation criteria and 68% for aquatic uses.

quality in the Ottawa River watershed met only 9 percent recreation criteria and 68 percent for aquatic uses. In addition, the study found the Ottawa River mainstem impaired for human health use.

The reasons biological goals are not met are natural conditions (flow or habitat), nutrients, total dissolved solids, organic enrichment, and direct habitat alterations. Sources of these problems include natural issues with flow or habitat, hydromodification (such as dams), municipal non-point source discharge, industrial point source discharge, sanitary sewer overflows, sewage discharges, crop production with subsurface drainage, urban

runoff/storm sewers, and habitat modification. Sources of bacteria include agricultural land uses and failing home sewage treatment systems.

Of primary significance is the difference between rural and urban development and that the infrastructure taken for granted by the urban resident does not exist in the rural environment. Public concerns range from industrial and municipal wastes entering the waterways to rural fire protection to failing septic system leachate and agricultural runoff entering the water. All these sources do impact the quality of drinking water. In urban areas, environmentalists call for: reductions from municipal point source discharges, industrial point sources, and combined sewer overflows, among others. While in rural settings, conservationists and agriculturists call for increased use of riparian buffers, grass waterways, no-till conservation practices, reforestation of parts of watersheds, better manure management, improved application of fertilizers - especially phosphorous and nitrogen as well as mandating corrective actions to failing home septic sewage treatment systems.

One of the H2Ohio program's projects focuses on the Ottawa River Watershed. This project has two simultaneous goals: alleviating recurring flood damage in an urban area and slowing the flow of sediment, and processing nutrients on their way to the Maumee. Twenty acres of three separate wetland cells are proposed and will incorporate citizen monitoring and educational outreach opportunities. This project focuses on the Baughman Ditch Wetland Restoration, to contain surface water from storm runoff and will address the need for new tiles to help the ponds work correctly in the area of North West Street and Bluelick Rd. <https://h2.ohio.gov/project/>

In 2016, The Ohio EPA performed a Biological and Water Quality Study of Lower Auglaize River Tributaries. However, based on the previous studies and local estimates, the watershed suffers from the same urban and rural agricultural stressors as the Ottawa River. EPA testing resulted in excessive chemical/physical parameters, including metals (lead, zinc, copper, and arsenic) and fecal coliform.

In August 2020, based on the 2010 Ohio EPA Biological and Water Quality study and information from the 2013 Ohio EPA Total Maximum Daily Load (TMDL) report, the Ottawa River Coalition removed the low head dam next to route 81 Allentown. While low-head dams effectively create a volume or depth of water in the Ottawa River, they can obstruct the natural habitat in the stream bed, the movement of fish species living in the river, and create zones of lower oxygen levels in the impounded water areas. Therefore, these structures are a key limiting factor to the stream miles that are impaired and not meeting the state's water quality standards.

<https://www.thisismyriver.org/low-head-dams/>

The latest studies completed found the Auglaize River and the Ottawa River in compliance with aquatic life standards. Most aquatic life impairments within the rivers stemmed from land disturbances related to agricultural activities and urban development with impairments caused by: siltation and sedimentation, nutrient loadings, habitat modifications, organic enrichment, and hydromodification. Map 4 provides a solid visual representation of the topography of the County, illustrating the pattern of runoff into tributaries of the Ottawa and Auglaize rivers. In an attempt to maintain compliance with federal Clean Water Act legislation and USEPA and OEPA mandates, local officials have developed Storm Water Management Plans for Allen County, the City of Lima,

Water Quality Concerns:

- *Managing storm water runoff in compliance with Phase II requirements*
- *Prevention of erosion*
- *Elimination of illicit discharges at point source facilities*
- *Management of hazardous materials*

and the townships of American, Bath, Perry, and Shawnee. Both the City of Lima and Allen County have taken deliberate measures to address specific point and non-point sources of pollution. Still, successful implementation will require the coordination of several efforts that must cross jurisdictional boundaries. Allen County must address the following points to meet the limits of the Total Maximum Daily Loads (TMDL) established by the USEPA and OEPA:

- Manage stormwater runoff to reduce sediment, nutrients, and downstream flooding.
- Prevent erosion from agricultural operations and removal of vegetation from areas in proximity to water surfaces.
- Identify and eliminate pollutant discharges from wastewater treatment plants, combined sewer overflows, package plant discharges, and industrial discharges.
- In cooperation with the Allen County Emergency Management Agency and local fire departments, establish hazard response teams to quickly provide adequate protection measures in the event of a hazardous chemical spill, especially along the state highways where hazardous materials are routinely transported.

5.4 The Natural Environment

Its site and situation have shaped the natural environment within Allen County. The local geographic and geologic conditions provide the topography, drainage patterns, and vegetative cover. The natural environment has been modified and is now

The extent to which the modification of the natural landscape continues will be the basis upon which this planning document will be judged.

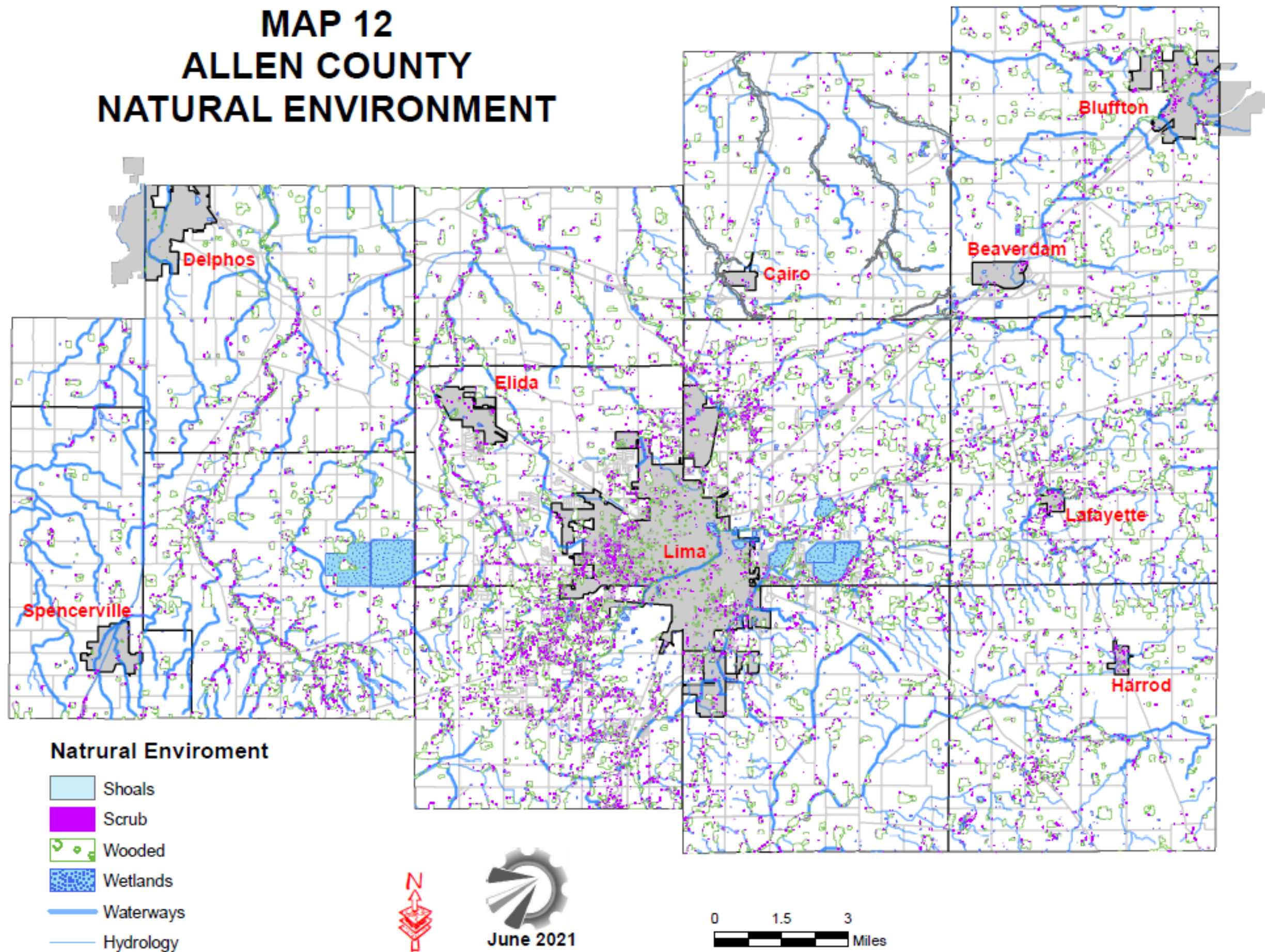
obligated to carry the burden of human activities, including littering, illegal dumping, roadway salts, and chemical contamination. The natural environment plays a vital role in many of the Township's memories and the vision for the community's future. Map 12 provides a visual representation of the existing elements supporting the natural environment. The extent to which the modification of the natural landscape continues unrestricted, especially its wooded lots and natural waterways, will be the basis upon which this planning document will be judged in the future.

5.4.1 Tributaries to the Ottawa & Auglaize River

The physical and functional attributes of both the Auglaize and Ottawa River were introduced in Section 3.2; its water quality characteristics and its drainage watersheds were addressed in Sections 5.3. However, these sections failed to provide the broad understanding necessary to appreciate the relationship between the Auglaize and Ottawa River and their tributaries with the larger natural environment.

Both the Auglaize and Ottawa River and their tributaries play an essential role in the natural environment. Both the Auglaize and Ottawa River, in many ways, are the backbone of the community's ecosystem. The rivers and their tributaries provide the necessary drainage; the stream valleys give the riparian habitat for diverse flora and fauna; natural migration routes for birds and other wildlife; and open spaces that provide a visual relief and recreation amenities for the community. This resource must be protected. The waterways and riparian corridors should be inventoried, monitored for their health, and saved to ensure access and their natural beauty for future generations. Maps 4, 5, and 6 display the rivers and their tributaries.

MAP 12 ALLEN COUNTY NATURAL ENVIRONMENT



5.4.2 Floodplains

As a result of an extensive 10-year map modernization process, the Emergency Management Agency identified 15,833 acres in Allen County as Special Hazard Areas.² The report was intended to serve in the

development of actuarial flood insurance rates and assist the community in promoting sound floodplain management. Hydrologic and hydraulic engineering studies formed the basis of the analysis that documented both the

Ottawa and Auglaize Rivers and their tributaries (Maps 5 and 6). The resultant floodplain delineations of these waterways were documented by the Department of Housing & Urban Development (HUD) in flood insurance rate maps (FIRM).

In May 2013 FEMA along with Allen County published a Flood Insurance Study that identified approximately 15,833 acres in Allen County as Special Flood Hazard Areas.



Historically, encroachment onto the floodplains has been minimal, the result of resident's attempts to draw water when/where municipal services were unavailable, for transportation and commerce, and irrigation of crops. Given the current level of technology, the recent pursuit of floodplain development is based on site aesthetics and/or economics. Whether it is the natural beauty of such sites or the price for the bottom-ground, it has influenced recent

development decisions and subdued the common sense possessed by the community's forefathers. Many consider this intrusion into these sensitive areas illogical, unsound, and/or simply foolish on a number of points, including the threat of flood-related damage, increased pre-and post-development runoff, declining water quality, and the loss of natural habitats for both vegetation and wildlife. Development in or the filling and subsequent floodplains will result in a net loss to the community in scenic vistas, roosting/yard areas for birds/deer, and disrupted drainage patterns and stormwater retention areas for both agricultural and urban development.

Floodplains need to be preserved and protected to prevent further damage to water quality and the local ecosystem. Natural floodplains further ecological diversity and slow the peak stormwater runoff from further eroding stream banks ditches and ultimately raising the level of flooding along downstream waterways. Floodplain soils and vegetation act as the kidneys of our local tributaries, capable of siphoning out various pollutants from the storm waters and cleansing stormwater as it is stored in the low-lying areas before it either re-enter the local tributaries or percolates back into the soil, replenishing local aquifers.

5.4.3 Wood Lots

Like the majority of northwest Ohio, the surface area of Allen County was once covered by broadleaf deciduous forests. After generations of farmed and developed, less than 25,000 acres, or slightly less than 1.0 percent of Allen County, are wooded today.



Most of the wood lots are concentrated in small deciduous trees along fence lines between properties and stream corridors. It should be noted that tree preservation is a high priority in many communities across the country because once cleared, replacing trees takes dozens of years. In addition, ornamental trees used in landscaping cannot replace the variation and character of an original stand of trees. Therefore, the loss of an original stand of trees is a loss to the community's natural landscape and one that should not be condoned or allowed by local development policies.

The benefits of maintaining high-quality tree cover include erosion control, wildlife habitat protection, and cleaner air. In addition, aesthetic and economic benefits include a visually pleasing and "softer" environment, higher home values from treed lots, and reduced energy bills from the natural cooling provided by shade. This sentiment was recognized during the visioning phase of the public planning process as Township residents expressed a desire to protect and increase the number and density of woodlots within the Township, including the reforestation of lands previously cleared.

5.5 Historical & Archaeology Sites

Currently within Allen County are 432 historical structures that the Ohio Historical Society has identified. Historic structures are vital for any community and should be preserved to their original state for posterity. Also within Allen County are 177 archeological sites.

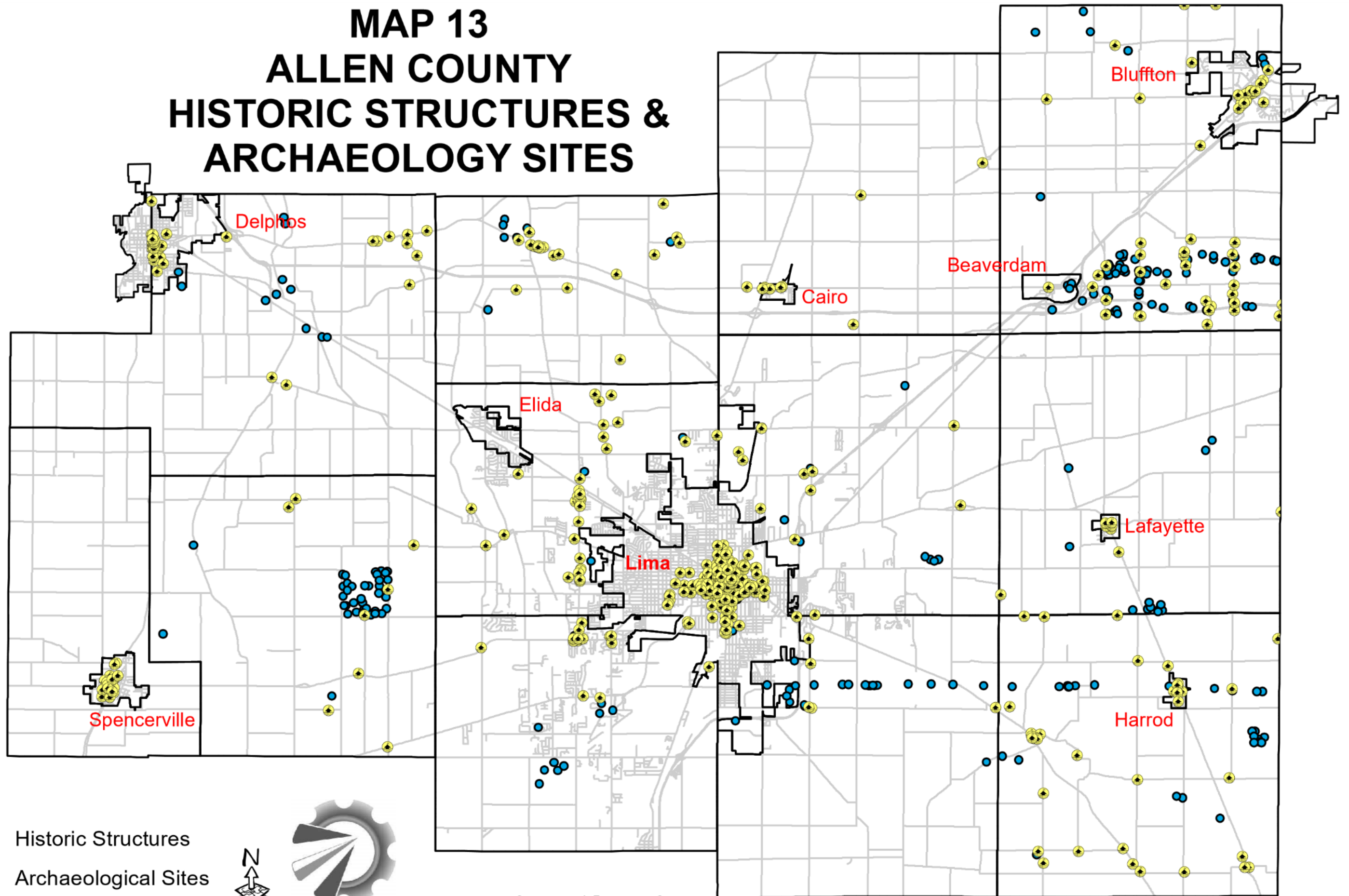
The community has several active historical societies that support several museums and monuments and have recently undertaken renovations with great success. Future efforts may well look to preserve and repair the historic buildings. The Rehabilitation Investment Tax Credit program is a federal program available for the substantial rehabilitation of qualified depreciable buildings; Ohio also offers a similar program for rehabilitation administered by the Ohio Department of Development and the Ohio Historic Preservation Office. Unfortunately, most archeological sites have not been acquired by the State of Ohio or Ohio Historical Society and remain unprotected under private ownership. Map 13 identifies the historical structures; the exact location of archaeology sites is protected from general circulation to help preserve such sites.

5.6 Planning for Sustainable Growth & Development

Local governments within Allen County do not have a long history of local land use planning. However, some political subdivisions have recently published Comprehensive Plans including Amanda, American, Auglaize, Bath, Perry, Richland, Shawnee, and Spencer townships. In addition, the villages of Cairo, Elida, Lafayette, and Spencerville have also prepared comprehensive plans identifying future trends and identified needed infrastructure and utility services to support and sustain a future land use plan. And while some communities are gradually becoming more comfortable with the process, others are opposed to the planning process suggesting the plans are not flexible enough and constrain future growth and development. However, the real impetus is that federal and state agencies demand that local governments adopt sustainable growth and expansion

plans or bear the financial burden of addressing environmental degradation spurned by poor or no planning.

MAP 13 ALLEN COUNTY HISTORIC STRUCTURES & ARCHAEOLOGY SITES



- Historic Structures
- Archaeological Sites
- Political_Subdivisions



May 2021

0 1.5 3
Miles

At the regional level, the Regional Planning Commission has prepared a 2040 Transportation Plan outlining the infrastructure and capital outlays required to accommodate the safe, efficient, and effective transportation of people and products by road, rail, and walkway (2013). The Transportation Plan aims to minimize automobile emitted pollutants and stormwater runoff by maximizing mode choice and promoting alternative transportation options. The Allen County Regional Airport Authority has recently completed its Airport Layout Plan, which establishes its top priorities through 2020. The Plan touts a complete resurfacing of airport runways and a 1000' extension to accommodate larger corporate jets while undertaking a wildlife inventory of the 700+ acres and improving local drainage and water quality (2015). The Allen County Regional Transit Authority recently completed a comprehensive operational analysis (2015) of its system to sustain positive growth and better serve the 330,000 passengers served in 2014. The Transit system is also looking to advance multimodal connectivity, including bike services from its intermodal facility located in the Lima CBD, and continue to support workforce development initiatives developed by the Allen Economic Development Group and the Allen County Department of Jobs & Family Services.

The Allen Water District is preparing plans to assess the feasibility of establishing a regional water distribution system across Allen County. At the same time, the City of Lima reviews the feasibility of extending services to the Village of Ottawa in Putnam County. The Allen County Sanitary Engineer is working from a 2025 Sanitary Sewer Improvement Plan and is assessing the feasibility of extending public sanitary sewer services into the hamlet of Gomer located in Sugar Creek Township and extending services north of the Village of Cairo in Monroe Township.

The City of Lima, Ohio, owns and operates a sewer system that is comprised of approximately sixty percent combined sewers and forty percent separate sanitary sewers. The US EPA has recently worked with the city to eliminate the frequent discharges of raw sewage and combined sewage to the Ottawa River, and WWTP bypasses of secondary and tertiary treatment. A consent decree includes specific requirements to address WWTP bypassing, combined sewer overflows (CSOs), and separate sanitary sewer overflows (SSOs). The WWTP projects include significant upgrades to increase the plant's primary and secondary treatment capacity from about 30 million gallons per day to 70 million gallons per day. The CSO control measures include full or partial sewer separation to eliminate or reduce flow to 10 upstream CSO points and construction of a new thirteen-million-gallon CSO storage tank and pump system serving the downstream CSO points. The SSO improvements include upgrading pump stations and constructing new relief sewers in each of the seven sanitary sewer basins. Lima will also develop and implement a capacity, management, operation, and maintenance program to minimize SSOs caused by operation and maintenance deficiencies. The total cost of the 20-year construction program approaches \$147 million.

Common in the more rural areas beyond the services of municipal water and sanitary sewer services, the Allen County Health Department annually issues roughly 75 permits for new private water wells and 50 household sewage treatment systems (HSTS). The Health Department does not conduct or require annual testing of the water well once established on municipal water systems but recommends regular monitoring to ensure water quality. The Health Department has issued HSTS permits for some 4,000 of the estimated 7,000 systems in operation today. In addition, the Health Department annually responds to more than 200 HSTS complaints per year. It works with the Ohio EPA and the County Sanitary Engineer to mediate current environmental health concerns until extended municipal services. The Health Department also regularly inspects and authorizes 14 waste hauling companies currently operating in Allen County.

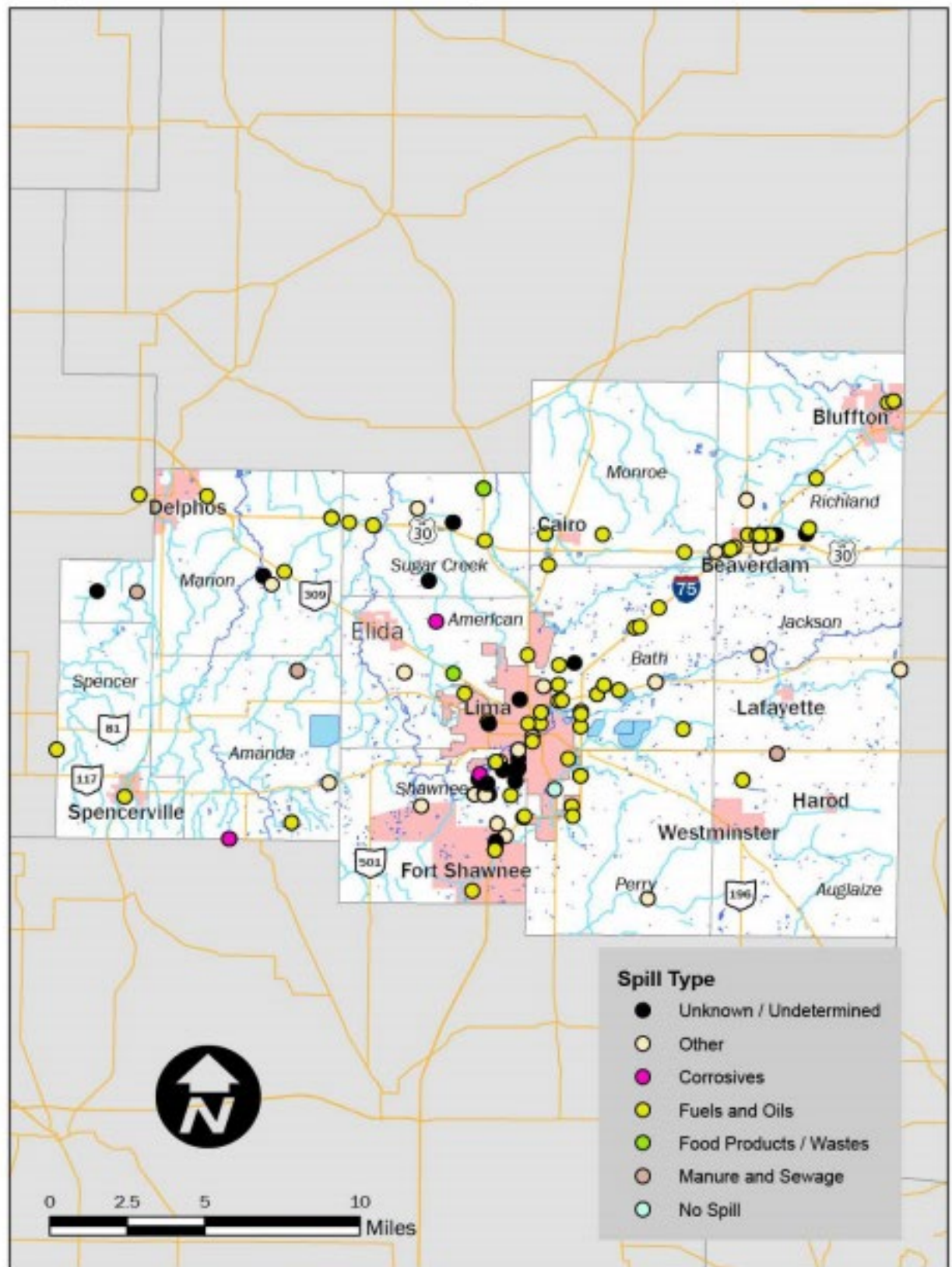
The City of Lima has constructed an upland reservoir system unrivaled in Ohio. The Lima Water Treatment Plant receives raw water from five up-ground reservoirs. To the west of Lima, water from the Auglaize River is used to fill the 4.9-billion-gallon Bresler Lake Reservoir and the new 5.4-billion-gallon Williams Reservoir constructed in 2010. On the east side, a complex consisting of Ferguson, Metzger Lake, and Lost Creek Reservoirs is filled from the Ottawa River. The total storage capacity of the east side complex is approximately 4.0 billion gallons. The Water Treatment Plant serves thousands of customers daily and processes 16 million gallons per day to meet the demand.

On a more project-focused level, local governments are working to meet the Phase II stormwater management regulations and eliminate combined sewer systems, sanitary sewer overflows, upgrade sanitary sewer systems, and upgrade water distribution systems. Local governments cooperate with the Ohio Environmental Protection Agency, Ohio Emergency Management Agency, and the Ohio Department of Natural Resources to improve water quality by identifying and eliminating illicit discharges, identifying and eliminating failing household sewage treatment systems, and removing low head dams.

The Allen County Commissioners, local municipalities, and the Ottawa River Coalition have also: recently developed and adopted county-wide floodplain management regulations and illicit discharge regulations, expanded the home sewage treatment system approval process, worked to reestablishing riparian buffers along area waterways, and are working on redesigning existing stormwater and sediment control regulations to support improved water quality.

The Allen County Emergency Management Agency has worked with local industry and area residents to eliminate hazardous spill events thru a coordinated and proactive public information and educational awareness campaign supported with enforcement. However, due to their unpredictable nature and the influence of human error, the probability of hazardous materials spills is difficult to quantify. Since hazardous material spills can occur at any time, they should be considered likely events. There have been 206 recorded hazardous material spills and releases in Allen County from May 2017 through July 2020. The map below is from the March 2021 Allen County Hazard Mitigation Plan:

Figure 4.6.2: Historic Hazardous Materials Spill Locations In Allen County, Ohio, 2017-2020



Local developers, area townships and villages, the Allen County Engineer, and the Regional Planning Commission have identified the need to develop and implement alternative development patterns to conserve natural resources. Of specific interest is open-space preservation development, sometimes referred

Local governments have neglected to develop Future Land Use Plans. Citizens and developer's alike suggest cluster developments will preserve natural resources and lead to better strategies encouraging sustainable development supported by appropriate infrastructure.

to as cluster development supported by recent amendments to local zoning codes and long-range plans adopted by the villages and townships. This alternative type of development is intended to provide more sustainable development patterns that encourage the protection and responsible use of the region's natural resources to improve water quality. Such a strategy will also give an opportunity to address other smart growth strategies, especially those that encourage sustainable development based on future year horizons and predicated upon the necessary infrastructure investments in roads, bridges, water, wastewater, stormwater, and communication systems.

A similar tact touts the redevelopment of our older urban centers predicated upon the reintroduction of mixed-use development, downtown residential living, complete streets components, and improved transit services. Instead of installing new water, sewer, and road infrastructure, redevelopment maximizes the current infrastructure to accommodate new growth and development. Such a strategy minimizes automobile emitted pollutants, saves farmland, and adds an urban vibrancy to sustain local economies.

SECTION VI INFRASTRUCTURE FACTORS

Infrastructure, the unrecognized overhead wires, and underground pipes and cables are the lifeblood of the region's ability to support existing and future residential, commercial, and industrial development. The community's transportation network, water distribution system, wastewater capabilities, and drainage system are typical infrastructure concerns for the public. Privately supplied utilities such as natural gas, electricity, voice, and data communications are also a part of the infrastructure. In economic development, infrastructure is concerned with the ability to move goods, services, and products between the community's suppliers and markets and the sustenance of the labor force.

The key issues of concern to future economic development include:

- *Water and Wastewater Services*
- *Telecommunications*
- *Transportation*
- *Industrial Facilities*

6.1 Water & Wastewater Infrastructure

Water and sanitary sewer services are necessary to support new development, especially industrial development. Urban centers within the County provide municipal water and wastewater services to residents and commercial and industrial interests. The extent and quality of each system vary by geographic location and responsible entity.

Within the Lima Urbanized Area, the water supply relies primarily on the vast reservoir system developed by the City of Lima. In other smaller municipal settings, water wells act as the "raw" source for municipal water. The hamlets of Allentown and Westminster have implemented public water since the last CEDS update. The rural communities of Gomer, Harrod, and Lafayette are slated to have public water within the next five years. Other communities have not developed or sustained the public's demand for water quality and the quantities needed to support future developments. Beaverdam, Bluffton, Cairo, Delphos, Elida, Lima, and Spencerville have all taken deliberate actions to improve water quality and expand the quantity of water available to local development.

Optimism, the region's industrial base, rural characteristics, lower population density along with "turfism" and the recent environmental regulatory climate have all worked to deliver potable water to the vast majority of Allen County residents, notwithstanding a specific excess capacity and a duplication of services. Optimistic projections based on industrial demands launched an aggressive expansion of the upland reservoirs in Delphos (Gillmor Reservoir 2009/480M gallons) and Lima (William's Reservoir 2010/5.1B gallons). The Village of Bluffton contracted with the Village of Ottawa for water services. The villages of Beaverdam, Elida and Spencerville upgraded their water distribution systems all since 2010. The Village of Cairo developed its water system with the Allen Water District (2011). The region's water distribution systems currently have excess capacity and generally operate between 60 and 75 percent of their respective capacity. The duplication of services coupled with lower than anticipated usage rates is expensive in terms of system financing, operations, and facility maintenance.

The age of the water distribution systems in many of the older urban centers remains a significant problem. For example, many portions of the water distribution system in Delphos (40 miles) and Lima (420 miles) were first installed in the early 1900s and are reaching ages of 80 to 100 years old, well beyond the projected useful life of a water supply system. As a result, these communities are faced with expensive annual maintenance and emergency repairs.

Wastewater infrastructure and services are primarily restricted to the local municipalities and in selected areas of American, Bath, Perry, and Shawnee townships. In 2014, Allen County completed a Capital Needs Assessment of its wastewater system detailing necessary infrastructure upgrades to eliminate existing capacity and infiltration concerns. The 7-Year Needs Assessment Report detailed expenditures of some \$32M. The Allen County Sanitary Engineer's Office is in the process of completing an updated 10-Year Needs Assessment. The 10-year report will outline expected Capital Project expenditures through the year 2030 and is expected to be in excess of \$36M. Nearly \$20M of that amount will be to address OEPA Findings and Orders for the Phase 2 Shawnee II WWTP Upgrade Project and the Phase 2 Shawnee II Collection System Upgrades. The City of Lima has also developed a long-range capital improvement program (2040) for its wastewater system totaling \$150M.

Water and wastewater concerns:

- Age of distribution and collection systems
- Service area expansions
- Lack of current future plans

Until recently, the existing service areas of local water and wastewater services were developed independently. Current planning efforts to collectively serve existing urban development with water and wastewater services under a new regional utility district. The plan proposal looks to alleviate leapfrog development, urban sprawl, and escalating system maintenance costs. Constraints to future industrial and commercial developments will be readily apparent if timely planning efforts are not initiated.

6.2 Industrial Sites

Although present across Allen County, industrial sites tend to be primarily located within and around the cities of Lima and Delphos because of the demand for water and wastewater infrastructure. Historically, there has not been an adequate supply of sites for immediate purchase or expansion of existing businesses or the location of new businesses. Recently, areas have been identified for future development along the Indiana & Ohio, CSX, and R.J. Corman rail lines, the Allen County Airport, and the redevelopment of the Gateway Commerce Park complex.

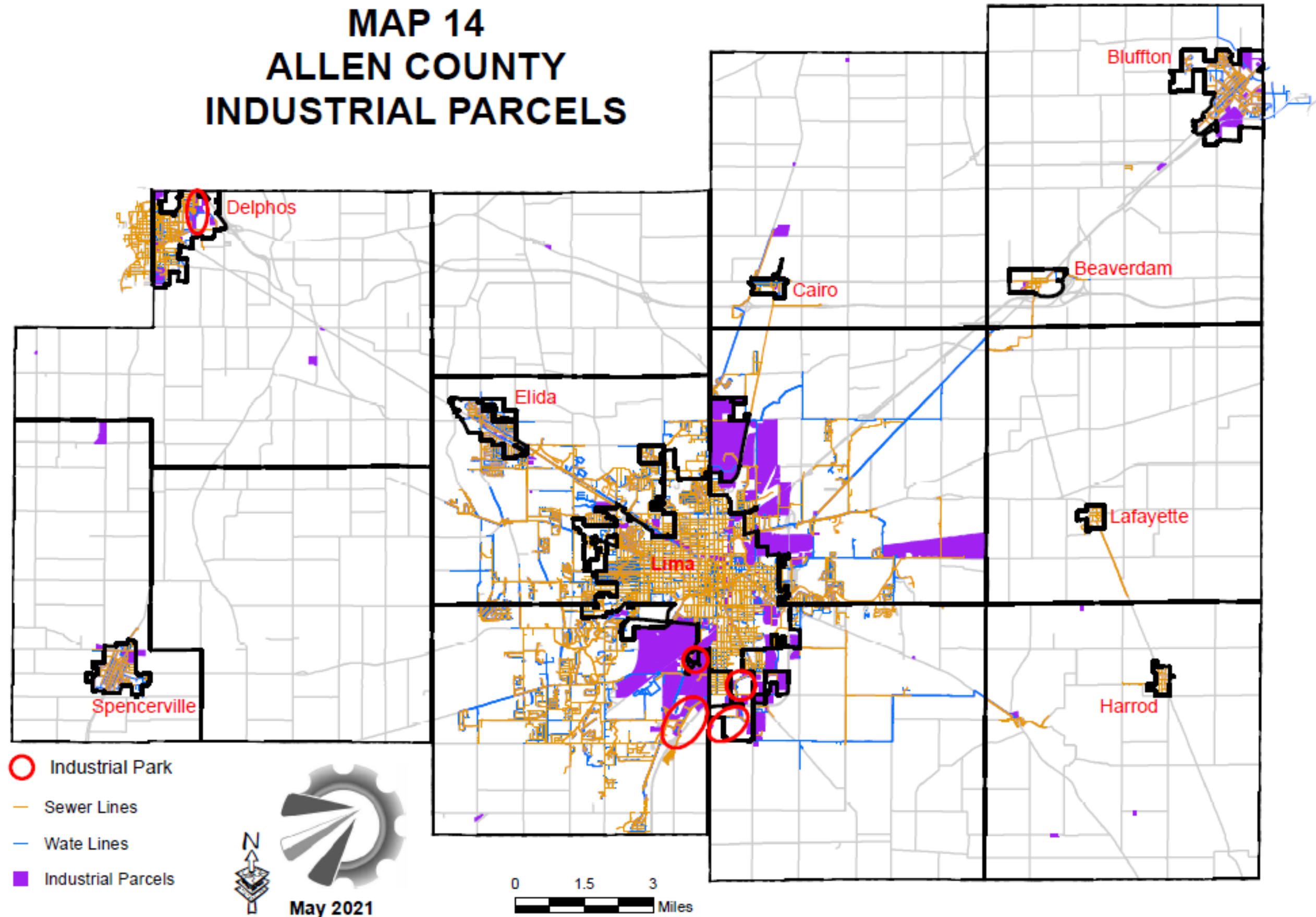
During the CEDS planning process, the identification of all industrial sites within Allen County was completed. Industrial areas were identified and mapped. Current concerns over site adaptability and the ability of specific sites to expand and their access to certain municipal services, utilities/power grids, and roadway/railway infrastructure are being identified with site impediments documented for action. Currently, there are more than 5,600 acres of industrial land dispersed over 517 parcels in Allen County.

Currently 5,600 acres of land in Allen County has been classified as in "Industrial" use.

There are three Industrial Parks located near the south end of Lima near Interstate 75 and one in Delphos, just off US30. And, while the amount of land appears to be adequate for near-term and future development, not all industrial parks are ready for occupancy. Several industrial parks are still planning, and others lack specific "on-site" amenities, including necessary infrastructure. Map 14 identifies the industrial parcels by available infrastructure.

On the positive end, potential clusters of available land with existing or access to existing infrastructure are concentrated along railroads north of Cairo (CSX RR) and Beaverdam.

MAP 14 ALLEN COUNTY INDUSTRIAL PARCELS



(Norfolk Southern - NS RR), west of Elida (G&W RR), west and southwest of Lima (R.J. Corman RR) in Shawnee Township, and in Perry Township (Indiana & Ohio RR). All locations offer certain advantages in terms of transportation and visibility. Further, a Foreign Trade Zone that encompasses the Husky Refinery reveals the community can provide unique benefits to future industrial activities not found within adjacent counties. Bluffton, Delphos, and Spencerville are also actively developing the infrastructure necessary to support new industrial facilities.

6.3 Transportation

Transportation infrastructure is a vital tool in community building and economic development activities. Transportation infrastructure includes roads, bridges, rail, and airports. It also provides area cartage and freight carriers as well as inter and intra city public transportation services.

6.3.1 Highway System

The highway system that services Allen County is characteristic of small metropolitan areas in the United States. The highway system is comprised of interstate, arterials, collectors, and local roads. The administration of these roads is a governmental function delegated, in whole or in part, to appropriate agencies of the federal government, state government, or local governmental units. For example, I-75, a major north-south interstate, passes through Allen County. To the north, I-75 links the community to cities such as Toledo and Detroit, while to the south, Dayton, Lexington, Atlanta, and Miami can be directly reached via I-75. Another major roadway located just north of the City of Lima is US 30. This east-west route links the Lima Urbanized Area with Chicago to the west and Pittsburgh and Philadelphia to the east. In addition to I-75 and US 30, Allen County is serviced by five major state routes: SR 309, SR 117, SR 81, SR 65, and SR 66. Thus, the highway system supplies a solid network for the movement of goods and people within the region.



The Allen County highway system is characteristic of many small metropolitan areas across the nation. The system is comprised of interstate, arterials, collectors, and local roads. The administration of these roads is a function designated in whole, or part, to federal, state, and/or local governmental units. According to ODOT records, in 2020, there were roughly 1,328 total roadway miles in Allen County, of which about 23 miles were classified as interstate miles. Arterial roadways totaled 103 miles and accounted for ~8% of the total system mileage. Approximately two-thirds (68%), or ~911 miles, were classified as local, and ~60%, or 790 miles, were rural. In 2020, estimates of daily vehicle miles traveled (VMT), total system mileage was compromised due to low traffic volumes during the global pandemic.

As part of the CEDS planning process, roadway corridors with a current or projected deficient level of service (LOS) were identified. In addition, of the 377 bridges in Allen County, 77 were identified as deficient or in need of rehabilitation. The transportation systems' performance and prioritized needs have most recently been documented by the LACRPC in its 2040 Long Range Transportation Plan; ODOT/FHWA subsequently approved the Plan. Transportation projects in the 2040 Long Range Plan approached

\$891.3 million in estimated project costs, of which \$82.1 million was identified for necessary bridge projects.

6.3.2 Public Transportation

Allen County is serviced by both intracity and intercity bus service. In addition, a full range of charter and taxi services and paratransit service providers are also available within the community. The Allen County Regional Transit Authority (ACRTA) and Greyhound Bus Lines provide bus services, Baron's Bus Lines and Lima Limo offer various charter services for local and regional travel needs.

The ACRTA provides fixed-route public transit within the Urbanized Area. The fixed route system consists of 168 miles of the route, and the Uplift system continues to provide services to passengers with disabilities. ACRTA runs six routes every day but Sunday. In addition, the transit authority has four routes that serve the public Monday through Friday. The demand response complementary paratransit service, called Uplift, facilitates the travel needs of the transportationally disadvantaged as required by the ADA. The transit system spent approximately \$2.8 million providing services in the most recent calendar year, which the LACRPC has published in the Transit Development Plan 2020.

Greyhound Bus Lines operate an intercity bus service. Greyhound operates from the ACRTA's bus terminal located in downtown Lima. Two scheduled buses arrive and depart daily. The bus line at the Lima terminal also provides parcel service. The available Greyhound services can reach most major cities in the United States. In addition, Baron's Bus Lines also utilize the Lima terminal several times a day, providing residents easy access to its regional services.

6.3.3 Rail System

The Public Utilities Commission of Ohio (PUCO) documented some 96.3 miles of rail in Allen County. Allen County is currently serviced by two primary Class I rail carriers, CSX (17.7 miles) and Norfolk Southern ((NS) 15.3 miles)). Indiana also services the area and Ohio RR ((I&O) 10.5 miles)), Genesee & Wyoming ((G&W (28.7 miles)), and R.J. Corman (23.7 miles). Collectively, these railroads can provide access to local, regional, and national markets. Map 15 depicts the rail system traversing the County. Noting the presence of Class I, II, and III rail service providers, the availability of rail sidings at existing sites is somewhat limited, and additional investment is necessary to increase capacity,

Rail sidings are limited at existing industrial sites.

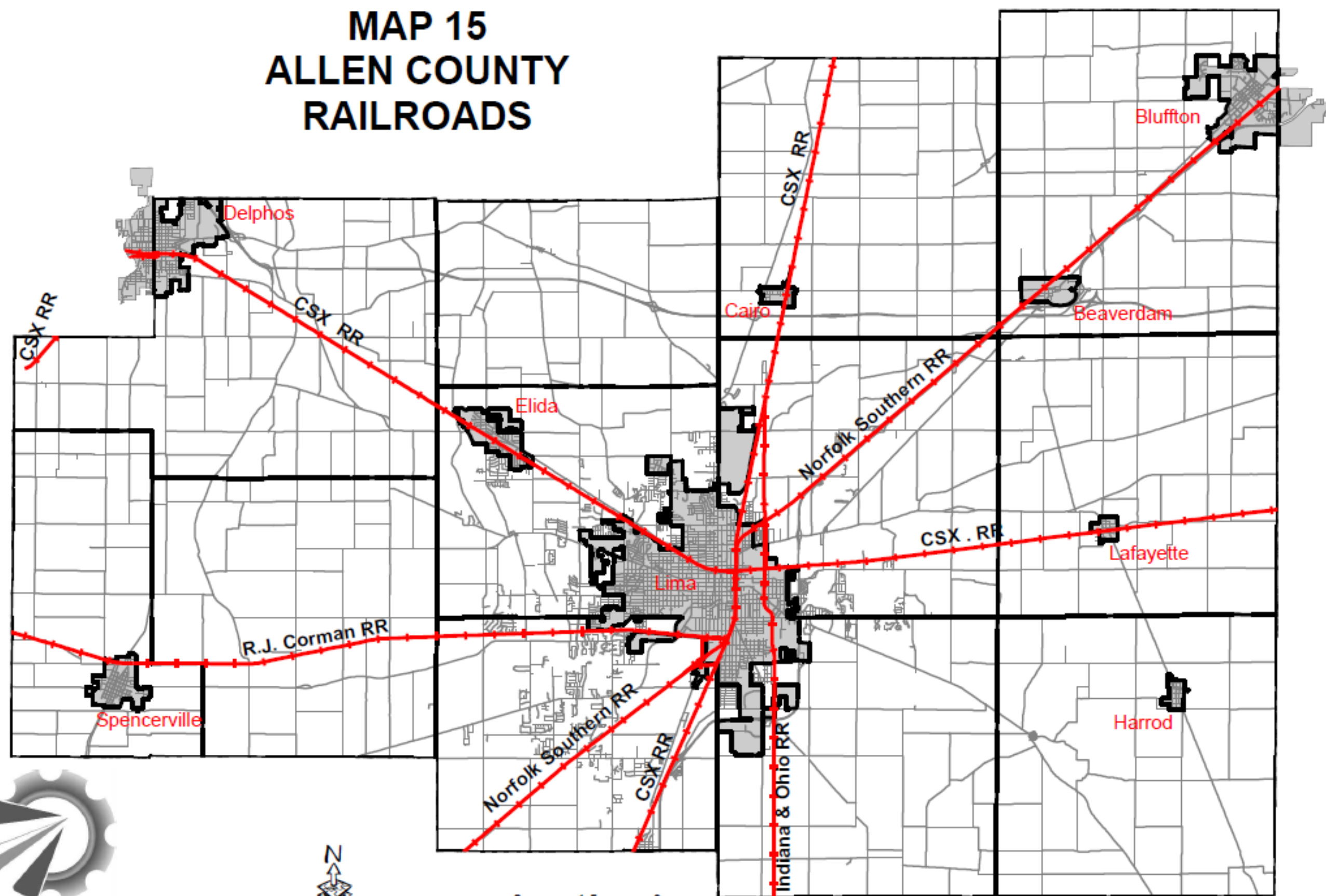
especially for break-of-bulk and intermodal functions. Also, insufficient sidings and limited through rails are increasingly a safety issue as crossings are continually being blocked for extensive periods, isolating hospitals, emergency services, and businesses.

Based partly on the resurgence of rail as a competitive mode of transportation for both freight and people, railroads are being reexamined as to their potential to strengthen the industrial and commercial vitality of the region, in conjunction with the City of Lima, the Ohio Rail Development.

Commission (ORDC) and the Allen County Commissioners developed an industrial development strategy that focuses on strengthening and increasing the community's already considerable rail infrastructure. The presence of passenger rail service within the community is an important goal of area officials. Another issue concerning the rail system is preserving abandoned sections of rail lines as future transportation corridors. The ORDC published the most recent discussion regarding rail infrastructure needs in the Allen County Community.



MAP 15 ALLEN COUNTY RAILROADS



May 2021



0 1.5 3
Miles

6.3.4 Electric, Oil & Gas Transmission Line Locations

A full complement of utility providers serves Allen County. Residential and commercial services are readily available for electricity and gas. Service providers include Buckeye, Panhandle Eastern, Columbia Gas of Ohio, and Dominion Gas. Specialized industrial cylinder and bulk gas are also available through BOC Gases and AGA Gas. Municipal water and sewer were addressed earlier.

The availability and costs of utility services are considered very reasonable when compared to state and national costs.

When examining larger industrial applications, it is important to recognize that Allen County hosts several significant regional gas companies (Dominion and Columbia Gas) and petrochemical companies that have established terminals and/or pipelines for transmission purposes. These include Marathon, Shell, Buckeye, Enterprise, and Mid Valley. It is also essential to recognize that the Ohio Power Company has large voltage transmission lines traversing the region. Map 16 identifies the approximate location of the various utility lines.

6.3.5 Cartage, Freight & Warehousing Services

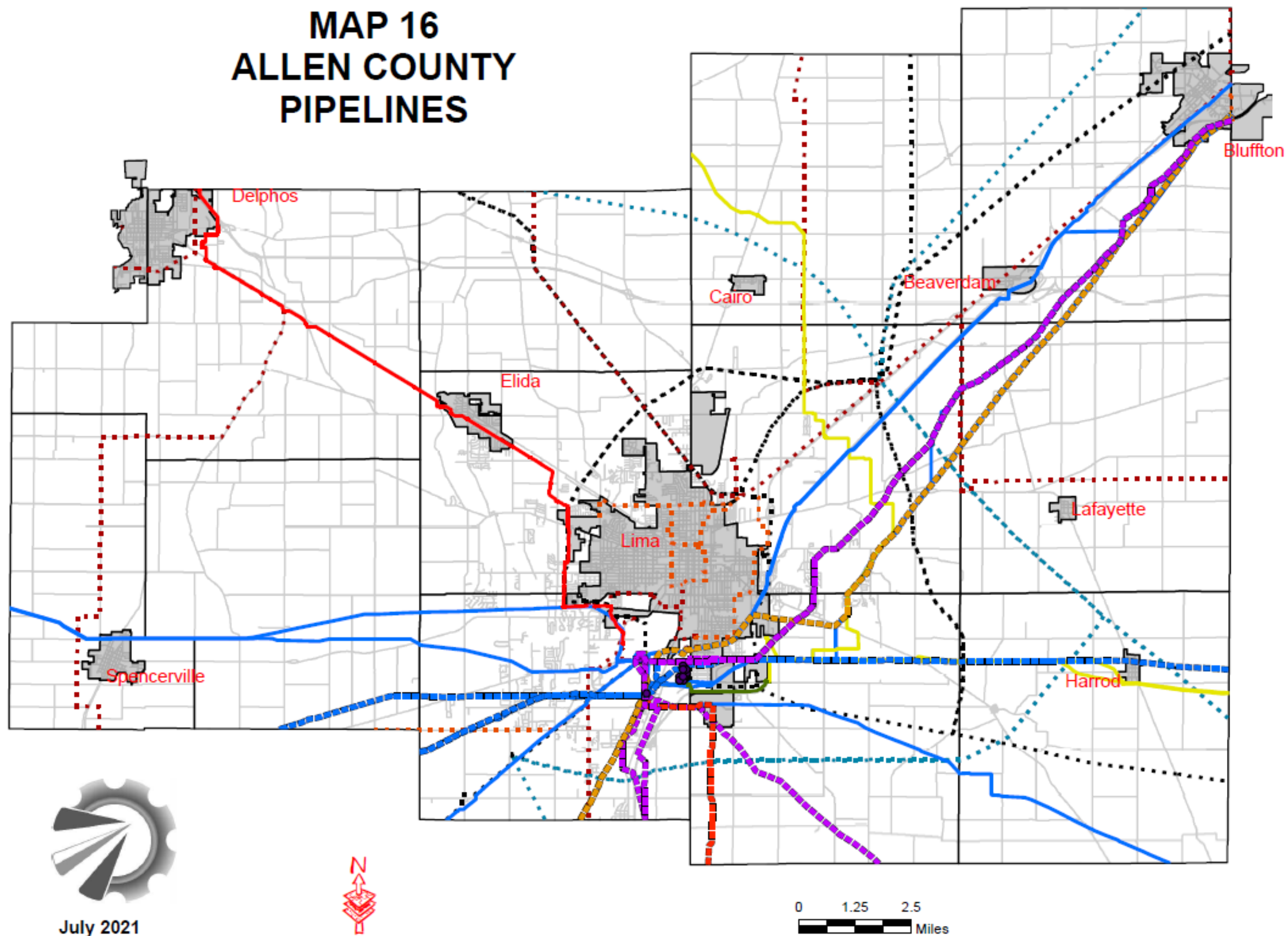
One of the primary assets of the Allen County community is its access to both the State and national systems of railroads and highways. These assets are being built and expanded upon by local freight and warehousing concerns. When examining the freight these carriers handle, over 75 percent of all freight is exported out of Allen County.

Another aspect of the sector available to the community is the existence of owner-operators. Though generally assigned to one primary carrier

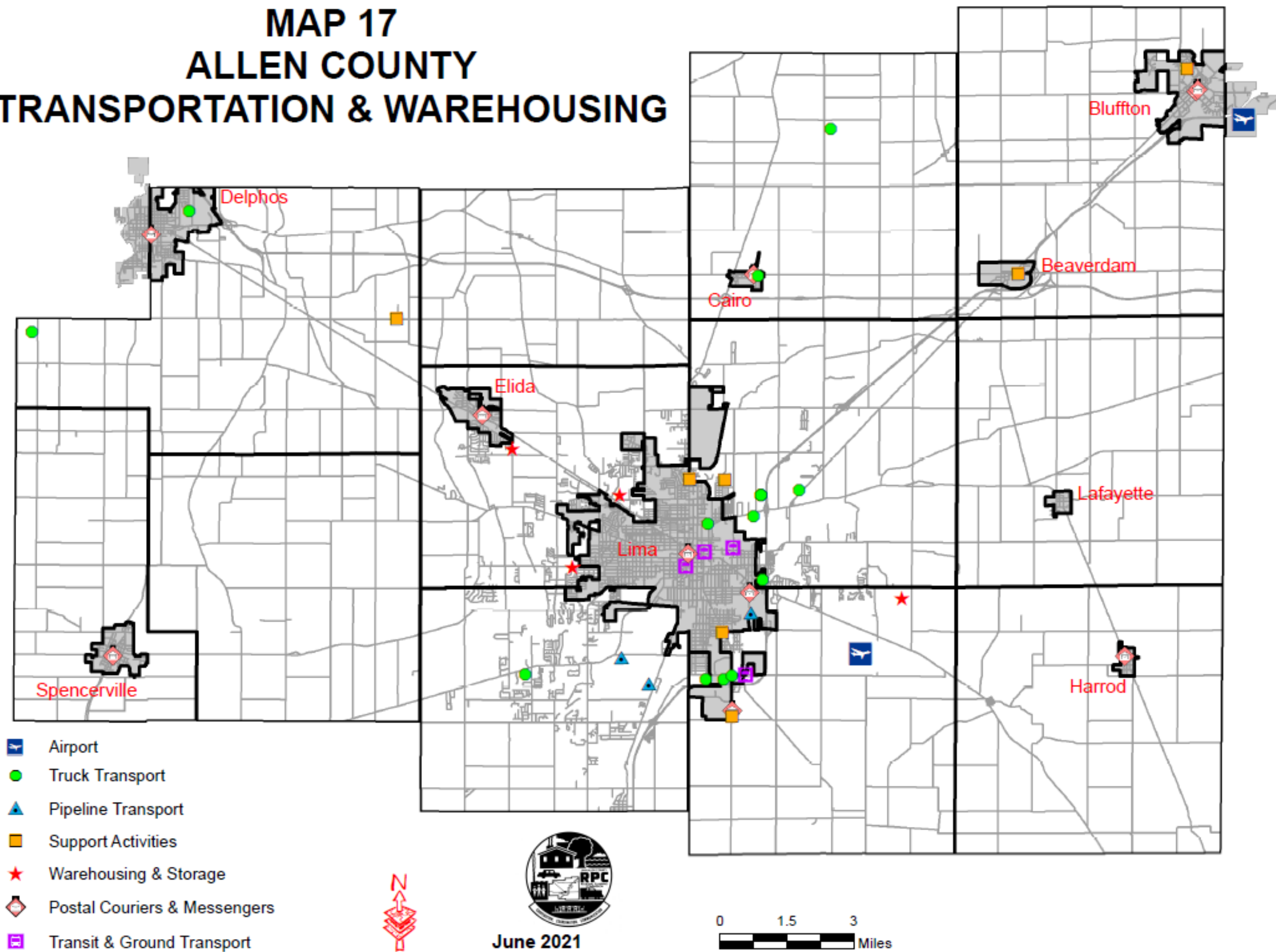


through lease, this group aids the industry serving as additional capacity for short-term trip leases to area carriers. Map 17 reveals the location of the cartage-related sector with respect to rail and air facilities.

MAP 16 ALLEN COUNTY PIPELINES



MAP 17 ALLEN COUNTY TRANSPORTATION & WAREHOUSING



**TABLE 15
CARTAGE, FREIGHT & WAREHOUSING BY CLASS**

Class	Firms	Employment
General Freight	23	374
Local	11	65
Long Distance	12	309
Specialized Freight	19	150
Local	8	49
Long Distance	8	86
Household & Office	3	15
Freight Forward	8	26
Warehousing	8	353
Total	58	903

6.3.6 Air Service

Allen County has only one airport with a Federal Aviation Administration owned & maintained Instrument Landing System and Automated Weather Observation System. The runway is 6,000' x 150'. The airport supports strong corporate and charter activity 24/7/365. The largest regularly use Lima-Allen County Airport is a mix of corporate aircraft, including Lear Jets, Cessna Citations, Beechcraft King Airc, Sabreliners, Hawker Siddeleys, and Gulfstreams, Falcons, and Canadair Challengers. Angel Flights, Air Ambulances (Lifeflight), Surgical teams are flown into Allen County regularly as the Lima area supports two hospitals. Expedited air freight supports the local Allen County area manufacturing facilities (Ford, Dana, etc.) to keep the assembly lines moving, eliminating downtime. The airport now features a grooved runway and plans to update LED taxiway edge lighting for improved visibility in inclement weather.

Another airport in the area is Bluffton, which is privately owned and operated. This has a 4,130-foot lighted runway and an instrument-approved system. Commercial air service is also available at Dayton International and Toledo Express airports, less than 80 miles from Allen County.

6.4 Summary

The critical issues of concern to future development lie with the availability, adequacy, and costs associated with the community's infrastructure. The community's transportation network, water distribution system, wastewater capabilities, and drainage system are typical infrastructure concerns for the public. Privately supplied utilities such as natural gas, electricity, voice, and data communications are also a part of the infrastructure. In economic development, infrastructure is concerned with the ability to move goods, services, and products between the community's suppliers and markets and the sustenance of the labor force.

Currently, there are more than 5,600 acres of industrial land dispersed over 517 parcels in Allen County. And, while the amount of land appears to be adequate for near-term and future development, not all are ready for occupancy. For example, several industrial parks are still in the planning phase, and many sites lack specific "on-site" amenities, including

necessary infrastructure. On the positive end, the primary clusters of available land or existing infrastructure are concentrated just south of Lima and east of Delphos near the I-75 or US 30 corridors.

The link between industrial development and transportation cannot be minimized. The community's access to the federal and state roadway system is excellent and pending improvements will only increase the community's attractiveness. However, the ability to capitalize upon the region's rail infrastructure is more challenging. Currently, the limited number of through tracks on critical corridors hamper vehicular traffic on area roadways near at-grade crossings. Moreover, the availability of rail sidings at existing industrial sites is somewhat limited, and additional investment is necessary to increase capacity, especially for break-of-bulk and intermodal functions. Concerns relative to other forms of transportation include expansion of public transport, especially for journey-to-work trips for persons without other means of travel; and continuation of Amtrak services, especially high-speed. Also of concern, intercity service transportation, including the economic viability of corporate air service facilities and the continued financial viability of local-based trucking companies.

The community must begin to recognize the capital assets already invested in and devoted to its various water and wastewater systems. In addition, the ability to financially establish and support expansion must meet primary cost-benefit analyses. Concerns regarding water and wastewater systems include the capacity and age of distribution and collection systems, service area expansions, the current regulatory environment; and, lack of long-range plans.

SECTION VII ECONOMIC OVERVIEW & ANALYSIS

The economic base of Allen County has been undergoing transition since the 1980s. The community's historical reliance on large multi-national corporations manufacturing durable goods, including heavy equipment, military items, aerospace equipment, and locomotives, has shifted. The community's economic base is now more dependent upon global economic pressures for consumer goods, smaller, more productive, and less labor-intensive industries producing lower-cost items. The contraction of the manufacturing sector has challenged the historical and social underpinnings of the community. In addition, the expansion and further development of the service sector and the retail and wholesale sub-sectors increasingly forces the community to examine future economic and social policies to improve and expand local employment opportunities for its residents.

This section provides baseline information on the community's economic underpinnings and begins with a summation of current County business patterns. Next, a review of non-agricultural employment is provided by sector and uses data provided by the U.S. Bureau of Labor Statistics (BLS) as its source. Next, data from the 2012 and 2017 United States Agricultural Census are used to analyze farm operations, production, the market value of agriculture commodities sold, and the number of acres in production. Then Gross Domestic Product (GDP) totals by industry are provided by the U.S. Bureau of Economic Analysis (BEA). Finally, the section concludes with a summary based on employment.

Allen County resisting the trend to a service sector based economy.

7.1 Non-Agricultural Employment

The employment data, processed by the BLS, contains employment data for all Allen County companies with employees. This annual dataset allows the study of economic trends across 13 employment categories. While data is reported for many subcategories of employment, a summary of the local data was limited to five major employment categories representing most total Allen County employment. This data helps conduct trend line analyses and compare employers' numbers and the total number of employees reported for each sector. The employment sectors included in the summary are:

- Manufacturing
- Retail Trade
- Professional, Scientific, Management, Administrative, and Waste Management Services
- Educational Services, and Health Care & Social Assistance
- Arts, Entertainment, Recreation, and Accommodation & Food Services

BLS 2019 data suggests these five (5) employment sectors comprised the majority (77.4%) of the total employees in Allen County. Table 16 displays a comparative data analysis for the years 2014 and 2019. The data shows the number of employees reported by employers on an average annual basis for 2014 and 2019 by sector. Calculated are the percentage change over the six years and a summation of 2019 sectoral representation as a percent of total 2014 employment.

Local job growth and business start-ups have lingered behind state averages.

The total number of full and part-time employees reported by the BLS grew from 46,730 in 2014 to 47,165 in 2019, increasing 0.9 percent.

Growth in all but one of the five selected sectors grew between 2014 and 2019. However, also worth noting is the number of businesses reporting employment across the Allen County community decreased by 78 employers between 2014 and 2019.

TABLE 16 NON-AGRICULTURAL EMPLOYMENT BY PRIMARY SECTOR & YEAR				
Sector	2019	2014	Percent Change 2014 to 2019	2019 Sectoral Representation as Percent of Total 2019 Employment
Manufacturing	10,601	10,125	4.7	22.5
Retail Trade	5,503	6,756	-18.5	11.7
Professional, Scientific, Management, Administrative, and Waste Management Services	3,281	2,255	45.5	7.0
Educational Services, Healthcare, and Social Assistance	11,315	10,993	2.9	24.0
Arts, Entertainment, Recreation, Accommodation and Food Services	5,733	4,501	27.4	12.2
Total of Selected Sector Employment	36,433	34,630	5.2	77.4
Total Jobs	47,165	46,730	0.9	
Source: Bureau of Labor Statistics				

7.1.1 Manufacturing

In Allen County's manufacturing sector, employment increased by 476 jobs, increasing 4.7 percent over the study period (2014-2019). The proportion of manufacturing jobs to all jobs rose from 21.7 percent in 2014 to 22.5 percent in 2019. Statewide, manufacturing jobs represented 14.0 percent of all non-agricultural employment in 2019. The number of manufacturing firms in Allen County reporting employment over the study period declined by 19, a 13.9 percent decrease.

Local manufacturing employment increased while local manufactures declined.

7.1.2 Retail Trade

Employment in the retail trade sector saw a decline of 1253 jobs (18.5%) between 2014 and 2019. As a percentage of total employment, employment in the retail trade sector declined slightly from 14.4 percent to 9.6 percent. Retail trade as a percentage of employment in Ohio represented 11.3 percent of all non-agricultural employment in 2019. According to the BLS, firms in Allen County engaged in retail operations declined by 4.5 percent from 405 in 2014 to 383 in 2019.

7.1.3 Professional, Scientific, Management, and Administrative and Waste Management Services

Employment in this sector increased by 1026 jobs between 2014 and 2019, an increase of 45.5 percent. As a proportion of Allen County employment, the Professional, scientific, management, and administrative, and waste

Administrative Support and Waste Management employment continues to grow, expanding by 45.5 percent between 2014 and 2019.

management services sectors increased from 4.8 percent in 2014 to 7.0 percent in 2019. Firms in this sector Increased by 20, a 13.4 percent increase, with the number of such firms totaling 149 in 2019.

7.1.4 Educational Services, Health Care and Social Assistance

In Allen County's health care and social assistance services sector, employment increased by 322 jobs, gaining 2.9 percent over the study period (2014-2019). The proportion of educational jobs to all jobs rose slightly from 23.5 percent in 2014 to 23.9 percent in 2019. Statewide, health care jobs represented 17.6 percent of all non-agricultural employment in 2019. The number of health care service firms in Allen County reporting employment over the study period is 291 in 2019.

7.1.5 Arts, entertainment, and recreation, and accommodation and food services

Employment in the accommodations and food services sector increased by 1,232 from 2014 to 2019, for a 27.4 percent increase. Employment within the accommodations and food services sector rose from 9.6 percent to 12.2 percent as a percentage of all jobs over the study period. At the same time, this same sector represented 9.8 percent of employment in Ohio in 2019. The number of Allen County firms engaged in this sector is reporting as 215 in 2019.

7.2 Agriculture

Allen County was ranked 29th in soybeans production, 28th in corn production, and 20th in wheat out of the 88 Ohio counties in the 2012 Agricultural Census. The presence of agriculture is diminishing. Agricultural data compiled by the National Agricultural Statistics Service (NASS) from 2017 indicates that the number of operating farms decreased from 904 in 2012 to 855 in 2017, a loss of 5 percent from five years earlier. According to the 2017 Census of Agriculture, the total number of acres of cropland in production increased by 5.9 percent between 2012 and 2017, reflecting a gain of 15 square miles of farmland. Data in Table 17 identifies the acreage consumed in agriculture pursuits by commodity over 2012 through 2017 period. Table 18 indicates that productivity increased in 2012 in two of the three commodities, and the increases were dramatic. However, the continued loss of agricultural land to residential and commercial uses is alarming, and the continued loss of productive farms and rich farmland should be monitored with concern.

TABLE 18
ALLEN COUNTY FARM PRODUCTIVITY BY COMMODITY 2007-2012

Crop	Productivity: 2012	Productivity: 2017	% Change
Corn	119.7 BPA	158.2 BPA	+32.2
Soy Bean	51.9 BPA	46.9 BPA	-9.6
Wheat	70.2 BPA	79.2 BPA	+12.8
Source: 2012 and 2017 Agricultural Censuses			

TABLE 17
ALLEN COUNTY FARM PRODUCTION 2012-2017

Crop	Acres Harvested 2012	Acres Harvested 2017	% Change in Acres Harvested
Corn	64,868	66,840	+3.04
Soy Bean	77,791	86,780	+11.5
Wheat	7,373	6,986	-5.2
Source: 2012 and 2017 Agricultural Census			

Due to urban uses (primarily residential) consuming agricultural land relatively rapidly, existing agricultural pursuits are experiencing additional stress. The 2017 Census of Agriculture suggests that the market value of products sold decreased from \$144,091,000 in 2012 to \$139,911,000 in 2017, a 3.0 percent decrease. Census data indicates that between 2012 and 2017, sales of agricultural goods and services in Allen County decreased by \$4.2 million.

7.3 Gross Domestic Product

Gross Domestic Product (GDP) Allen County generates approximately 8.2 billion dollars yearly (per a 2018 study conducted by the Ohio Development Services Agency's Office of Research). This figure represents roughly 1.22% of the total state GDP.

TABLE 19 ALLEN COUNTY GDP BY SECTOR: 2007-2014 (IN MILLIONS)				
Sector	2018*	2014*	% Change Amount	% Change Share
Manufacturing	\$4101.00	\$2,440	68.1	42.3
Wholesale Trade	\$348.90	\$275	26.8	4.8
Retail Trade	\$393.20	\$345	14.0	6.0
Health Care/Social Assistance	\$800.20	\$616	30.0	10.7
Information	\$115.20	\$90	28.0	1.6
Finance/Insurance/Real Estate (FIRE)	\$737.80	\$384	92.1	6.7
Professional/Technical	\$119.30	\$308	-61.3	5.3
Accommodations/Food	\$161.40	\$125	29.1	2.2
Educational Services	\$63.20	\$52	21.5	0.9
Arts, Entertainment, and Recreation	\$16.40	\$15	9.3	0.3
Other Services	\$115.70	\$113	2.4	2.0
* Bureau of Economic Analysis				

7.4 Summary

Data between 2014 and 2020 shows that the total number of jobs in Allen County grew by 0.9 percent, the number of jobs approaching 47,200.

This analysis demonstrates that the region's economy has and is continuing to experience significant changes to its historical employment pattern. Data indicates that the economic base is maturing as a relative decline in the proportion of retail jobs in the community has been offset by administration and waste management services. In addition, the food and accommodations industries are beginning to take on increased importance within the local economy.

The economic base is maturing as evidenced by the increasing presence and contributions of those engaged in waste management and food service industries.

SECTION VIII

ACTION PLAN: VISION FOR THE FUTURE

As required by the United States Department of Commerce, Economic Development Administration, the CEDS process must frame the community's long-term vision and develop goals and strategies to address the deficiencies and identified limitations within the local economy. The development of the CEDS was a collaborative effort that utilized the community's various political subdivisions and community stakeholders to define and address the economic concerns within the County. The process required the community to accept its strengths, identify its economic weaknesses, and identify specific goals and strategies to support its aspirations and prosperity.

8.1 Community Vision

The Allen Economic Development Group facilitates the CEDS planning process and the economic development actions of member political subdivisions and other local organizations interested in economic development. The Allen Economic Development Group's mission respects the role of each entity in supporting a robust environment through its mission statement: "It is the mission of the Allen Economic Development Group to create an environment for new business development, to promote and nurture existing business development and to facilitate the creation of new jobs in Allen County."

"It is the mission of the Allen Economic Development Group to create an environment for new business development, to promote and nurture existing business development and to facilitate the creation of new jobs in Allen County."

8.2 Establishing Community Economic Goals

Developing the CEDS economic goals, initially established in June 2004, was revisited in earnest in 2015 and again in 2021. The initial effects of the global COVID-19 pandemic, coupled with increased international competitiveness and a tightening labor market, forced local officials to assess the community's assets and analyze its readiness to support future growth and development. The planning processes were fundamental to population dynamics, educational attainment levels, workforce development issues, industrial trends, land use, and future development. Local stakeholders participated in a livability survey designed and conducted by the Allen Lima Leadership (ALL) class in 2020. In addition, AEDG conducted an internal survey of staff and its board around this same time. These activities combined to create a SWOT analysis to identify the community's strengths, weaknesses, opportunities, and threats, facilitating future scenario planning and ultimately a pragmatic approach to establishing the CEDS.

Shared or common improvements would collectively benefit the community in its entirety.

The planning process requires consensus on shared or common improvements that address deficiencies across the county, which will collectively benefit the community in its entirety. With that charge, the CEDS Advisory Committee reviewed and ultimately agreed on the economic development issues facing the region and local units of government. Table

20 identifies some insightful goal statements generated during the planning process. There were over 860 responses received through the two surveys conducted in Allen County. These statements capture core community values that could garner public

support and political will to achieve economic success. These initial goals were subsequently evaluated, clarified, simplified, and summarized. Table 21 reveals ten goals designed to guide strategic actions to benefit the region as a whole ultimately.

TABLE 20
GOAL STATEMENTS

1	Continue to build our manufacturing presence within the region.
2	Preserve agriculture as a competitive industry.
3	Diversify the economic base by attracting new industry and new product lines; reduce the tax burden on local business and industry.
4	Identify and strategically integrate communication networks that support industry's internal/external uses, specifically support for vehicular communications systems that enhance freight and automotive research/manufacturing throughout the community/region.
5	Support K-12 by promoting technology exploration and innovation.
6	Support the Small Business Development Center and the Bluffton Center for Entrepreneurs to grow new business enterprises.
7	Support the Allen Economic Development Center Strategic plan to attract new businesses with equal or greater wages than statewide comparative averages.
8	Foster increased communications and understanding between state and local economic development officials, industry, and local government agencies.
9	Provide support to maintain common databases and provide direct technical assistance to local communities with no development agencies.
10	Identify areas of collaboration outside of Allen County to support regional economic development growth.
11	Promote cooperative programs such as Revolving Loan Programs and Grant Writing.
12	Focus on business retention, business expansion, and business attraction in that order.
13	Improve the housing stock; rehabilitate or demolish unsafe and unsightly housing.
14	Reduce long-term unemployment and poverty; encourage unemployed and underemployed job seekers to consider careers in advanced manufacturing.
15	Develop a collaborative approach to improve the hiring process by removing barriers to employment, especially the long-term unemployed or underemployed.
16	Develop more brownfield sites and programs to minimize urban sprawl.
17	Market and promote redevelopment of our downtowns and business districts.
18	Work with local schools to establish them as centers for technical and vocational training; support strategic investments in the K-12 system to ensure awareness of manufacturing jobs within the community.
19	Support infrastructure improvements by leveraging the full faith and credit of the County.
20	Provide direct technical assistance to communities and direct business contacts.
21	Support career exploration and workforce training activities throughout all aspects of secondary education.
22	Increase business awareness of non-traditional, quasi-public financing vehicles such as revenue bonds and SBA loans.
23	Develop import/export assistance utilizing the foreign free trade zone.
24	Develop a "Makerfest" to highlight local firms' services, products, and capabilities and expose local students to career possibilities and needed skills.
25	Encourage the use of the Ohio State University, Bluffton College, University of Northwestern Ohio, and Rhodes State College as tools for innovation and development.
26	Develop a plan for Countywide expansion of the overall infrastructure.
27	Retain and expand jobs; expand educational, technical, vocational, and skill levels of the labor force.
28	Expand the range of potential industrial sites available; increase the number of "job-ready" sites.
29	Encourage proper utilization and preservation of prime agricultural land; stop urban sprawl.
30	Create a regional approach to economic development; develop a marketing and communications plan for internal and external media markets.

8.3

Strategies

The goals will not be realized overnight. They will require deliberate actions, specific strategies, and policies to be achieved. Therefore, strategies and guidelines were developed and articulated to enable the community to adapt to changing economic conditions, especially conditions stemming from factors outside the community's control. Table 22 identifies potential strategies or policies that should prove effective in realizing the goals mentioned above. The Committee reviewed and refined goals and strategic approaches for each and will assess the same regularly.

**TABLE 21
ALLEN ECONOMIC DEVELOPMENT STRATEGY
STRATEGIC GOALS**

1	Infrastructure/Site Preparedness – Rehabilitate unsafe, aging, and insufficient infrastructure to include roads, utilities, schools, and parks to inventory land, sites, and buildings available and ready for economic and business development.
2	The attraction of New Business – Attract new business to Allen County to create and retain jobs that share wage rates equal to or greater than statewide comparative averages, and increase capital investment for economic development support in Allen County.
3	The Support of Existing Business – Support and promote the entrepreneurial spirit in a highly competitive manner which inevitably results in an "innovation culture" that spurs market commercialization for the region, assisting in promoting the growth of existing business in Allen County.
4	Workforce Development – Develop a regional strategy that employs an international approach to workforce attraction by coordinating population dynamics and workforce development with the existing educational system inclusive of technical, vocational, and post-secondary training to meet the need of all employers and residents.
5	Collateral Support – To successfully support collateral systems for housing and downtown development.
6	Incentives/Initiatives/Programs – Develop and maintain a listing of incentives, initiatives, and programs to assist in expanding employment in existing employment clusters and attract the local presence of their suppliers to assist in business and economic development in Allen County.
7	Marketing – To market the related assets of AEDG to the community and business partners.
8	Strategic Planning and Collaboration- Expand and strengthen local/regional cooperation and the private sector engagement needed to assume a culture of proactive leadership to affect sustained community economic development. Develop a strategic plan to support the proper economic development structure that promotes growth and prosperity by balancing industry interests and natural resources across a larger region by guiding manufacturing and higher density development into planned places and encourage urban redevelopment.
9	Agricultural Preservation- Preserve and enhance agriculture as a competitive industry and way of life
10	Regional Resiliency- Develop regional resiliency with smart growth strategies to maintain economic and environmental adaptability amid ever-growing technological expansion within diverse industry sectors in order to prevent stagnation.

8.4 Milestones & Measures

For the goals and strategies to be helpful, they must necessarily be quantified and measured. Measures are beneficial to assess incremental progress and improvements over time. They are also helpful in supporting specific actions and policies or establishing benchmarks from which new goals and strategies develop. As stated earlier, to achieve the goals outlined in this document, certain steps need to be undertaken by local government units. Table 23 provides various measures to assess progress on the CEDS goals and re-evaluate those strategies as implemented.

8.5 Summary

The CEDS Advisory Committee commits to assist local governments with specific actions incorporated herein. The Committee will measure success according to specific performance measures outlined above. The CEDS argues that using growth rates at various geographic levels will provide local communities the necessary benchmarks to assess improvements/declines in employment, income, education, and the local environment.

TABLE 22 ALLEN ECONOMIC DEVELOPMENT GOALS & STRATEGIES	
1	<i>Infrastructure/Site Preparedness – Rehabilitate unsafe, aging, and insufficient infrastructure to include roads, utilities, schools, and parks to inventory land, sites, and buildings available and ready for economic and business development.</i> Strategies: Management of Allen County Port Authority. Work with partners to develop spec buildings for the availability of business development. Identify and track inventory of industrial sites and buildings. Identify land development for the next business park. Develop a revenue plan for development with our partners (Greater Lima Region and Port Authority of Allen County).
2	<i>The attraction of New Business – Attract new business to Allen County to create and retain jobs that share wage rates equal to or greater than statewide comparative averages, and increase capital investment for economic development support in Allen County.</i> Strategies: The marketing of Lima/Allen County through available communications and to develop a site selector information manual. To pursue RFI's through JobsOhio and Regional Growth Partnership. To develop a centralized and focused approach with partners for the attraction of new business in Allen County. Research and identify target sectors best suited and most viable for Allen County. Pursue site selector opportunities, conferences, and programs. Develop a local incentive program.
3	<i>The Support of Existing Business – Support and promote the entrepreneurial spirit in a highly competitive manner which inevitably results in an "innovation culture" that spurs market commercialization for the region, assisting in promoting the growth of existing business in Allen County.</i> Strategies: Perform the 100, 20/20 plus 10 model per year and list action steps per visit. Keep a listing of the 100 modified BR&E's per year. Conduct 100 significant BR&E's per year. Identify 100 modified BR&E's per year.
4	<i>Workforce Development – Develop a regional strategy that employs an international approach to workforce attraction by coordinating population dynamics and workforce development with the existing educational system inclusive of technical, vocational, and post-secondary training to meet the need of all employers and residents.</i> Strategies: Develop quarterly meetings with business, academia, and non-profit institutions. Communicate workforce initiatives within BR&E's. Support and receive \$1 million-plus in workforce assistance from JobsOhio and OhioMeansJobs annually working with partners.
5	<i>Collateral Support – To successfully support collateral systems for housing and downtown development.</i> Strategies: Connect with partners to increase housing development in Allen County Search, identify, and list housing investment partners to work together to achieve progress Search, identify, and list housing developers to work together to achieve progress Work with Allen County Commissioners to develop a plan for the Allen County Home site Search and find downtown development partners Work with partners for Opportunity Zone investment Work with chambers of commerce, city administrations, and businesses for renovation/revitalization of city/town centers Attract developers to build in downtowns of cities/villages in Allen County Marketing of area strengths and assets, promote livability of Lima/Allen County
6	<i>Incentives/Initiatives/Programs – Develop and maintain a listing of incentives, initiatives, and programs to assist in expanding employment in existing employment clusters and attract the local presence of their suppliers to assist in business and economic development in Allen County.</i> Strategies: Promote JobsOhio and OhioMeansJobs programs. Promote loan programs Promote grant programs Work with Greater Lima Region to identify and attain investment in development opportunities Promote utility programs
7	<i>Marketing – To market the related assets of AEDG to the community and business partners.</i> Strategies: Provide a quarterly newsletter Communicate monthly with WLIO and radio Provide regular videos of projects as projects on AEDG website and via mass communication Work with JobsOhio and Regional Growth Partnership communication teams Develop a promotional toolkit for businesses
8	<i>Strategic Planning and Collaboration- Expand and strengthen local/regional cooperation and the private sector engagement needed to assume a culture of proactive leadership to affect sustained community economic development. Develop a strategic plan to support the proper economic development structure that promotes growth and prosperity by balancing industry interests and natural resources across a larger region by guiding manufacturing and higher density development into planned places and encourage urban redevelopment.</i> Strategies: Create a Collaborative Growth Plan Advocate for the development of regionally significant corridors (US30, SR65, I75) Support community efforts to revitalize, rehabilitate, or develop economic/recreational spaces
9	<i>Agricultural Preservation- Preserve and enhance agriculture as a competitive industry and way of life</i> Identify and attract value-enhancing agricultural processing facilities Develop land use controls to preserve prime farmland from urban encroachment jeopardizing agricultural productivity and strengthening farm markets.
10	<i>Regional Resiliency- Develop regional resiliency with smart growth strategies to maintain economic and environmental adaptability amid ever-growing technological expansion within diverse industry sectors to prevent stagnation.</i> Facilitate educational opportunities for communities to learn and implement new strategies to make their local area resilient economically and physically Incorporate green infrastructure into the planning phases of projects to reduce environmental impacts from development Assist Allen County EMA and local jurisdictions in the maintenance and utilization of the Allen County Hazard Mitigation Plan

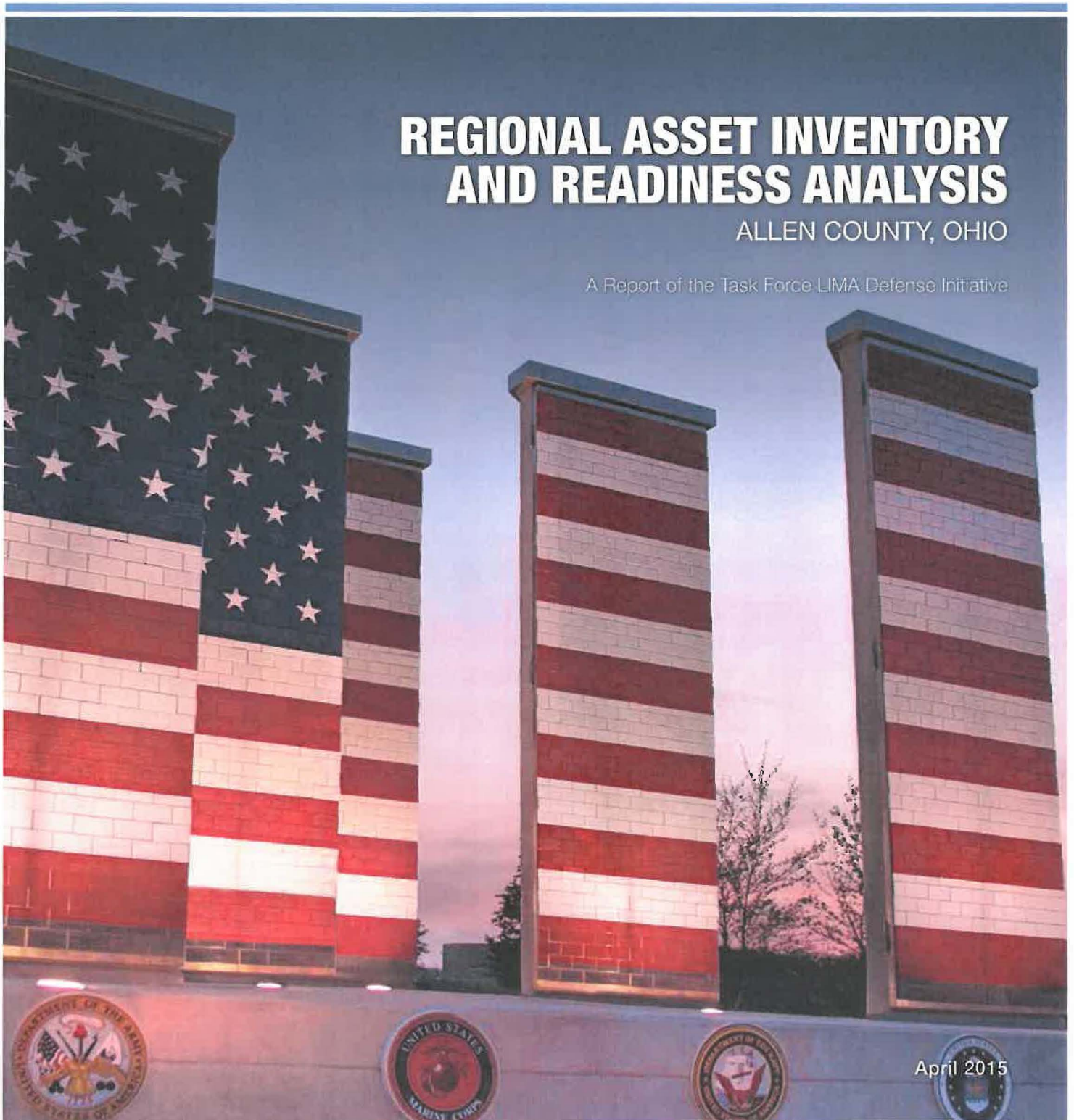
TABLE 23 ALLEN COUNTY ECONOMIC DEVELOPMENT GOALS BY MEASURES OF SUCCESS			
Goal	Measure:	Source(s):	
1	<i>Infrastructure/Site Preparedness – Rehabilitate unsafe, aging, and insufficient infrastructure to include roads, utilities, schools, and parks to inventory land, sites, and buildings available and ready for economic and business development.</i>		
	A	Add viable business to Gateway II, III (40 acres each), and V (70-80 acres)	AEDG
	B	Complete one spec building (80,000 square feet or more) within three years	AEDG
	C	Develop an inventory of available land and buildings	AEDG
	D	Fill vacant sites in Shawnee Industrial Park	AEDG
	E	Develop a revenue plan for development with Greater Lima Region and Port Authority of Allen County	AEDG, GLR, PAAC
	F	Develop a prioritized list of infrastructure improvements based on conditions/use	Local Stakeholders
2	<i>The attraction of New Business – Attract new business to Allen County to create and retain jobs that share wage rates equal to or greater than statewide comparative averages, and increase capital investment for economic development support in Allen County.</i>		
	A	Business Attraction – Assist in the attraction of ten businesses of any size and one large business (20+ employees) per year	AEDG
3	<i>The Support of Existing Business – Support and promote the entrepreneurial spirit in a highly competitive manner which inevitably results in an "innovation culture" that spurs market commercialization for the region, assisting in promoting the growth of existing business in Allen County.</i>		
	A	Twenty (20) business and twenty (20) economic development projects each year	AEDG
	B	Conduct 100 significant and 100 modified BR&E's each year	AEDG
4	<i>Workforce Development – Develop a regional strategy that employs an international approach to workforce attraction by coordinating population dynamics and workforce development with the existing educational system inclusive of technical, vocational, and post-secondary training to meet the need of all employers and residents.</i>		
	A	Support job growth of over 500 jobs per year over three (3) years.	AEDG
	B	Assist in the coordination of workforce partners	AEDG
	C	Support workforce development programs and receive \$1 million-plus in workforce assistance from JobsOhio and OhioMeansJobs annually.	AEDG
	D	Create an endowment to promote career exploration	Local Stakeholders
5	<i>Collateral Support – To successfully support collateral systems for housing and downtown development.</i>		
	A	Work with partners to increase housing development in Allen County	AEDG
	B	Search and identify housing investment and development partners	AEDG
	C	Focus on market-rate housing	AEDG
	D	Develop Allen County Home property with Allen County Commissioners	AEDG, Commissioners
	E	Identify and work with downtown development partners and local officials in Lima, Delphos, Bluffton, and villages throughout the county.	AEDG
	F	Work with partners to achieve \$25 million-plus investment in downtown opportunity zones over three (3) years	AEDG
6	<i>Incentives/Initiatives/Programs – Develop and maintain a listing of incentives, initiatives, and programs to assist in expanding employment in existing employment clusters and attract the local presence of their suppliers to assist in business and economic development in Allen County.</i>		
	A	Develop and maintain a listing of all incentives, initiatives, and programs and disseminate to communities and businesses	AEDG
	B	Present opportunities to the community and businesses	AEDG
	C	Utilize an average of 30% of the D'Arcy Fund annually	AEDG
	D	Use PACE funding through ESIDS annually	AEDG
	E	Facilitate communication between funding/regulatory agencies and political subdivisions.	AEDG
	F	Develop a community fund to promote innovation and entrepreneurship	Local Stakeholders
7	<i>Marketing – To market the related assets of AEDG to the community and business partners.</i>		
	A	Communication on at least a monthly basis to the general public	AEDG
	B	Communication to local businesses as-needed	AEDG
	C	Marketing the attraction of new businesses	AEDG
	D	Prepare a regional economic development marketing and communications plan for internal and external media markets	Local Stakeholders
8	<i>Strategic Planning and Collaboration- Expand and strengthen local/regional cooperation and the private sector engagement needed to assume a culture of proactive leadership to affect sustained community economic development. Develop a strategic plan to support the proper economic development structure that promotes growth and prosperity by balancing industry interests and natural resources across a larger region by guiding manufacturing and higher density development into planned places and encourage urban redevelopment.</i>		
	A	Create a Collaborative Growth Plan	Local Stakeholders
	B	Conduct an assessment of all existing and potential industrial/commercial sites within Allen County based on current land, zoning, and potential environmental restraints	Local Stakeholders
	C	Advocate for the development of regionally significant corridors (US30, SR65, I75)	Local Stakeholders
	D	Lead or assist in regional corridor planning	
	E	Support community efforts to revitalize, rehabilitate, or develop economic/recreational spaces	Local Stakeholders
	F	Document special environments by acreage, by categorical exclusion, and location by year	ODNR/ACAO
	G	Document population and density by political subdivision	Census
	H	Document employment and density by political subdivision	Census
	I	Assess Change in COLI/QOL Ranking by year	ACCRA/Census
	J	Document acreage and density by type of land use and assess changes	ACAO
	9	<i>Agricultural Preservation- Preserve and enhance agriculture as a competitive industry and way of life</i>	
A		Identify and attract value-enhancing agricultural processing facilities	FSA/ACAO/ODA
B		Support niche, organic, and specialty crop enterprises	FSA/ACAO/ODA
C		Develop land use controls to preserve prime farmland from urban encroachment jeopardizing agricultural productivity and strengthening farm markets.	FSA/ACAO/ODA
E		Maintain the community's unique rural country settings	FSA/ACAO/ODA
10	<i>Develop and Maintain Regional Resiliency – Develop regional resiliency with smart growth strategies to maintain economic and environmental adaptability amid ever-growing technological expansion within diverse industry sectors to prevent stagnation.</i>		
	A	Assist Allen County EMA and local jurisdictions in the maintenance and utilization of the Allen County Hazard Mitigation Plan	Local Stakeholders
	B	Facilitate educational opportunities for communities to learn and implement new strategies to make their local area resilient economically and environmentally	Local Stakeholders
	C	Support area or site development efforts to diversify regional economies	Local Stakeholders
	D	Incorporate green infrastructure into the planning phases of projects to reduce environmental impacts from development	Local Stakeholders



REGIONAL ASSET INVENTORY AND READINESS ANALYSIS

ALLEN COUNTY, OHIO

A Report of the Task Force LIMA Defense Initiative



April 2015

REGIONAL ASSET INVENTORY AND READINESS ANALYSIS

ALLEN COUNTY, OHIO

A Report of the Task Force LIMA Defense Initiative

April 2015

PREPARED BY:




TABLE OF CONTENTS

1.0	Introduction	5
1.1	History	5
1.2	The Role of the Joint Systems Manufacturing Center (Lima Tank Plant).....	6
1.3	Asset Inventory and Readiness Assessment Role and Format	7
2.0	Allen County Regional Asset Inventory	9
2.1	Population and Demographic Trends	9
2.1.1	Historic Population Growth	9
2.1.2	Forecasted Population Growth	11
2.2	Workforce Dynamics	13
2.2.1	Unemployment Trends.....	13
2.2.2	Labor Force Participation and Composition	14
2.2.3	The Role of Educational Attainment.....	16
2.2.4	Workforce Mobility	19
2.3	Industry Trends	21
2.3.1	Industry Employment Growth	21
2.3.2	Industry Output and Productivity Growth	23
2.3.3	Industry Innovation Potential	26
2.4	Income Patterns	27
2.4.1	Industry Wage Estimates	28
2.4.2	Per Capita Income Growth	29
3.0	Community Assets.....	30
3.1	Task Force LIMA	30
3.2	West Central Ohio Manufacturing Consortium.....	32
3.3	Link Lima	33
3.4	Ohio Energy and Advanced Manufacturing Center.....	34
4.0	Conclusion.....	36
5.0	Acknowledgements	37
6.0	About the Author	37
7.0	About Future-iQ Partners	38

FIGURES

Figure 1: Historic Population Growth 1940-2013	9
Figure 2: Birth Rates by Year 2006-2014	10
Figure 3: Population by General Age Group, 2013	11
Figure 4: Projected Population Change 2010-2040	12
Figure 5: Comparative Projected Growth Rates - 2010-2040	12
Figure 6: Comparative Unemployment Rates 1990-2015	13
Figure 7: Labor Force Participation Rate by Age Group.....	15
Figure 8: Manufacturing Employment Composition by Age Group	16
Figure 9: Educational Attainment of the Population Age 25 and Over, 2013	17
Figure 10: Distribution of Employment by Educational Attainment for Selected Industries, Q3 2014	18
Figure 11: Employment Commuting Patterns, Allen County.....	19
Figure 12: Principal Employment Locations of Allen County Residents by Density	20
Figure 13: Employment by Major Industry Sector, Q3 2014	21
Figure 14: Employment Change by Major Industry Sector 2008-2014	22
Figure 15: Indiana Business Research Center Innovation Index 2014.....	26
Figure 16: Indexed Real Per Capita Personal Income 1969-2013.....	29
Figure 17: 2014 Job Openings by Education and Experience Required.....	34



WELCOME
TO THE



LIMA

COMMUNITY

1.0 INTRODUCTION

Allen County, located in Northwestern Ohio has long been synonymous with economic progress and resilience in challenging times. From the perspective of the casual observer, it may be argued that the region, including the City of Lima has experienced a period of at least three major “boom and bust” cycles since its founding and multiple reorganizations in the 1850’s. However, a closer examination of the key dynamics underlying the Allen County economy points to a pattern of consistency punctuated by periods of near-exponential growth. The fact that each wave of growth in the region has been succeeded by new industries and innovations stands as a hallmark to the strength and perseverance of the region and its population.

The county, and by extension the broader region of Northwestern Ohio has faced a number of seemingly unprecedented challenges since the 1980’s due to a series of periods of deindustrialization and outmigration. A review of the region’s history again demonstrates that such patterns of death and rebirth is more common here, thereby reinforcing the resiliency narrative. This is an area that has been defined by flux and change. Comeback stories are relatively common here, and the region is poised to begin writing a new one.

1.1 HISTORY

Allen County began its life on the frontier of a new nation’s westward expansion but did not truly find its place on the map of the nation’s consciousness until the mid-1850’s when the rail industry began to make a lasting impression on its landscape and workforce. The blip that appeared on the map became a beacon after 1885 when the discovery of oil would bring the first proper industrial boom to the region. The attention, investment, and prosperity brought by the intersection of transportation and commerce over the next twenty five years would define much of the region for the last century.

The transition of the Lima Agricultural Works to the Lima Machine Works and later the Lima Locomotive Works marked the growth of heavy industry in the area, paving the way for other prominent manufacturers such as the Ohio Power Shovel Company and Superior Coach in the 1920’s and the Lima Tank Plant in 1942. These industrial giants, along with strong regional ties to agriculture and the automotive industry defined the landscape of the region’s economy throughout much of the twentieth century. While many of these large firms closed during a period of industrial decline in the 1970’s and 1980’s, the region still boasts a strong and proud manufacturing base through the presence of global firms such as Ford, Proctor-Gamble, and Potash.

The legacy of these predecessor firms defined much of the civic investment in the county’s communities and supported a number of cultural amenities, such as the Lima Symphony Orchestra that may seem out of place in a region of this size. References to the county’s cultural and economic history can also be seen in the architecture of downtown Delphos and Lima. Rather than viewing this as a vestige to the past, community leaders are now embracing the potential of the built environment for preservation and redevelopment.



1.2 THE ROLE OF THE JOINT SYSTEMS MANUFACTURING CENTER (LIMA TANK PLANT)

The Joint Systems Manufacturing Center, or JSMC, which had started its life first as the Lima Tank Depot upon its opening in 1942 and later as the Lima Tank Plant between 1976 and 2004 is the principal focus of Future iQ Partners' engagement in the Allen County region, as well as the subject of the U.S. Department of Defense Office of Economic Adjustment grant funding this initiative. The plant has held a unique position both in the regional economy as well as in the United States' defense industrial infrastructure. As the only Government-Owned, Contractor-Operated (GOCO) facility in the Department of Defense's property inventory, it stands as somewhat of an enigma. The mere operation of the facility is dependent on effective collaboration between the U.S. Military and General Dynamics Land Systems, which has been the private contractor for the plant since 1982. Its history has also closely mirrored that of the Allen County region as a whole as it has experienced several periods of growth and decline.

The early history of the Lima Tank Depot closely mirrors periods of significant military engagement. The depot and its 5,000 workers provided parts for and assembly of more than 100,000 combat vehicles during World War II. The plant was the region's largest employer during this period and a source of intense local pride, a tradition that would persist for the next seven decades. The depot was effectively "mothballed" between 1946 and 1951, reopened to meet vehicle needs for the Korean conflict, and then entered into a period of sixteen years of inactivity where the facilities were leased for commercial use. The plant was reopened for military use in 1976 to upgrade more than 12,000 M880 commercial trucks.

The plant entered its most current period of activity in August 1976, when it was selected as the production site for the XM-1 (later M1 Abrams) heavy combat tank. As the first tank rolled off the assembly floor on February 28, 1980, the plant entered into a second era of prominence, as 30 tanks were produced per month until August 1985, when the introduction of the M1A1 variant of the Abrams platform increased production levels to 120 a month. This cycle would lead to a second peak of employment in the mid 2000's as production of a Mine-Resistant, Armor-Plated utility vehicle joined Abrams and Stryker platforms in assembly.

Over the course of the last fifteen years, the JSMC has continued production and refurbishment of a number of Abrams variants, as well as production of the Stryker combat platform for the U.S. Marine Corps, the MK46 Naval Gun system, and the Namer-Merkava Armored Personnel Carrier for the Israeli Defense Force. This has coincided with the expansion of production capabilities at the plant, as well as service to all five branches of the U.S. Military.

Despite the expansion of the product lines currently manufactured at the JSMC, overall production and staffing levels have decreased over the last decade. This is the consequence of a number of failed and cancelled projects, including the Crusader and Future Combat Systems heavy weapons programs for the U.S. Army and the Expeditionary Fighting Vehicle Program for the U.S. Marines. If approved, the work associated with the combination of these three programs among others would have allowed GDLS to maintain peak staffing levels for the next several years. Their cancellation, however has cast doubt on the future viability of the JSMC and its role in Allen County.

The community and business leaders of Allen County are familiar with the particulars of the Base Realignment and Adjustment Criteria analysis of the JSMC conducted in 2003 and 2004. Changes in military alignment and spending over the last twenty-five years has resulted in calls from both the Department of Defense and Congress to consider the consolidation or closure of what are viewed as surplus military assets. Community leaders were alarmed when it was announced in 2003 that the JSMC would be included in a round of Base Realignment and Closure (BRAC) analysis that would conclude with a series of recommendations in 2005.



While the initial review and recommendations called for the realignment and idling of the JSMC, the proactive outreach coordinated by GDLS and Task Force LIMA, a coalition of local, state and federal elected officials, economic development and business associations, labor organizations, media, and other community leadership effectively advocated for the facilities removal from the recommended actions list. This presented the JSMC with a reprieve, but also cast local and national light both on the facility and its importance as a key defense asset.

Subsequent actions by Task Force LIMA, coupled with engagement by Ohio's congressional delegation has resulted both in the extension of the M1 Abrams program, as well as a recent decision by the Department of Defense to commit \$2.3 million in additional capital upgrades. The JSMC and Allen County were also identified by the U.S. Department of Defense Office of Economic Adjustment as the recipient of one in a series of Defense Industry Adjustment (DIA) action planning grants. The intent of these grants is to provide communities affected by changes in defense procurement activity with resources to both strategically address these changes as well as to develop proactive strategies to both diversify local industries and workforce opportunities.

1.3 ASSET INVENTORY AND READINESS ASSESSMENT ROLE AND FORMAT

The asset inventory and readiness assessment presented in the following section represents one of the key deliverables in Future iQ Partners role in this initiative to guide the region through a strategic action planning process. The intent is that the dialogue conducted through this process will both identify and align the strategic community resources already active in the areas of community, economic and workforce development to first identify the key needs facing the JSMC and the region's other major employers and then to craft an agenda of pragmatic actions to both address these immediate needs and to develop sustainable partnerships to respond to future challenges.

This report traces its origins to a statewide assessment of defense assets prepared by CBD Advisors in 2014. This comprehensive study produced a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis of four regions of Ohio and their military installations and assets. This assessment was further measured against the ten-criteria community analysis prepared through the BRAC process. This analysis considered a number of current and historical demographic, economic, and community indicators, including:

- Demographics
- Childcare
- Cost of Living
- Education
- Employment
- Housing
- Medical Providers
- Safety/Crime
- Transportation
- Utilities

INTRODUCTION



These indicators provide a comprehensive portfolio of the community assets and services deemed essential to ensure continued operation of each facility under review. The findings of this analysis, which was conducted in 2003 and is included as Appendix 1 to this report shows that the JSMC and Allen County was competitive in a number of key areas, such as the availability of educational facilities and medical services, but lagged behind its peers in other areas such as unemployment and the availability of childcare facilities.

The BRAC analysis presents a mixed image of Allen County and its local assets. It reveals a number of opportunities for future alignment and collaboration. The intent of the current analysis is to extend these findings in a number of notable ways.

The asset inventory and readiness analysis follows along five specific topic areas:

- Demographic and Population Trends
- Workforce Dynamics
- Industry Growth and Needs
- Income Dynamics
- Community Assets

Much of the content included in these topics echoes and updates a number of the indicators in the included analysis. Others are unaltered as conditions have not changed appreciably since the initial review. The intent is to both reexamine those critical factors necessary to support the local economic base, but to also highlight the potential challenges facing the region in this regard.

The asset inventory and readiness analysis also expands upon the community analysis presented in the BRAC process by also highlighting a number of significant concerns that have been identified by key partnerships that have formed in the region in the last twelve years. A host of organizations and community leaders have joined to address key workforce and industry needs that extend beyond issues of worker availability to include questions of workforce quality. Parallel conversations have also emerged around issues of industry growth and innovation.

The format of the analysis to follow will generally present those key indicators associated with each of the five topic areas, compare those indicators to historic and statewide trends, and identify potential challenges and opportunities associated with each. The analysis will conclude with a discussion of the initiatives that currently active in Allen County and how each may play a critical role in the future growth and operation of the JSMC and the regional economy.



2.0 ALLEN COUNTY REGIONAL ASSET INVENTORY

2.1 POPULATION AND DEMOGRAPHIC TRENDS

One of the most frequent concerns voiced in conversations with community leaders in Future iQ Partners time in the region has been the state of the local population. Leaders speak with pride over the quality and engagement of local residents. However, there is also a growing concern over the possibility of demographic stagnation or decline, as suggested by recent projections.

2.1.1 HISTORIC POPULATION GROWTH

The population of Allen County is estimated at 105,298 in 2013. This represents a slight decline from the last three years, but the county's population has decreased even more dramatically over the last thirty years. Between 1980 and 2013, Allen County's population shrank by 6.2%. To put this in comparison, the state of Ohio's population increased by 7.2% over the same period, or a swing of more than thirteen percent.

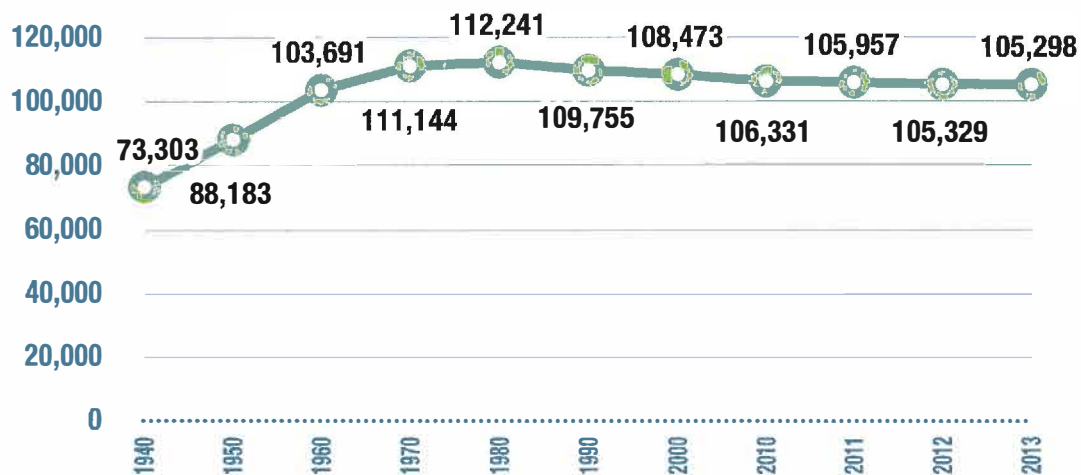


Figure 1: Historic Population Growth 1940-2013

As we can see, the county's population grew at a precipitous pace in the first three decades following World War II. This period coincided with the Baby Boom in the United States as well as a period of general economic prosperity in the region. This population growth stabilized to a great extent during the 1970's and has slowly decreased since. Allen County's population trends closely with the periods of industrial growth and decline that have occurred since 1980, as decreasing employment opportunities have resulted in fewer residents.



Another interesting phenomenon appears to be missing in the chart above. Many regions of the United States have experienced two periods of higher population growth since the end of the Baby Boom in 1964. The period between 1976 and 1984 is generally referred to as the Baby Boom Echo as the children of the Baby Boom generation began forming families of their own. Similarly, birth rates have also grown since 1990 with the arrival of the so-called "Millennial Generation." It is projected that the sum of population in this generation will come close to, if not surpass the Baby Boom generation.

Neither of these more generalizable trends is readily apparent in the historical population trend in Allen County. There are a number of possible explanations for the population decline that has occurred. Many of these are again tied to the state of the regional economy as family formation may be delayed due to diminished economic opportunity. It is also possible that the county's younger populations are more likely to move in search of greater opportunity is relatively more mobile. This is demonstrated in data from the U.S. Census Bureau which suggests that the median age of residents moving either to a new county or state between 2008 and 2012 was 24.5 years old.

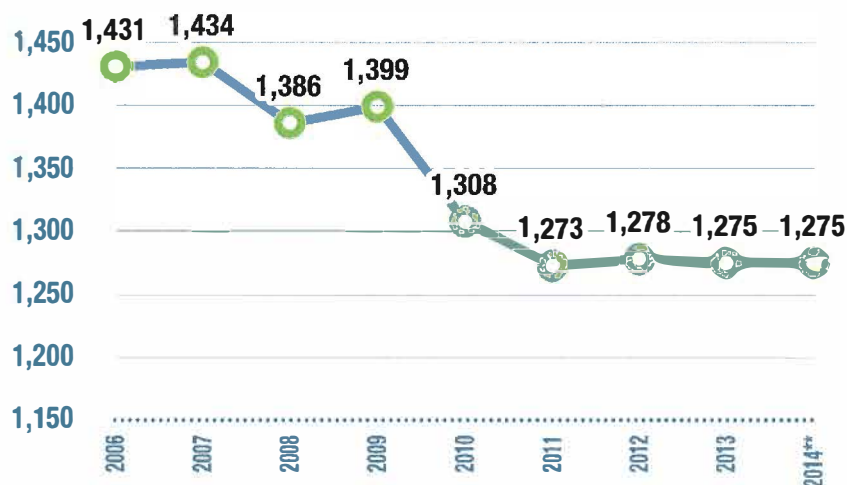


Figure 2: Birth Rates by Year 2006-2014

The chart above reinforces the impact of population mobility as birth rates in Allen County have decreased by 12.2 percent between 2006 and 2014. This correlates with a more generalized state trend as the birth rate has declined by 9.3 percent over this same period. The fact that the most significant decline occurred between 2008 and 2010 confirms the economic opportunity hypothesis posited earlier as those states that were most strongly affected by the most recent recession also experienced significant decreases in their average birth rates.

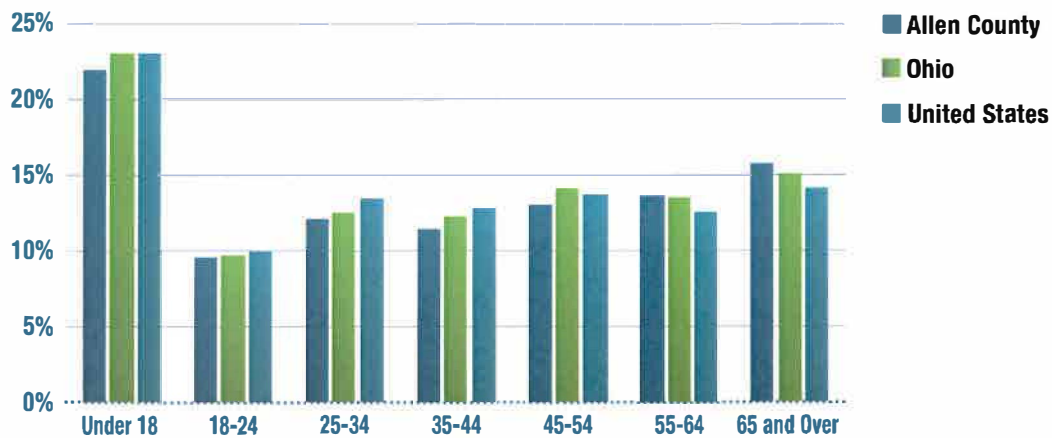
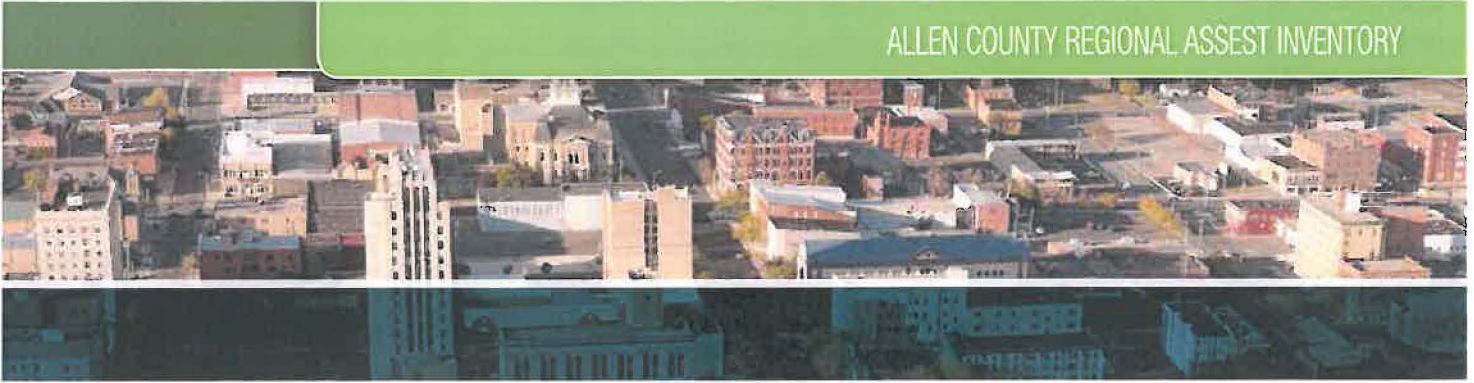


Figure 3: Population by General Age Group, 2013

The composition of the Allen County population can be further decomposed by age group, as presented in the chart above. What is immediately apparent again is the fact that both Allen County and Ohio have lower percentages of their population in young age cohorts, principally those under age 44, and a higher share of residents over the age of 45. This correlates to slightly higher median ages of 38.1 years in Allen County and 39 years in Ohio, as compared to a national median of 37.3 years. The current age distribution of the population both explains the current state as well as predicts future growth patterns.

2.1.2 FORECASTED POPULATION GROWTH

We have observed that the Allen County population has experienced a pattern of slight decline over the last thirty years, largely in response to changes in the regional economy. This has created a demographic profile that is generally older than the nation, as a whole. The current age distribution is expected to intensify over the next several decades if the trend of outmigration by younger residents continues.

The factors discussed here are among several that are considered by agencies such as the Ohio Research Office in preparing long-term population forecasts. The thirty-year forecast for Allen County is presented in the graph below.

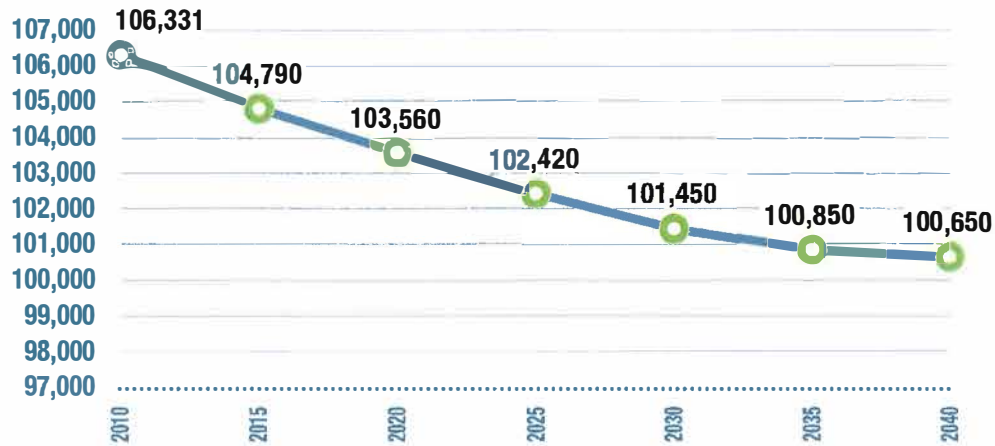


Figure 4: Projected Population Change 2010-2040

Allen County's population is expected to decline by a total of 5,691 residents or 5.3 percent between 2010 and 2040. While this seemingly assumes a downward trend, the forecasted annualized change is actually much smaller of around 190 residents or 0.2 percent of current population. This trend line is consistent with recent historical patterns and further suggests that the regional population has stabilized. At first glance, this may infer a sense of certainty or security. However, a flat population also has the potential to constrain economic growth, as we shall see in future sections.

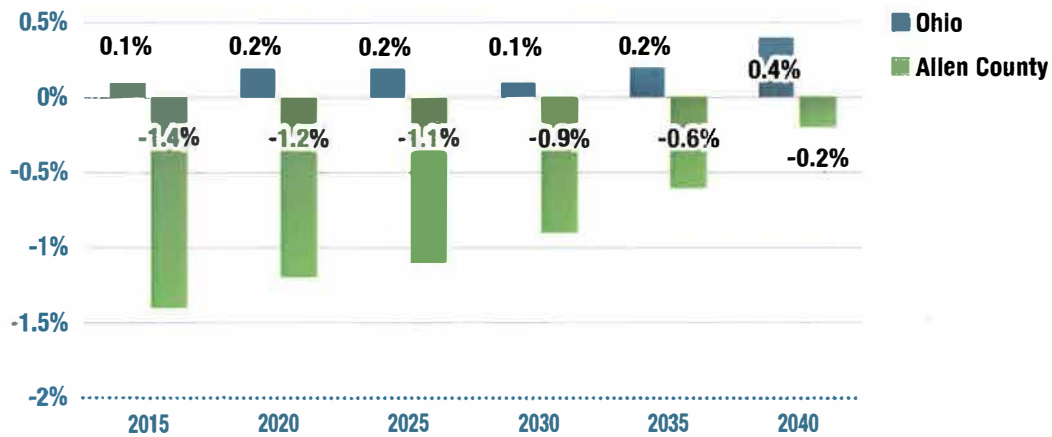


Figure 5: Comparative Projected Growth Rates - 2010-2040



The disparate population trend of Allen County is further illustrated when compared to five-year annualized growth rates for the state of Ohio. We see that Allen County's population will be most strongly impacted over the next ten years in correlation with the retirement of the Baby Boom generation, the state forecasts modest, but positive growth throughout this same period. When considered in scale, a 1.2 percent positive growth rate for the state is not all that dissimilar from the slight decline forecast for Allen County. It also emphasizes the shared challenge faced by many Midwestern states due to similar demographic trends. This further suggests an increase in competition for young residents among communities throughout the region.

2.2 WORKFORCE DYNAMICS

There are a number of strong and natural linkages between trends in a region's population and its workforce. This is especially true both in periods of economic growth and decline as one's ability to live in an area is clearly influenced by their employment. We have established the assumption that there has been some connection between local economic cycles in Allen County and patterns of population change. This suggests that future challenges may exist for the region, but that potential solutions are also close at hand.

2.2.1 UNEMPLOYMENT TRENDS

One of the most commonly reported and closely watched workforce metric available is the monthly unemployment rate. While the measure is not perfect by any means and often lags behind other economic activity, it is the best comparable measure of labor market conditions available. There are a number of factors that are most likely to impact the unemployment rate of a particular area, as depicted in the chart below.

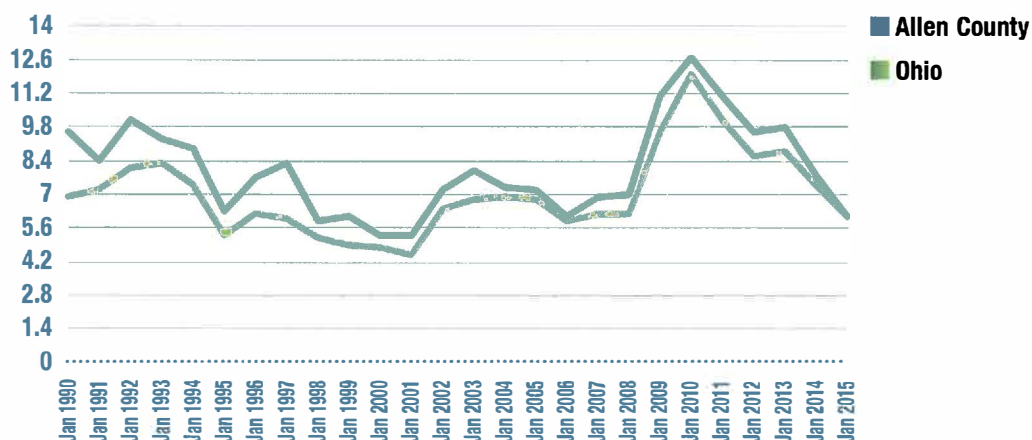


Figure 6: Comparative Unemployment Rates 1990-2015



The first pattern that becomes apparent in these trend lines is that the unemployment rate of any area is subject to seasonal fluctuations. This is especially true of Midwestern states, as industries related to agriculture and those that are weather-dependent, such as construction see wider fluctuations in employment than do those that are not subject to these factors, such as health care. Communities with higher shares of employment in these seasonally-affected industries typically see the widest variation. This is also especially true in communities with large retail sectors, as they tend to report their highest levels of employment around the holiday shopping season.

The second and perhaps more prominent trend that can be observed here is that changes in the unemployment rate are also strongly affected by changes in broader economic conditions. We can see the clear evidence of three significant recessions throughout this period in 1991 and 1992, 2001 through 2003, and 2008 through 2010. This represents punctuated high water marks for unemployment in both Allen County and the state.

The two trend lines mirror each other, for the most part, except for one period of divergence from 1995 to 1997 where Allen County's unemployment rate remained relatively high while the state unemployment rate decreased. This suggests that the region recovered more slowly from the effects of the 1991 recession and that policy changes related to the passage of the North American Free Trade Agreement may have also played a factor. This pattern is fairly consistent in areas where employment was dominated by manufacturing and other heavy industries during this time.

The unemployment rate represents a ratio of two connected measures – the total share of an area's population that is considered to be unemployed, in that they are actively seeking employment, and the labor force, which is a subset of the general population over the age of 16 that is either employment or seeking work. (If an individual is not working and is not seeking employment they are considered excluded from the labor force.) Changes in the unemployment rate can then occur through fluctuations of either of these factors. Allen County's unemployment rate has generally followed Ohio's trend over the last four years as the local unemployment rate has returned to pre-recessionary levels in the last several months. This decline is partially the result of the generalized improvement of the nation's and local economy. However, it also demonstrates a third pattern that is closely tied to the population dynamics discussed earlier.

2.2.2 LABOR FORCE PARTICIPATION AND COMPOSITION

The unemployment rate represents one means of assessing the health of any given labor market. Another metric which is especially useful is the labor force participation rate, which is the ratio of the sum of employed and unemployed individuals to the labor force-eligible population as a whole. Allen County's labor force participation rate or LFPR has remained fairly constant at 63 percent over the past eight years. This dynamic has historically followed state trends for the last thirty years due to similarities in population composition and economic makeup.

Over the last fifty years, participation in the labor force has been strongly influenced by two major factors – gender and age. Most regions, including Ohio experienced a significant increase in labor force participation beginning in the 1960's as women entered the workforce in larger numbers. This has remained fairly stable until the last several years, as the most recent recession has led to a significant decline in male labor force participation. Data is not available to confirm this at the level of Allen County. However, a number of recent studies have demonstrated that these effects are again disproportionately felt in manufacturing-heavy markets.



In addition to punctuating a growing divide between male and female labor force participation, the most recent recession also demonstrated that participation varied quite widely by age. The chart below forecasts labor force participation rates for various age groups through 2018, as projected by the U.S. Bureau of Labor Statistics.

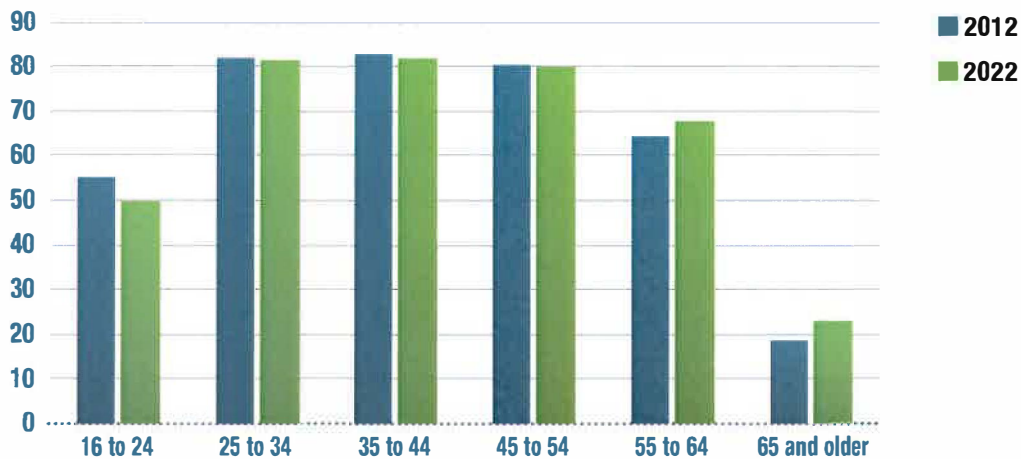


Figure 7: Labor Force Participation Rate by Age Group

We see here that labor force participation is the highest among workers aged 25 to 54 and then decreases with age. This pattern is dictated first by the increased utilization of postsecondary education, which delays entry into the labor force for many. It is also dictated by the physical demands of many occupations, as labor force participation had historically been defined by one's strength and ability. As such, it should come as no surprise that these demands couple with eligibility for a number of benefits, such as Medicare and Social Security lead to a sharp drop off in labor force participation after age 65.

There are a number of key changes that are forecast across several age groups. We have observed a gradual erosion of participation among young entrants. This is expected to reach a low point. Conversely, participation has expanded among older workers both due to growth in the number of less-demanding professional occupations that has occurred over the last two decades, as well as increases in life expectancy. This suggests that any further erosion in the Allen County labor force will not occur as rapidly as forecasted population decline. Rather, it is not unreasonable to assume that the region's labor force will remain stable for the next decade. This provides some certainty to employers and a base upon which to build new initiatives.

The impacts of the changes discussed are most strongly felt in industries with higher shares of older workers. This again tends to be the case in traditional industries such as construction or manufacturing and less likely in industries with relatively lower wages and higher worker turnover, such as retail trade or the hospitality sector.

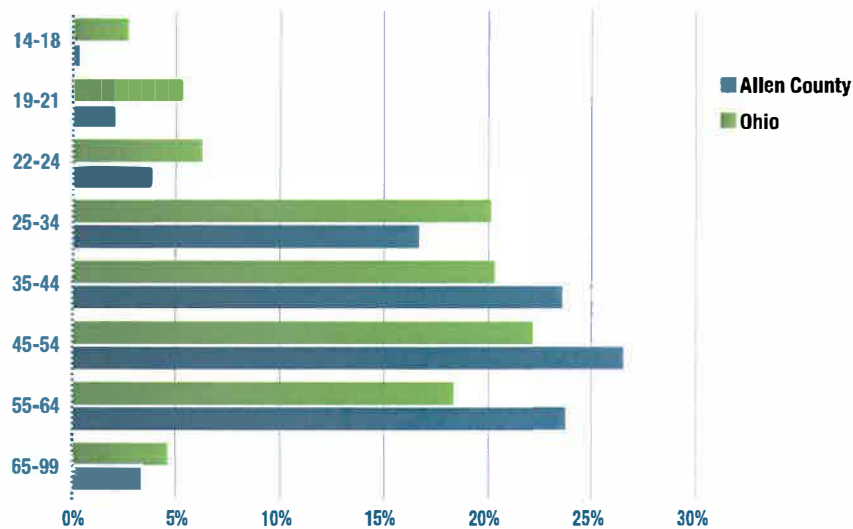


Figure 8: Manufacturing Employment Composition by Age Group

The chart above depicts the age distribution of all employers and the manufacturing sector in Allen County as of the first quarter of 2014. We can see the significant impacts of an aging workforce here as the share of workers over the age of 35 is significantly higher among manufacturers in the region. Of particular note is the sharp difference in the share of workers ages 55 to 64. This represents a significant share of the workforce that may be anticipating retirement in the next decade. Employers also recognize that these workers, as well as those ages 45 to 54 are more likely to have advanced skill sets and leadership experience. Replacing these workers and their attributes is of critical importance in maintaining economic competitiveness.

The issue of the potential skills gaps created by the aging workforce in a number of key industries has become more pronounced as the regional economy has recovered from the most recent recession. This has led a number of organizations such as the Western Ohio Manufacturing Consortium (WOMC) and Link Lima to realign their efforts to account for skills and training needs throughout the full array of workforce preparedness. Similar conversations are occurring in many communities and best practices are only now emerging. The development of the WOMC, which will be discussed in the review of Community Assets that follows as well as Link Lima have the potential to lead Allen County in being well-positioned to address this possible challenge.

2.2.3 THE ROLE OF EDUCATIONAL ATTAINMENT

One of the more interesting metrics included in the 2005 BRAC analysis was the educational profile of those communities under review. Education plays a vital role in connecting many aspects of society and the economy through its influence on residents and the workforce. Allen County has the advantage of access to a wide variety of postsecondary education options, including seven colleges and universities and five community or technical



colleges. These institutions are also essential partners in a number of community initiatives, such as the Automotive Task Force, Link Lima, Task Force LIMA, and the WOMC. This engagement underscores the importance of education and training in securing Allen County's economic future.

The chart below describes the distribution of all residents in the county aged 25 years or older by their highest completed level of education, also known as educational attainment. As we can see, there are a number of distinct differences between the Allen County profile and that of the state and nation.

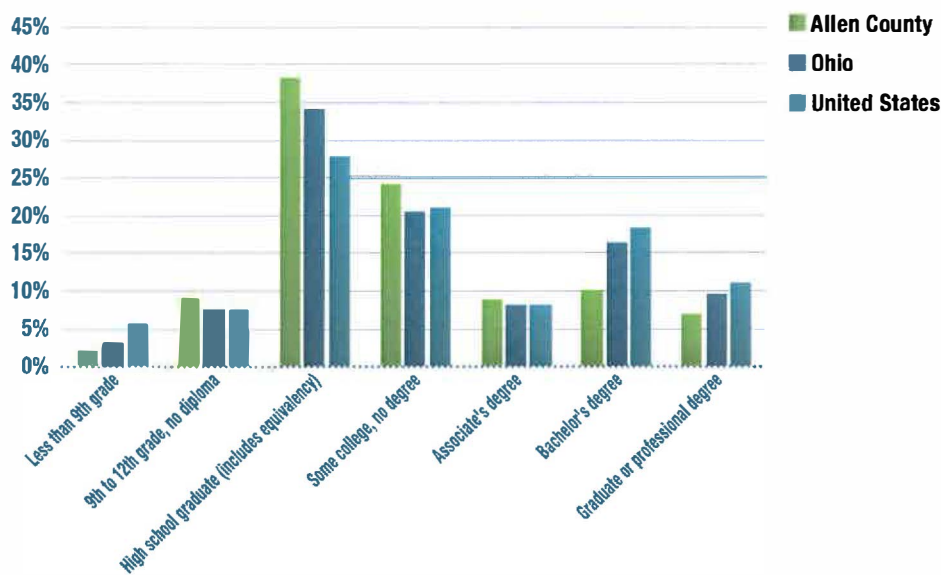


Figure 9: Educational Attainment of the Population Age 25 and Over, 2013

The first and most significant difference is that both Allen County and Ohio have a significantly higher percentage of individuals that have completed no postsecondary education. This has historically been associated with a difference in industry composition, as employment in many traditional industries has not required specific training beyond high school until recently. Any additional skills would be obtained through a combination of company-provided instruction and experience. This is also more common in smaller regions than large urban areas for similar reasons.

Conversely, Allen County has a slightly higher concentration of individuals who have completed at least one year of postsecondary education or have received an Associate's degree. This too is determined both by available employment opportunities in an area as well as access to education institutions. This finding is intuitive, given that Allen County's residents have enjoyed convenient access to high quality vocational and technical education options.



A final clear difference has the potential to present another significant future challenge to the region. Only ten percent of Allen County's residents have earned a bachelor's degree, and seven percent have earned a graduate or professional degree. Each of these measures is significantly below both the state and national average. The region's industry and employment base again explains much of this disparity. However, demands for more highly educated and skilled workers in all major industries have increased significantly over the last decade and will continue to increase as employers seek to replace the skills and experience vacated through retirements. As a consequence, the region must consider ways to both attract and retain these highly educated and coveted residents.

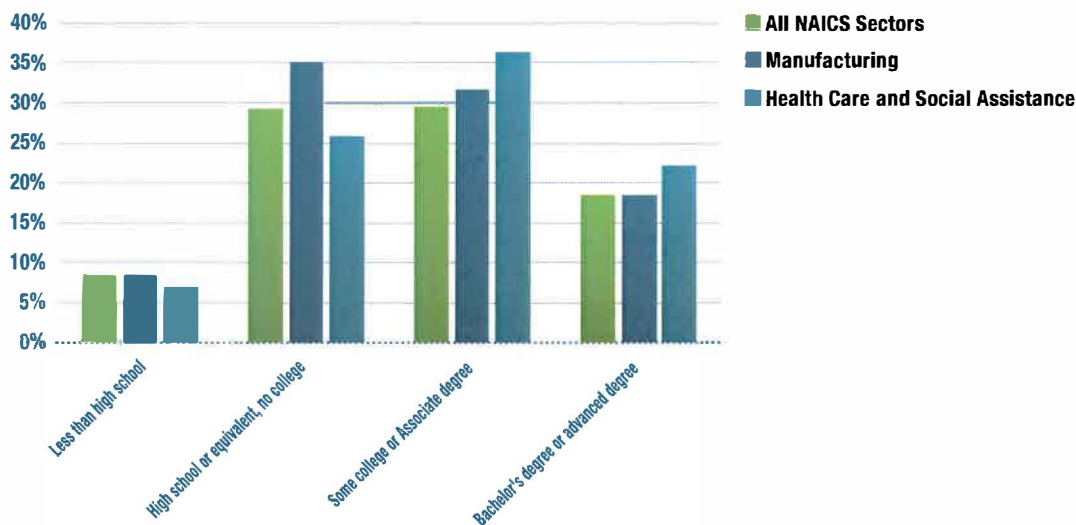
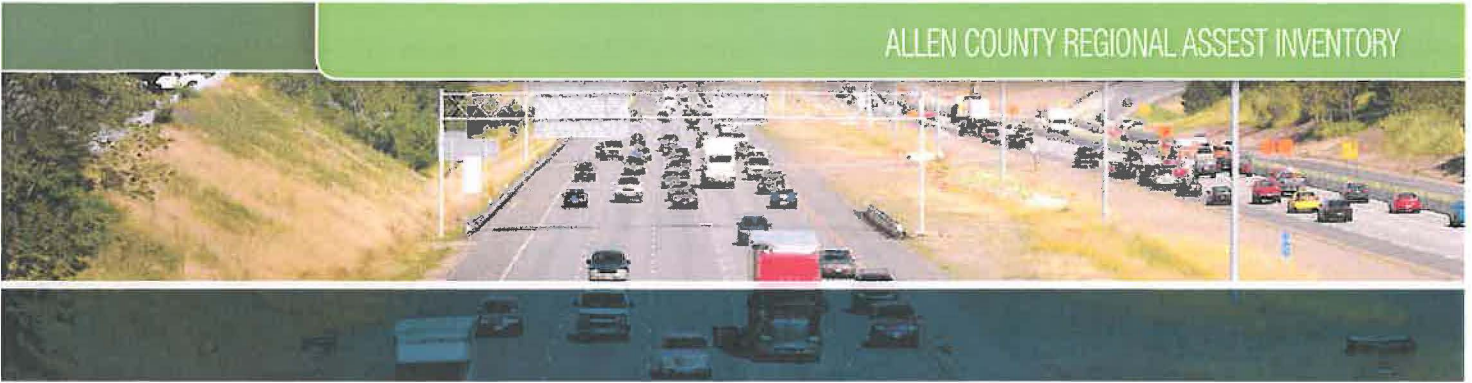


Figure 10: Distribution of Employment by Educational Attainment for Selected Industries, Q3 2014

It has been suggested that many of the differences that have been observed to this point between population and workforce trends in Allen County and Ohio have been attributed to historical industry patterns that will be discussed in a future section. One aspect that is particularly salient to the current discussion, however, is again the fact that different industry sectors have varying demands for individuals of different educational attainment levels. This is illustrated in the bar graph above. By comparing the two rightmost bars in each educational category, we see that the manufacturing sector in Allen County employs a significantly higher share of high school degreed workers than does the health care sector. Conversely, Allen County's health care providers employ a greater percentage of workers with some level of postsecondary education. This can be linked to some extent to the occupational distribution found in each sector. However, changes among the region's major manufacturers have also narrowed these gaps considerably over the last eight years.



2.2.4 WORKFORCE MOBILITY

A final aspect of the workforce dynamics of Allen County that helps to determine its readiness to meet future economic opportunities is the level of mobility within the local workforce. Residents often view labor markets as being regionally-defined rather than restricted by municipal or county boundaries. Similarly, one's personal employment opportunities are defined both by access to transportation as well as the tradeoff opportunity cost between time, distance, and compensation.

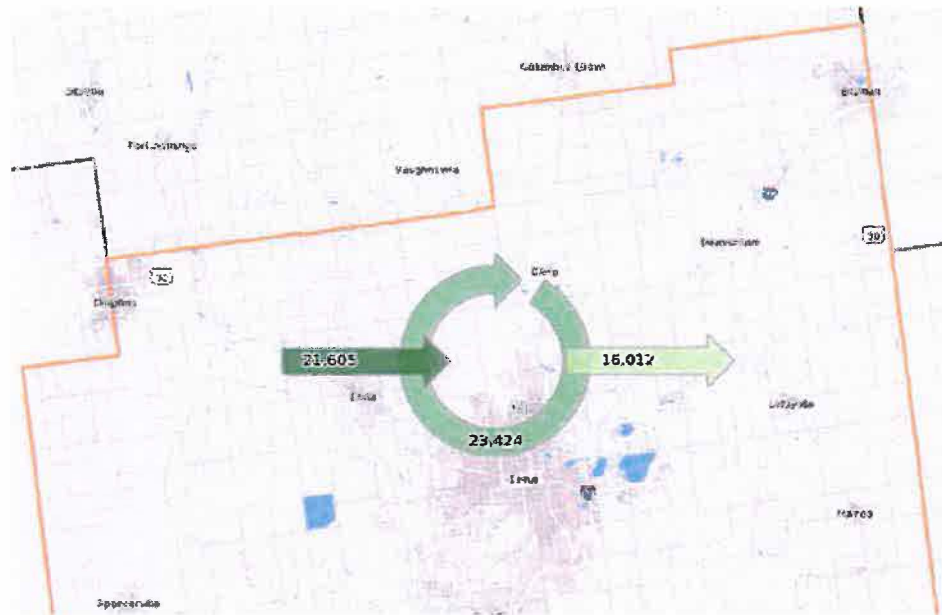


Figure 11: Employment Commuting Patterns, Allen County

The map above summarizes the net commuting activity of the Allen County labor market. We see that a majority of the county's labor force (59 percent) both lives and works in the county. Similarly, a lesser share of residents (40.6 percent) work outside of Allen County, and represent a lesser number than those from outside of Allen County that commute into its communities every day. This commuting pattern is fairly typical of metropolitan areas that are located along major transportation routes, as is the case Lima and neighboring communities. This pattern also suggests that there is some potential to effectively recapture the out-commuting workforce if employment opportunities grow and diversify.

Another way of visualizing commuting behavior is to look at the principal markets in which residents of Allen County are employed. The map below shows this density, with darker colors, such as that in the communities of Lima and Delphos representing the strongest concentration of jobs and workers.

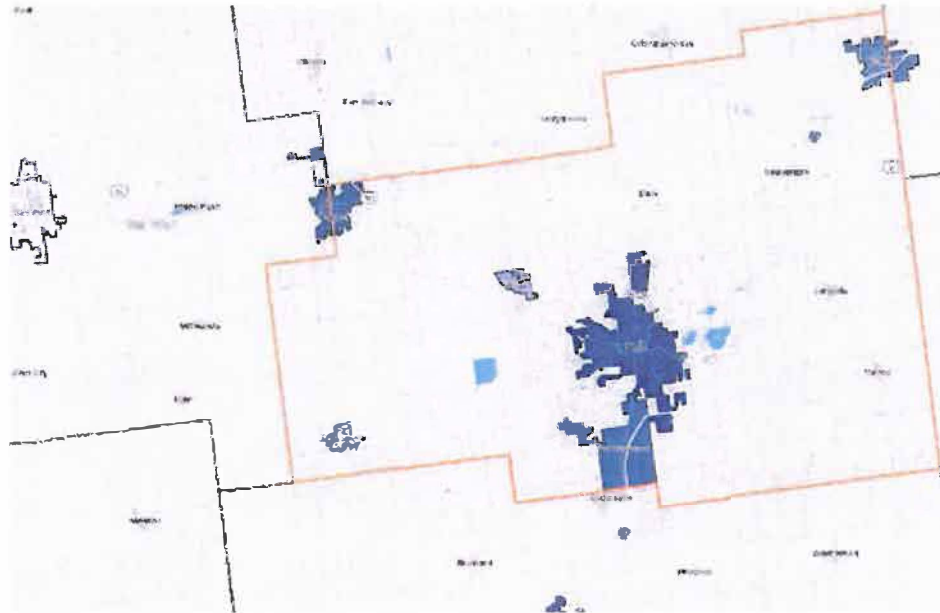


Figure 12: Principal Employment Locations of Allen County Residents by Density

This analysis suggests that the effective labor market for Allen County's residents is mostly defined by three counties – Allen, Auglaize, and Van Wert. This further reinforces the conclusion that the Allen County economy is truly regional in scope.

A final note of interest regarding Allen County's commuting activity concerns both the earnings generated through the inflow and outflow of workers. The general distribution of average wages among those commuting into and out of the county is roughly similar, though fewer workers commute into the county for employment that pays less than \$1,250 per month. This is again intuitive as lower wages offer less incentive to travel when similar work may be available close by. However, the gross numerical disparity between those coming into and going out of creates an imbalance of over \$600 million annually as the earnings of those who live outside of Allen County (\$894 million) are greater than those who work outside of it (\$281 million). This suggests, to a certain degree that relative wages may be higher in Allen County than in nearby neighbors, or that the mix of individuals who commute into and out of the county differs. This again presents an opportunity for future growth as it suggests that Allen County's employers require both larger numbers and a diversity of skill sets to meet their employment needs than that which is currently produced within the county.

2.3 INDUSTRY TRENDS

The population and workforce of Allen County represents two significant assets that will be needed to assure future prosperity and competitiveness. The composition of the county's economy and industry base represents a third important factor that has both influenced the region's history and will continue to shape its future. Allen County has traditional strengths in heavy industries such as oil refining and manufacturing as well as a strong agricultural



heritage. These same industries, coupled with a growing professional sector will grow and adapt in response to changes in future conditions. By examining many of the recent historical and current trends among these key sectors, it is possible gain some perspective on the possibility of future growth opportunities.

2.3.1 INDUSTRY EMPLOYMENT GROWTH

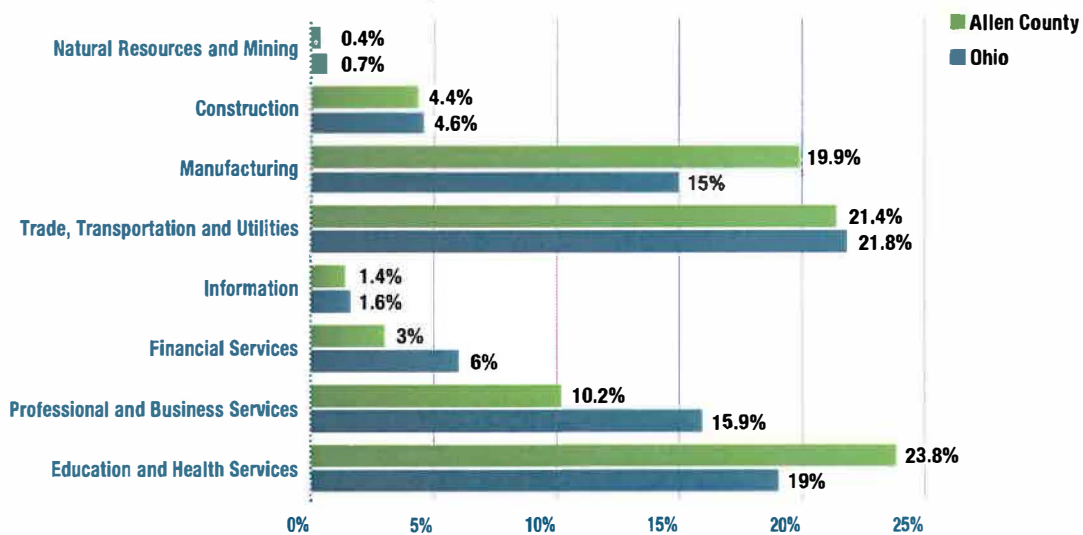


Figure 13: Employment by Major Industry Sector, Q3 2014

The Allen County industry base is dominated by two major sectors – manufacturing and education and health services. Employment in the manufacturing sector constitutes nearly twenty percent of total employment, a concentration that exceeds the state average and is more than twice the national average (9.6 percent). The sector is also represented by many of the county's largest employers, including the JSMC, Ford Engine Plant, Procter-Gamble, Potash and several others. The sector represents one of the historical strengths of the region and dominates the local economy in other ways.

The second principal industry sector in Allen County is the education and health services super sector. This sector represents the amalgamation of two industries that share many similarities. The health services sector represents 14.3 percent of employment and more than 63 percent of employment in the super sector. The importance of health services employment in Allen County is especially pertinent given its location between the Dayton and Toledo markets and the access that it provides to a broader regional patient base.

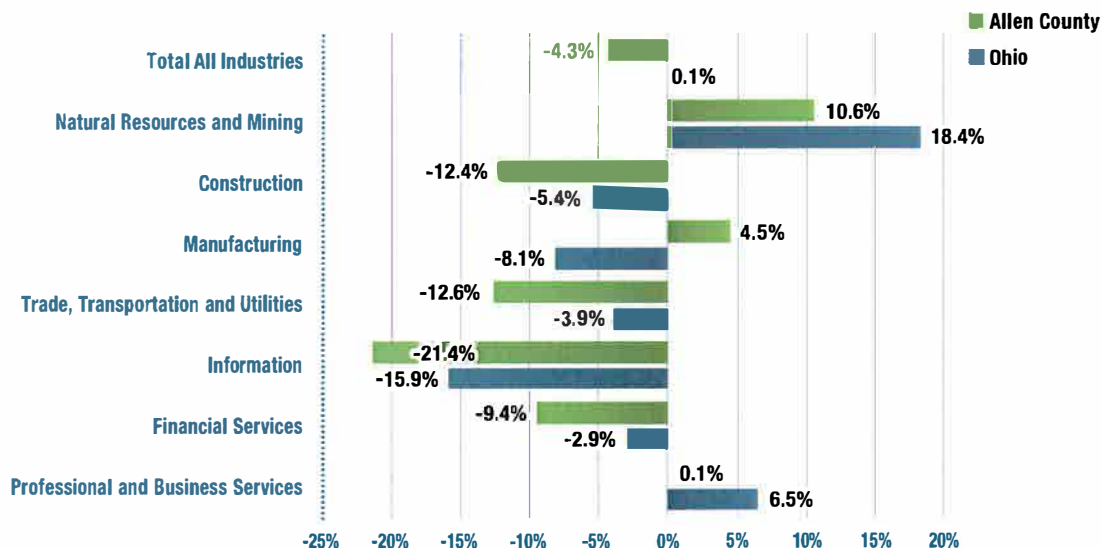


Figure 14: Employment Change by Major Industry Sector 2008-2014

The chart above depicts the impact of the most recent recession and subsequent recovery on Allen County and the state of Ohio by measuring changes in employment from the third quarter of 2008 to 2014. We see that there are a number of areas of divergence between the two industry growth patterns. This further highlights the unique composition of Allen County's industry base.

The region, as a whole continues to lag behind state and national employment growth trends. This is largely due to two principal factors. First, while the share of jobs lost in the county and the state from 2008 to 2010 are roughly equal in percentage terms (6.3 percent versus 6.4 percent), the broader statewide employer base is better able to benefit from the multiple growth opportunities that have emerged in the last five years. This has especially been true in professional sectors such as professional and business services and education and health services. Second, some industry changes, such as the recent cancellation of a number of contracts at the JSMC are not subject to or consistent with economic cycles. As a consequence, the region may lag behind the state in the pace of employment growth. However, employment growth in sheer numerical terms only tells part of the story here.

The industry base of the Allen County regional economy has generally struggled to recapture the largest share of employment lost over the course of the recent recession. Much of this is the consequence of counter-cyclical factors and scale though changing demographics also plays an important role. What is missing in this discussion is a consideration of the extent to which changes in industry output mirror changes in employment. It is clear that the industry growth patterns described above in terms of employment have been eclipsed both by increases in profitability and productivity among the region's largest industry segments.

2.3.2 INDUSTRY OUTPUT AND PRODUCTIVITY GROWTH

Industry Sector	2008-2012 % Change (in 2009 Dollars)
All industry total	10.8%
Private industries	12.8%
Farms	89.3%
Utilities	40.0%
Construction	-8.8%
Manufacturing	36.4%
Wholesale trade	-6.4%
Retail trade	-0.6%
Information	5.9%
Finance and insurance	5.3%
Real estate and rental and leasing	-28.0%
Professional, scientific, and technical services	-6.7%
Management of companies and enterprises	57.9%
Administrative and waste management services	23.0%
Educational services	2.1%
Health care and social assistance	1.5%
Arts, entertainment, recreation, accommodation, and food services	7.5%
Performing arts, spectator sports, museums, and related activities	50.0%
Accommodation and food services	9.5%
Other services, except government	-6.5%
Government	-6.8%

Figure 15: Change in Real GDP by Industry Sector 2008-2012



The table above represents changes in industry output in Allen County after adjusting for inflation. (Please note that data for 2013 and 2014 is not available for most industries as of publication.) Many of the findings presented here first contradict but also provide a great deal of additional context to the discussion of transitions within the regional economy. Output growth across all industries has averaged nearly eleven percent over the period, with several sectors far outpacing this benchmark. Any analysis of percent change data must always be tempered by differences in scale among many of these industries. For example manufacturing output is twenty-four times the size of farm output. However, there are still a number of interesting patterns that can be deduced.

First, we see that growth among traditional industries, such as agriculture and manufacturing has remained strong over the last several years, with farm incomes increasing by nearly 90 percent and manufacturers growing by more than 36 percent. Construction income has lagged here as has been the case in most of the country. This again suggests that these industry sectors remain an important part of the regional economy.

Growth in so-called "white collar" or service industries has been more measured, but is still vibrant. The real estate industry has suffered for many of the same reasons as the construction industry, yet has the potential to rebound as it has nationally. Health care output has lagged over this period due to changes in national policy. The most significant growth by scale has occurred among the region's corporate and company headquarters, as well as in the administrative and waste management services sector. Each of these industries represents different aspects of a third perspective on industry changes in the regional economy.

Industry and employment and income interact in two ways. The most commonly-discussed is in terms of payroll and wages. This will be analyzed in the next section. The intersection between employment and output can also be measured in terms of employee productivity, or value-added.



Industry Sector	Allen County Output Per Employee	Ohio Output Per Employee
All industry total	\$ 80,236	\$ 97,827
Private industries	\$ 82,649	\$ 102,051
Farms	\$ 56,928	N/A
Utilities	\$ 589,041	\$ 753,352
Construction	\$ 80,236	\$ 85,897
Manufacturing	\$ 248,625	\$ 139,173
Wholesale trade	\$ 96,006	\$ 138,704
Retail trade	\$ 42,018	\$ 55,391
Information	\$ 120,617	\$ 184,132
Finance and insurance	\$ 79,940	\$ 195,184
Real estate and rental and leasing	\$ 102,347	\$ 989,489
Professional, scientific, and technical services	\$ 46,039	\$ 113,031
Management of companies and enterprises	\$ 86,957	\$ 144,977
Administrative and waste management services	\$ 36,060	\$ 53,168
Educational services	\$ 33,070	\$ 39,150
Health care and social assistance	\$ 55,478	\$ 59,484
Accommodation and food services	\$ 23,197	\$ 27,191
Other services, except government	\$ 25,961	\$ 42,170
Government	\$ 69,233	\$ 75,571

Figure 16: Value-Added Levels for Prominent Industry Sectors, 2013



Employee productivity is commonly expressed in terms of dollar output per worker. This is presented in the table above. We see that there are wide variances between industries across all sectors. Productivity across all industries is significantly lower than the state average, as well as national standards. This is consistent with previous conclusions regarding the general scale and composition of the regional economy. This is true of all private sector employment, as well as employment in a number of the county's largest industry sectors. One finding that does stand out is the fact that manufacturing output in Allen County is nearly twice the state average. This is also significantly higher than the national average of \$163,000 per employee. This speaks to the presence of a number of high value-added firms in the sector, as well as a strong concentration of professional and design staff. These output measures present both significant challenges and opportunities to regional stakeholders as productivity can be enhanced in a number of sectors through employment and growth and diversification especially in highly-skilled technical fields. Yet, this growth should occur without affecting the high returns yielded in a number of key industry sectors.

2.3.3 INDUSTRY INNOVATION POTENTIAL

There has been a great deal of discussion in Allen County over the last decade as to the role that innovation plays in the future economic growth of the region. Similar conversations have occurred in many small urban and rural economies as these regions seek ways to advance beyond a strict reliance on traditional industries. This is a natural transition as recent evidence has demonstrated that so-called "second stage" growth firms have outpaced national growth trends both in terms of employment and profitability. As a result, it is important to examine those activities currently ongoing as well as the region's potential to foster future innovation.

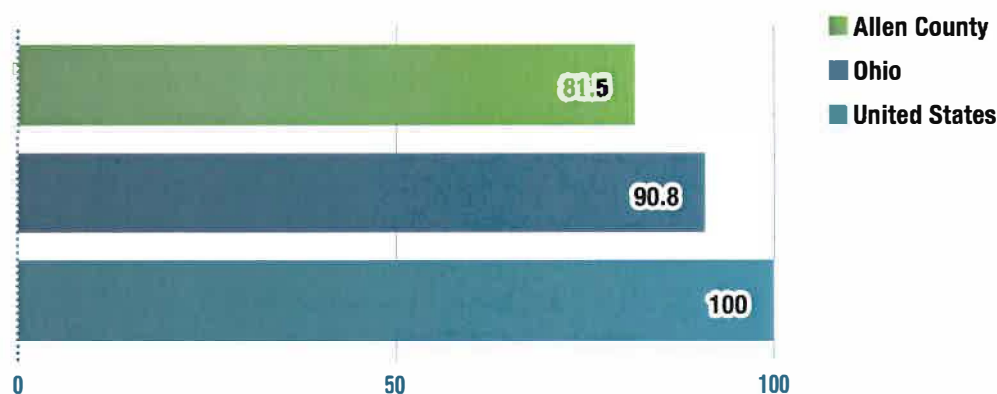


Figure 17: Indiana Business Research Center Innovation Index 2014

The bar graph above presents the most recent comparative measure of innovation capacity, as measured by the Indiana Business Research Center. As the United States represents the benchmark in this index, we see that both Ohio and Allen County lag in terms of innovation support. The index is constructed on the basis of four key measures: Human Capital, Economic Dynamics, Productivity and Employment, and Economic Well-Being. In



decomposing this index, we see that Allen County lags most significantly in terms of Human Capital (75.1) and Employment and Productivity (75.5). Each of these conclusions is consistent with previous findings in the current analysis. It is important to note here that the Innovation Index does not measure innovation activity, per say, but rather a region's ability to support future innovation growth.

The Allen County region has invested significant capital and other resources in the development of the Ohio Energy and Advanced Manufacturing Center (OEAMC), a targeted industry incubator facility. It is too early to speculate as to whether this center will facilitate in the development of new firms. However, its existence and the consortium of firms and leaders that has emerged in support serve as testament to the aggressive positioning of the region as a future innovation hub. It is also consistent with a historical pattern of research and development that has improved production and refining processes in a number of key industry sectors. The organization and incubator will be further discussed in the review of community assets that follows.

It is also important to note that much of the innovation that has historically occurred within the region has happened as existing firms have developed new products and processes. Examples of world-class innovations can be found at many of the region's most prominent manufacturers, including the JSMC, American Trim, and Ford Motor Company. These breakthroughs have improved internal processes and increased productivity and profitability. However, recent history has also demonstrated that it is less likely and more difficult for these internal improvements to become commercialized or grow in scale to support separate enterprises. Rather, firms tend to closely hold this intellectual property for competitive advantage.

As a consequence, the strategy that is most likely to be successful for facilities such as the OEAMC is to build partnerships among academic researchers, entrepreneurs with industry experience, and primary customers in large industries to support the development of similar innovations to support multiple industries. This model has been successfully applied in a number of communities and can be adapted to scale in Allen County.

2.4 INCOME PATTERNS

The final significant asset or indicator area that warrants discussion is the role that income and earnings plays in the dynamics of the regional economy. This has been alluded to in a number of previous sections, but it is also important to review this in isolation as a number of key insights can be gained. The level of income present in any given community has a significant bearing on the quality of life enjoyed by its residents, the composition of the industries, and the level and variety of services offered.



2.4.1 INDUSTRY WAGE ESTIMATES

	Allen County Output Per Employee	Ohio	Percent of Ohio Average
Total, All Industries	\$38,815	\$44,062	88.1%
Natural Resources and Mining	\$30,900	\$45,305	68.2%
Construction	\$44,717	\$51,998	86.0%
Manufacturing	\$64,156	\$55,733	115.1%
Trade, Transportation, and Utilities	\$31,682	\$38,657	82.0%
Information	\$38,075	\$61,670	61.7%
Financial Services	\$40,842	\$61,160	66.8%
Professional and Business Services	\$34,637	\$57,399	60.3%
Education and Health Services	\$41,899	\$41,321	101.4%
Leisure and Hospitality	\$13,167	\$16,508	79.8%
Other Services	\$21,728	\$27,427	79.2%

Figure 18: Average Annual Wages for Major Industries, 2013

The table above presents annual average wage estimates for each of Allen County's most prominent industry sectors in comparison to state averages. We again see that the county average lags behind the state as its all industries average of \$38,815 is 12 percent below the state average. Similar trends can be observed in a number of other key industries. Two industries break from this pattern, however – education and health services and manufacturing. Each of these sectors has average wages that are at or above the state average. Average manufacturing wages also eclipse the national average of (\$61,102). This is especially important as we know that each of these sectors also represents a significant share of employment and output in the regional economy. As such, growth in both of these segments is critical to ensure future economic vitality.

Average wages have increased by 3.4 percent across all industries since 2008 after adjusting for inflation. This local growth rate is more than twice the state average of 1.3 percent, and again points to the potential for future economic growth that exists. Wage growth has also been especially aggressive in the natural resources and mining



(8.4 percent), manufacturing (4 percent), and professional and business services sectors (10.9 percent). This again suggests that growth is occurring among a number of key industry sectors and that the potential exists for future employment growth and diversification.

2.4.2 PER CAPITA INCOME GROWTH

It is also common to measure income dynamics in a more comprehensive manner that includes sources other than wage and salary, such as investment returns, proprietor income, and transfer payments. This can be further decomposed at a per capita level to better compare trends between areas of different sizes. Such a comparison is presented in the chart below.

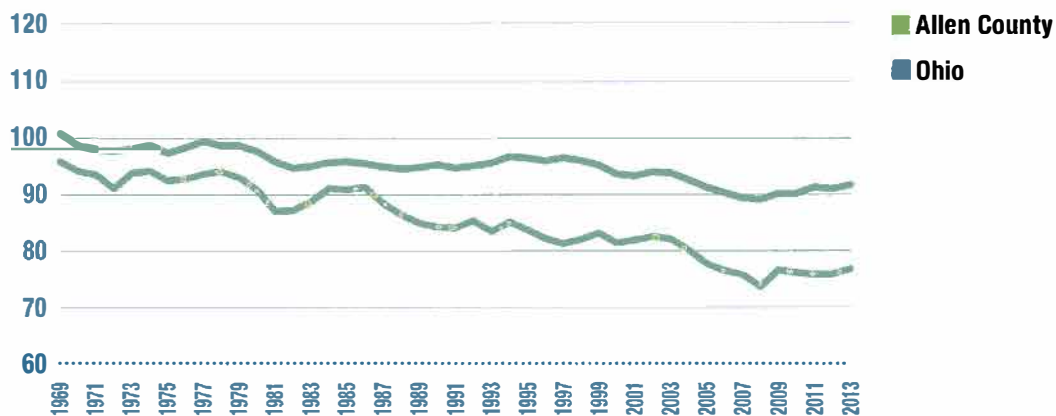


Figure 19: Indexed Real Per Capita Personal Income 1969-2013

The trend lines seen here depict changes in per capita personal income as indexed to the national average. This allows data across multiple years to be presented in real dollar terms. The first notable conclusion to be observed here is that personal income in Allen County has historically lagged behind national and state averages. The gap between Allen County and Ohio averages also diverged significantly beginning in the mid 1980's though the two trend lines have moved in roughly the same fashion over the last decade. This suggests that the economic downturn experienced in the region due to deindustrialization in the late 1970's and 1980's established a new baseline for the region which has created a semi-permanent divide between it and larger markets. It is hoped that future employment and opportunity growth could potentially close this gap.



It is finally important to note the role that proprietors or small business owners play in the Allen County region. Their impact on supporting regional employment has been well established, as firms with less than 50 employees account for 87 percent of local employment. They also play a critical role in supporting the regional income base. Non-farm proprietors' income accounted for eight percent of total personal income in Allen County in 2013, a figure that is only slightly less than the national average of 8.8 percent. This is significant as small business owners and their presence in the community are cited as one of the principal assets required for rural entrepreneurial growth by Mark Drabenstott in his 2010 paper, *Past Silos and Smokestacks: Transforming the Rural Economy in the Midwest*. Allen County is identified as a region that has potential to spur future activity due to its high concentration of proprietor income. It is important to note that proprietor income has grown by 21.1 percent in gross terms in Allen County, 47.8 percent in Ohio, and 33.1 percent nationally between 2007 and 2013. This suggests that the region's position in this analysis may have eroded to some extent as a consequence of the recent recession.

3.0 COMMUNITY ASSETS

The analysis presented above suggests that the Allen County region possesses significant demographic and economic assets that can be effectively utilized to generate future growth and prosperity. However, significant challenges exist in terms of addressing the needs of an aging community, developing the next generation of skilled workers, and unleashing the region's innovation potential. The foundation for the solutions of each of these challenges exists and none is necessarily insurmountable. What is a greater challenge is how the region might develop solutions to deal with more timely challenges, such as the uncertain future of the Joint Systems Manufacturing Center, the significant income disparity between the immediate region and state averages, and the need to produce more civic investment and engagement.

The communities of Allen County are fortunate to be filled with business and community leaders that have anticipated many of these challenges and have initiated discussions to create innovative solutions. The purpose of this section is to summarize the work and progress of a sample of four key regional initiatives – Task Force LIMA, the West Central Ohio Manufacturing Consortium, LINK Lima/Allen County, and the Ohio Energy and Advanced Manufacturing Center. There are a number of synergies that exist between these organizations. They also represent a small segment of a wider population of organizations and partnerships that are working to improve conditions in the region. They have been selected for inclusion largely due to the multitude of stakeholders engaged, as well as for the possible models they represent to build future regional collaborations.

3.1 TASK FORCE LIMA

The Joint Systems Manufacturing Center or JSMC has played a prominent historical role in the Allen County economy, as well as the nation's defense infrastructure. This role has been documented throughout the course of this analysis. However, the analysis to this point has not alluded to the recent vulnerability of the facility and its prominence.

Changes in military alignment and spending over the last twenty-five years has resulted in calls from both the Department of Defense and Congress to consider the consolidation or closure of what are viewed as surplus military assets. Community leaders were alarmed when it was announced in 2003 that the JSMC would be included in a round of Base Realignment and Closure (BRAC) analysis that would conclude with a series of recommendations in



2005. The challenge presented was how the community could present the JSMC as a unique and vital asset while also building a supportive community infrastructure. Task Force LIMA was formed with this in mind.

Task Force LIMA represents a comprehensive community partnership organized to advocate for the JSMC and its capabilities to state and federal officials. It is a coalition of local, state and federal elected officials, economic development and business associations, labor organizations, media, and other community leadership. The inclusion of such a comprehensive array of partners is essential given both the scope of the facility as well as the nature of the challenge.

The leadership of the task force mirrors the unique nature of the JSMC as it has always been co-chaired by the mayor of Lima and the General Dynamics plant manager. This public-private partnership has been especially effective as it opens a constructive dialogue as to the needs of the JSMC and what community assets could be leveraged to support it. By engaging in an extensive public outreach and advocacy campaign, the task force was able to successfully reverse a 2005 recommendation to reduce the productive and physical footprint of the JSMC.

The Task Force only met occasionally between 2006 and 2010, but resumed its current regular meeting schedule in 2010 and 2011 when two key contracts – the Future Combat Systems and Expeditionary Fighting Vehicle programs were cancelled by the Department of Defense. The Task Force has met continuously since and has shifted its approach from being reactive to assuming a more proactive role. Members now actively engage in a number of key advocacy activities, such as hosting Congressional delegations and meeting with Pentagon staff. They have also been instrumental in bringing the importance of the defense sector to the State of Ohio to Governor John Kasich's attention by drafting a white paper in 2013 tracking the flow of federal funds into and out of the state.

By assuming this more forward-thinking perspective, Task Force LIMA is in the process of evolving from an issue coalition to an advocacy or interest organization. The distinction is important as it has allowed the members to shift their orientation from defending the JSMC against possible closure to advocate for more capital investment and additional contracts. This shift has made the Task Force a more viable organization in the long-term. In fact the organizational structure has become so successful and embedded that membership has recently met with other communities in Ohio to share best practices.

Issue or advocacy organizations frequently struggle to expand their scope or maintain inertia after the initial threat or crisis has been resolved. The Department of Defense's Office of Economic Adjustment has recognized this challenge and has provided a planning grant to the Allen County Board of Commissioners to consider how the JSMC fits within the broader economy and its impact at a regional level. Future iQ Partners has been contracted to help facilitate this conversation.

Task Force LIMA has also enjoyed an additional recent victory through the recent announcement of additional capital investment by the U.S. Army into the JSMC. It is assumed that this is the first in a series of actions that may shift the facility's standing into one that is more in line with other depot facilities. This will improve the future viability of the JSMC by opening it up to additional maintenance and support funding and allow GDLS and its military partners to better position the facility to procure additional contracts and vehicle lines. This again attests to the mission of Task Force LIMA, though it also highlights how dependent its success is on external stakeholders. This is a second key vulnerability of advocacy organizations.



Task Force LIMA represents a viable model of public-private partnership that could be effectively applied to support other industries or issue areas. It speaks to the importance of engaging stakeholders across a wide scope of interests, centering the discussion on shared needs. It also highlights the importance of both embracing proactive strategies and publicizing success. The region's victories must be shared in order to gain additional traction and support as these initiatives expand in scale and scope.

3.2 WEST CENTRAL OHIO MANUFACTURING CONSORTIUM

The West Central Ohio Manufacturing Consortium represents a second significant asset in the Allen County region's ability to capitalize on future opportunities. Its history and the development of the more broadly-defined but related Link Lima initiative speaks again to the opportunities and challenges that have emerged in the wake of the recent recession. The consortium's mission is closely tied to the changing needs of the region's manufacturing workforce and is now expanding to consider similar needs in other industries. It points to the importance of human capital needs in the region as well as the strength of the partnerships that have formed between education and industry.

Community and business leaders in Allen County and neighboring counties began to engage in a series of conversations regarding the broader future of manufacturing within the region around the same time that Task Force LIMA developed. The impact of global and national industry changes were especially hard felt in the region, as manufacturing employment as a share of total employment decreased from 35 to 25 percent between 1994 and 2004 (it has since decreased to 20 percent), leading many experts to conclude that future decline was inevitable unless industry leaders collaborated. Many of these leaders had maintained informal relationships with each other through community social and fraternal organizations and the Allen County Chamber of Commerce. However, formal collaboration was less common even though shared needs became evident.

The WCOMC traces its foundation to a 2004 survey conducted by Rhodes State College of forty-three advanced manufacturing companies. The survey, which was funded by KnowledgeWorks, a Cincinnati-based education and training advocacy foundation explored these firms' workforce needs and challenges. The general conclusion reached by this analysis suggested that local hiring demands had shifted from the unskilled labor that had filled shop floors during the 1960's and 1970's to individuals with intermediate to high skill levels as companies invested in more technology and increased productivity. Significant gaps were further identified in the skills competencies of the incumbent and incoming workforce and the capacity of the region's training providers to prepare these workers for future demands.

The WCOMC is nominally headquartered at Rhodes State College and is endorsed and supported by many of the largest manufacturers within a twelve-county region. Its principal focus to date has been on the development of a series of three tiered career pathways training programs designed to prepare manufacturing workers for the rigors of increasing skill and responsibility. The consortium started with the development of a basic-level advanced manufacturing certification that addressed concerns from manufacturers as to level of employability and entry-level skills lacking in the region's jobseekers. Much of this work occurred before the recession of 2007. However, this initial focus also combined with changing economic conditions to prompt employers such as the JSMC and GDLS to disengage from the partnership.



Subsequent surveys conducted in 2007 and 2013 indicated that the skills needs expressed by the region's manufacturing base had intensified with a greater concentration in intermediate skills levels. A second-tier certification program was designed that closely follows the acquisition of a technical diploma in one of many skilled trade areas. An advanced certification was also added to credential those manufacturing workers that have received an associate's or bachelor's degree.

Pathways models of this type are notable for a number of reasons. First, they represent a logical path of advancement for workers in the field. This is important as this advancement can be effectively transferred between employers. Second, the training curriculum and credentials are both designed and endorsed by industry partners. This provides a second level of credibility beyond that which is given by the training provider and may give job seekers an advantage when pursuing opportunities with member companies. As the skills needs of manufacturers, including the JSMC become more advanced, the work of organizations such as the WCOMC will become increasingly important.

It is strongly recommended that the JSMC and GDLS reengage in a more meaningful sense with the consortium. A recent analysis of skills needs at the JSMC revealed the presence of 326 intermediate-skilled workers, and an additional 91 advanced-level employees, using the criteria established by the WCOMC. As the plant's workforce continues to age and potential future contracts are procured, demands for workers in each of these skills levels will only increase. The pathway model developed by the WCOMC may represent one possible tool to produce these needed employees.

3.3 LINK LIMA / ALLEN COUNTY

The discussion regarding workforce development and human capital needs has expanded in scope but narrowed in scale in recent years through the creation of the LINK Lima/Allen County initiative. This initiative traces its development back to the publication of the Allen Economic Development Group's AEDG Workforce Vision 2018 in 2010. The initiative, which represents a partnership by large employers across several sectors and the small business community members of the Lima-Allen County Chamber of Commerce developed through the recognition of a shared need for the community to attract, develop, and retain a world-class workforce. This also comes from a similar recognition to that of the WCOMC as to the need to develop a more comprehensive training model to support the workforce needs of employers across multiple sectors.

The initiative has established an ambition agenda as part of its mission statement, which reads:

Lima and Allen County will become known for cultivating and delivering to local businesses everything they are looking for in an employer-ready, appropriately trained, local workforce.

This ambitious agenda clearly calls for the adoption of a collaborative approach. To this end, the AEDG has partnered with Transform Consulting of Cincinnati to provide leadership and strategic guidance. The initiative is also guided by a widely-represented Workforce Advisory Council, which includes community, business, and education leaders. A number of working groups also support the core initiative. This organizational structure closely mirrors similar initiatives found in other communities around the country.



Where LINK Lima/Allen County differs from the WCOMC and other related initiatives is first in its more generalized scope encompassing multiple industries, and also in its focus, which includes both the K-12 primary and secondary education system as well as postsecondary institutions. This suggests that the initiative may shed more attention on career exploration as well career development for adult workers. The initiative also builds upon state efforts to link employers and jobseekers through awareness of the Ohio Means Jobs portal. The model is ambitious in its scope as it intends to meet the needs of workers at all levels of experience and age. This closely aligns with the existing needs of Allen County's employers as current job openings reveal needs across all education and experience levels.

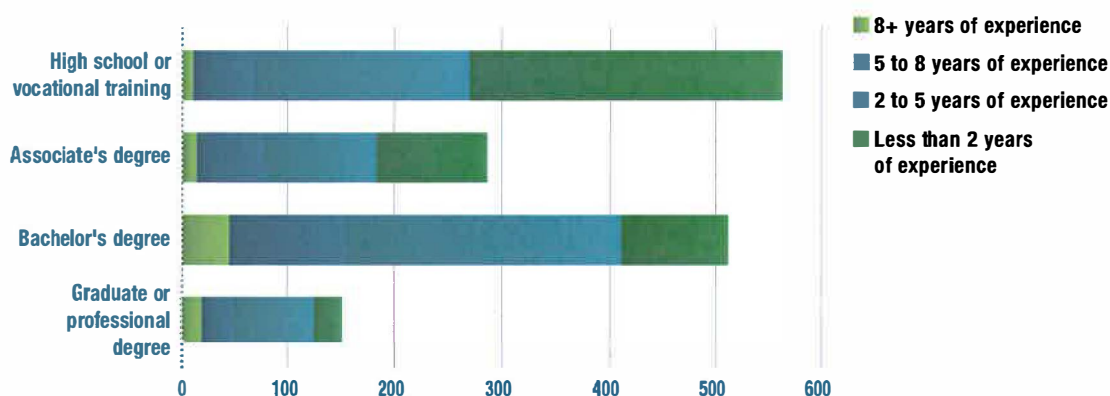


Figure 20: 2014 Job Openings by Education and Experience Required

Despite the ambition of its scope, it appears that the AEDG is uniquely positioned as a potential facilitator for the growth of this and other related partnerships. Its mission bridges across multiple areas and it has the widespread support of both the business community and government leaders. The presence of this type of objective champion organization is essential to ensure the success of regional public-private partnerships.

3.4 OHIO ENERGY AND ADVANCED MANUFACTURING CENTER

The Ohio Energy and Advanced Manufacturing Center (OEAMC) is a sophisticated and versatile incubator facility in Lima, Ohio. The center opened in fall 2014 and is currently accepting its first class of entrepreneurs. However, the story of the partnership that led to this development stretches back over the last decade and mirrors the conversation that led to the creation of the West Central Ohio Manufacturing Consortium, in many regards.

The dialogue that led to the eventual formation of the OEAMC started in 2006 as community leaders engaged with faculty from Ohio Northern University and other research institutions and business leaders in the energy and manufacturing sectors to discuss the role of innovation as an economic development tool. These early conversations focused on the principle of Sustainable Agile Manufacturing as a development strategy for the region.



The concept of Sustainable Agile Manufacturing (SAM) is described in a 2012 White Paper produced by the center. In short, SAM attempts to apply the concepts of software development to manufacturing processes in stressing the importance of pre-tooling to enable mass customization in production. It also embraces the concept of the “10 percent model,” where principles are applied to develop pre-production systems in 10 percent of the time, at 10 percent of the cost, but for only 10 percent of the previous model's production cycle. This objective is also a key principle in lean manufacturing, which is a closely related, but more holistic model.

Most American manufacturers do not currently utilize SAM in their processes largely because embedded tooling and design systems dissuade customization. The shift to more agile models may result in costly initial capital investment, but the eventual cost savings and increased productive capacity far outweigh the outlay. The SAM model proposed by the OEAMC utilizes a number of innovative principles to derive these savings, including:

- Sustainable Energy
- Advanced Materials
- Agile Tooling
- Additive Manufacturing Technologies
- Advanced Forming and Joining Technologies
- Coatings/Decorative Technologies
- Simulation Software

In sum, these advances present a comprehensive suite of tools and processes that are on the cutting edge of manufacturing innovation.

The OEAMC formalized its organizational structure in 2008 and initiated a campaign to raise capital for an incubator facility. The new incubator was funded, in part through a \$1.5 million Economic Development Administration grant and a total of \$4.8 million in state grants and loans. This represents a significant public investment in the concept of innovation as an economic development strategy.

The success of the incubator model of innovation development is largely driven by the synergies that are derived from collaborative partnerships among entrepreneurs and researchers. This is especially important in the case of the OEAMC as their stated intention is to develop applications to benefit firms in a national market. One key synergy has already been created as the organization has deliberately recruited leadership from both local manufacturing and energy firms. This represents the two key traditional industry strengths in the region.

The development of the OEAMC incubator facility will require continued engagement from those key stakeholder groups already at the table, as well as new industry partners. It serves a vital role in the pursuit of a regional innovation strategy. The identification of a clear development process and defined markets has already differentiated it from similar initiatives in other communities. It rightfully represents one of the key assets to guide the Allen County region's economic future.



4.0 CONCLUSION

Allen County, Ohio, and its surrounding region have had a long history of growth, struggle, and resilience. It has re-defined itself time and again on the strengths of its industrial core and world-class workforce. Many of these assets still exist today, though there are considerable challenges ahead. The region recognizes the importance of many of these key assets and knows that they must be repositioned in order to most effectively benefit from future opportunities. These are the same challenges faced by a number of manufacturing communities in the Midwest. Those communities that develop the most comprehensive and effective partnerships are most likely to succeed.

The analysis presented here illustrates many of the same key strengths and weaknesses identified in the BRAC community assessment conducted in 2005. While the focus of that investigation was to evaluate the assets needed to support the Joint Systems Manufacturing Center, many of these same assets are recognized to be of critical importance to the community at large. Employers throughout the region are all faced with the challenge of an aging workforce. Companies across multiple sectors are considering strategies to more effectively engage young professionals. The community has recognized the need to foster more innovation throughout the regional economy. These are all needs that are common throughout multiple sectors and will require collaborative strategies to address.

While many of the indicators presented here suggest that Allen County lags behind Ohio and the United States in a number of growth measures, it is also important to note that none of these gaps are insurmountable. Some of the challenges are cyclical in nature and will continue to improve as the regional economy recovers from the recent recession. Others are systemic or structural in nature and will require more intensive solutions and therefore more community resources to address. Potential worker shortages can only be solved by preparing and engaging a new generation of labor. The innovation economy requires the coordination of capital, facilities, and customers. Again, many of the assets needed to meet these challenges already exist in the region but need to be aligned. Others may need to be developed.

There are a number of regional organizations and partnerships already actively engaged around these issues. In some instances groups such as the West Central Ohio Manufacturing Consortium may represent a best practice to be replicated. Others, such as Task Force LIMA and LINK Lima/Allen County show the power of collaboration and organization. Finally, the innovation potential that exists at the Ohio Energy and Advanced Manufacturing Center may have the potential to spur extensive future development throughout the region. Each of these examples is joined by many others, suggesting that a critical mass for change exists within the region.

Allen County has written a number of comeback stories throughout its history. This discussion may represent the first chapter in the next one.



5.0 ACKNOWLEDGEMENTS

This work would not be complete without the assistance of Denis Glenn, the Project Manager for Task Force LIMA, Matt Kinkley of Rhodes State College, Jeff Sprague, President of the Allen Economic Development Group, Doug Arthur with LINK Lima/Allen County, Joe Patton with JobsOhio, and Judith Cowan of the Ohio Energy and Advanced Manufacturing Center. Their insight into the region and their organizations proved invaluable in the preparation of this analysis. Special thanks also to Celine and David Beurle for editorial assistance and Marc Rassel for creative design.

Additional thanks are owed to theAyers.com, which supplied many of the images of the Allen County region used in this project. Finally, all data in this analysis has been collected and compiled from a host of publicly-available sources, including Ohio Development Services, the Ohio Research Office, U.S. Bureau of Economic Analysis, U.S. Bureau of Labor Statistics, and U.S. Census Bureau.

6.0 ABOUT THE AUTHOR



Jeffrey Sachse is a Senior Economist with Future iQ Partners, Inc. He has assisted the firm with a number of projects over the past year, including community engagement and defense industry adjustment initiatives in Edina, Minnesota, and Oshkosh, Wisconsin. Jeffrey also serves as the head of the Office of Economic Advisors in the Wisconsin Department of Workforce Development where he has been a practicing economist for the last fifteen years. He is also on the faculty at the University of Wisconsin – Oshkosh.

Jeffrey has an extensive academic and professional career in regional development, workforce development, and economic analysis. His work has focused on the role of industrial redevelopment and regional initiatives on economic growth in the Midwestern United States. He has presented to local, regional, and national audiences and has collaborated on a number of notable studies, including the Organization for Economic Cooperation and Development's Territorial Review of Metropolitan Chicago (2012). Jeffrey has received his bachelor's degree in Economics, History, and Political Science from Marquette University, a Master's of Public Affairs degree from the University of Wisconsin – Madison, and his doctorate in Political Science from the University of Wisconsin – Milwaukee.



7.0 ABOUT FUTURE IQ PARTNERS

Future IQ Partners is a market leader in the development and application of scenario planning; network analysis, industry and regional analysis, and community engagement and capacity building. We specialize in applying innovative tools and approaches to assist organizations, regions and industries shape their economic and community futures. We take a practical, hands-on approach to working with groups and communities. With over a decade of business experience, the company has grown to have a global clientele spanning three continents.

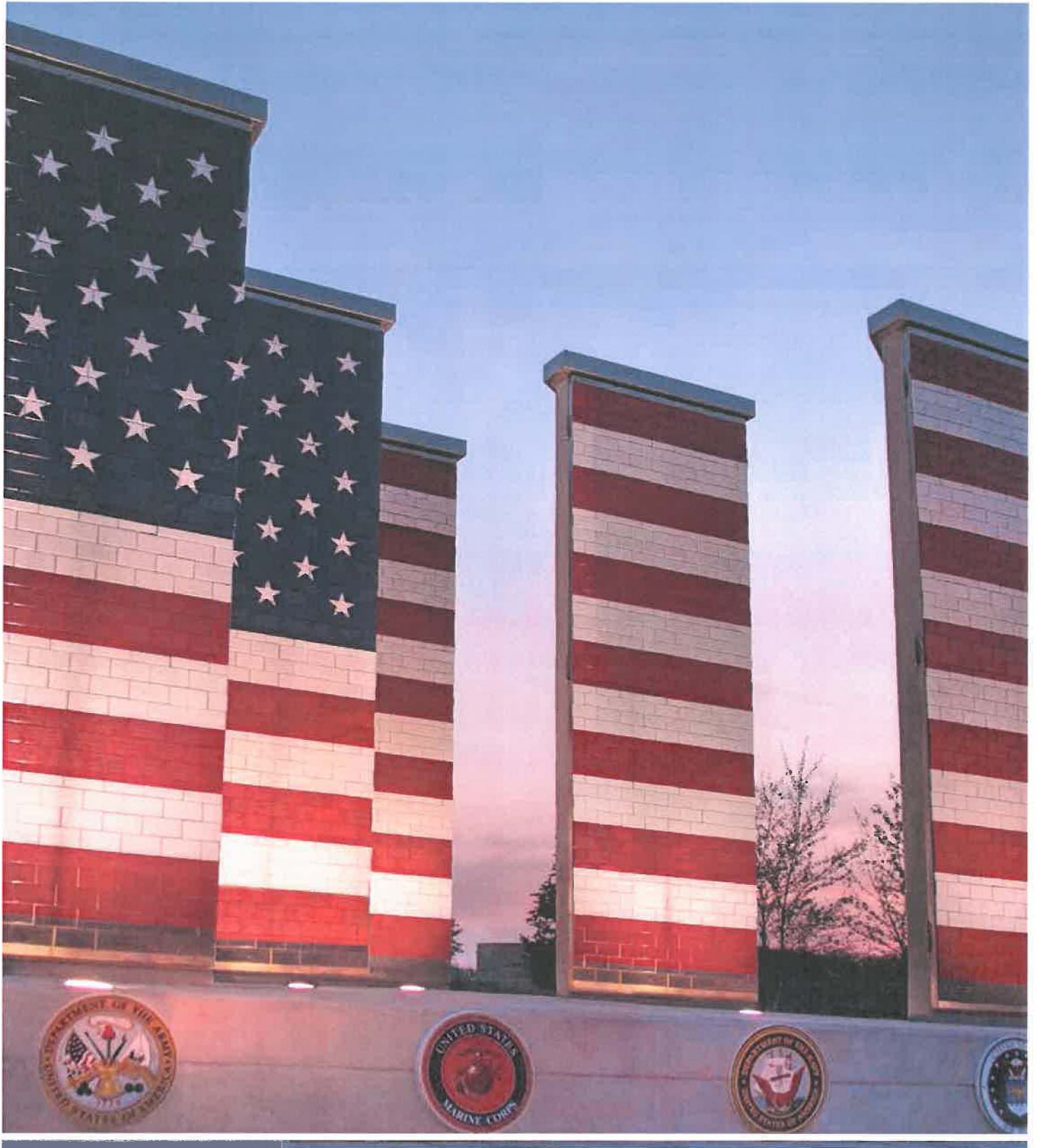
TO LEARN MORE ABOUT FUTURE IQ PARTNERS, ITS EXPERTS, AND OUR RECENT PROJECTS
VISIT WWW.FUTURE-IQ.COM OR BY EMAIL AT INFO@FUTURE-IQ.COM.



ABOUT TASK FORCE LIMA

This study is one of many to be produced under an award issued by the U.S. Department of Defense Office of Economic Adjustment to assist Allen County and Task Force LIMA in developing strategies to ensure the economic health and vitality of the Joint Systems Manufacturing Center and the broader region. For more information regarding Task Force LIMA or any aspect of this project, please contact: Denis Glenn, CM at dglenn@allencountyohio.com.

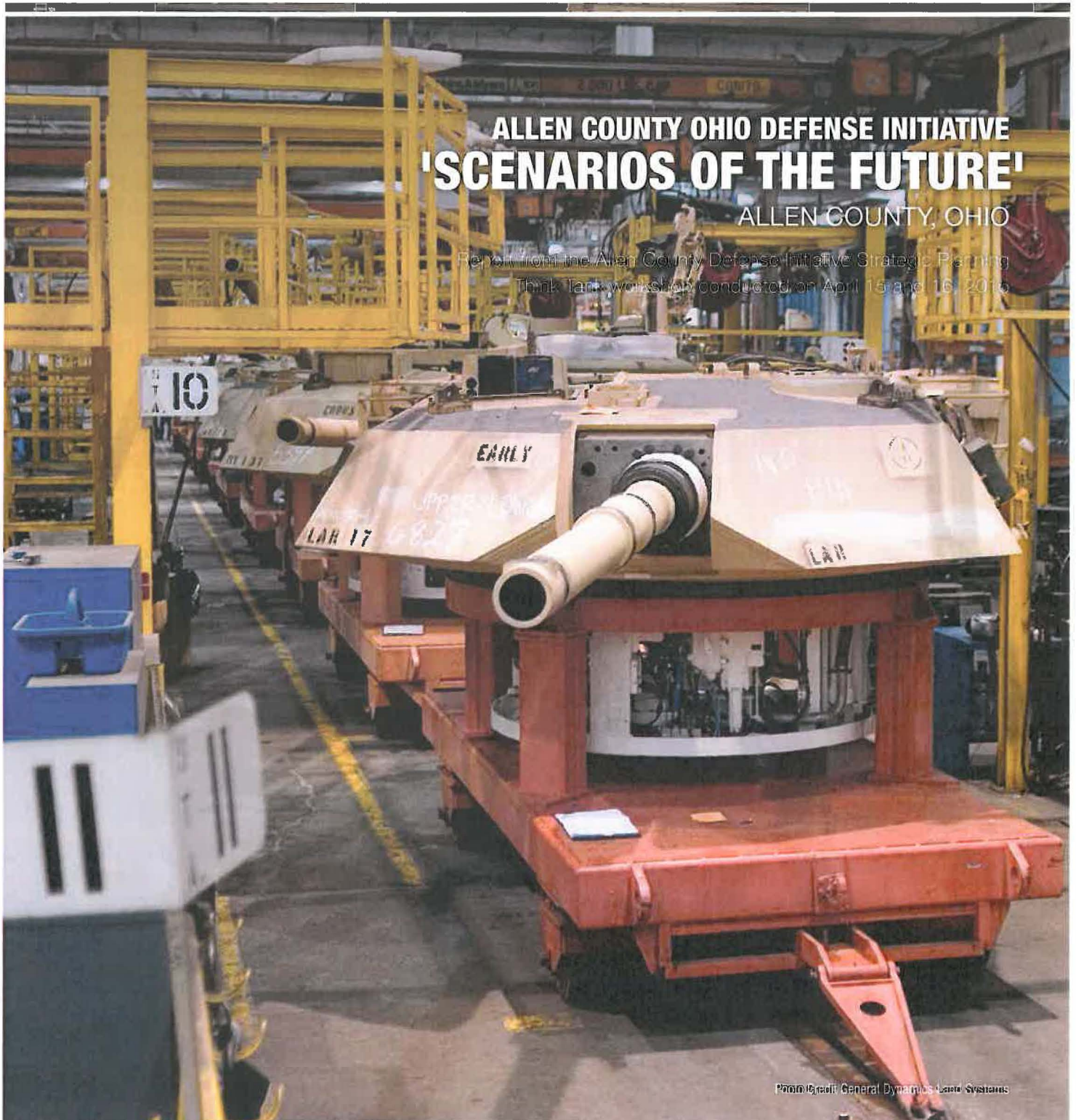




© Copyright 2015



future*→*iQ
PARTNERS



ALLEN COUNTY OHIO DEFENSE INITIATIVE

'SCENARIOS OF THE FUTURE'

Report from the Allen County Defense Initiative Strategic Planning
Think Tank workshop conducted on April 15 and 16, 2015.

PREPARED BY:



HOSTED BY:



TABLE OF CONTENTS

1.0	Executive Summary	4
1.1	Background	4
1.2	Initiative Progress and Prior Work	4
1.3	Scenario Planning Process	5
2.0	Introduction	6
2.1	Allen County Defense Initiative.....	6
2.2	Strategic Planning 'Think Tank' Workshop.....	7
2.3	Future iQ Partners.....	8
3.0	Allen County Regional Profile.....	9
4.0	Setting the Stage – Scenario Planning	12
4.3	Developing Four Plausible Scenarios for the Future	14
4.4	Drivers Shaping the Future	14
4.6	Creating Narratives for each Scenario Quadrant.....	16
5.0	Scenario Descriptions	18
5.1	Scenario A – Tribal Knowledge	18
5.2	Scenario B – Streets of Dreams; Marvel's Innovators United	20
5.3	Scenario C – Lean LIMA	22
5.4	Scenario D – Same O; Same O.....	24
6.0	Selecting a Preferred Scenario	26
7.0	Defining the Preferred Scenario	30
7.1	Issue Area Characteristics	31
7.1.1	Local and Regional Collaboration and Private Sector Engagement.....	31
7.1.2	Economic Development Structure and Alignment.....	32
7.1.3	Workforce Development Structure and Alignment.....	34
7.1.4	Industry Innovation and Entrepreneurship	36
8.0	Conclusion and Next Steps.....	38
9.0	About Future iQ Partners.....	39
10.0	About Task Force Lima.....	40



1.0 EXECUTIVE SUMMARY

1.1 BACKGROUND

The Allen County Defense Initiative was launched in 2014 as a means of expanding community conversations around the future of the Joint Systems Manufacturing Center to consider common issues of need throughout the region. This process, funded by the U.S. Department of Defense Office of Economic Adjustment addresses both recent fluctuations in production at the facility, as well as the ability of the region to respond to the recent slowdown. The initiative also seeks to maintain future capacity to support projected demands. The findings obtained through Future iQ Partners' work in the region will provide the basis for a number of supplemental funding requests to support additional regional development initiatives.

1.2 INITIATIVE PROGRESS AND PRIOR WORK

A great deal of work has been conducted in support of the strategic planning think tank workshop described in this report. Critical support has come from Task Force LIMA, a public-private partnership formed in 2005 to advocate for continued production at the Joint Systems Manufacturing Center and to breed awareness of the importance of defense-related industries in Ohio. Information shared has provided a great deal of context regarding key issues and actors in the region.

Two other key deliverables have been developed and presented as a means of informing conversation:

- An asset inventory and readiness analysis identified key demographic, economic, and industry trends in the region and identified a number of critical challenges.
- A social network mapping exercise identified linkages between community and industry leaders and measured the intensity of this collaboration. Visual representations of regional collaboration and technical information flows were produced.

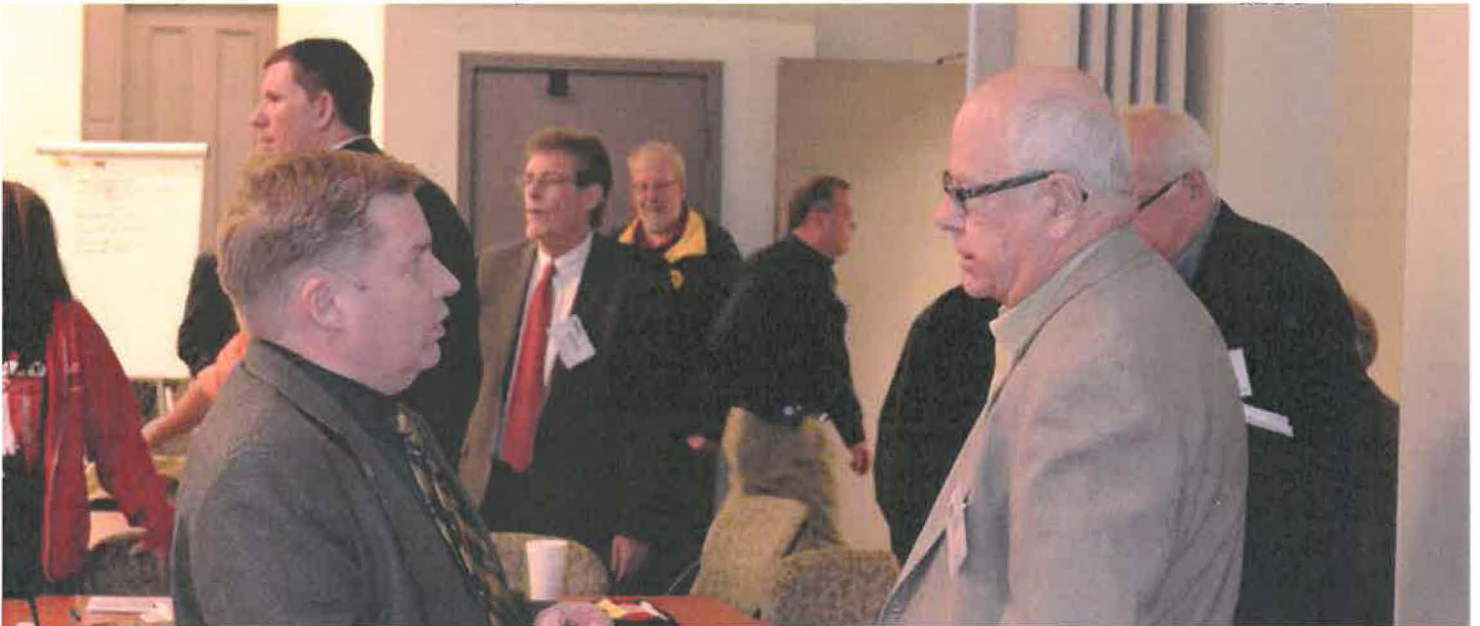


1.3 SCENARIO PLANNING PROCESS

A critical step in this process is initiating a wide-ranging discussion about different possibilities for the future of the region. To begin this exploratory conversation about the future, the region has engaged in an innovative Scenario Planning Process. This involved over 30 key stakeholders working together at the Strategic Planning Think Tank Workshop.

The Scenario Planning process brought together the local stakeholders to explore the future and develop a range of plausible future scenarios, looking out as far as 2025. The four scenario spaces were structured around two critical driver axes that define areas where the region both faces significant challenges and where future opportunities exist. The scenario spaces are defined by different points on the continuums established. These quadrants were used to formulate four plausible scenarios. The axes were 'Industry Innovation and Entrepreneurship' and 'Workforce Development'.

The four plausible scenarios were defined and described in detail. Participants speculated about the characteristics of each scenario and major events that could occur in the region, against the triple bottom line dimensions of business sector, workforce profile, and ecosystem function.





WELCOME
TO THE

COMMUNITY

Photo Credit Ayers Inc.

2.0 INTRODUCTION

The scenario planning work and results presented in this report was conducted as an integral part of the Allen County Defense Initiative. It was designed to solicit input from community leaders as to their perspectives on the region and future challenges.

2.1 ALLEN COUNTY DEFENSE INITIATIVE

Allen County, Ohio is home to the Joint Systems Manufacturing Center (JSMC), a unique asset in the United States' national security infrastructure. The facility is the only government-owned, contractor-operated (GOCO) production center in the United States Department of Defense's assets. The facility is currently managed by the U.S. Army and operated by General Dynamics Land Systems. This arrangement has been in place since 1978 and has been responsible for the product of most of the heavy combat vehicles in the military's inventory.

The facility traces its history back to 1942 when the former Lima Tank Plant played a key role in building a number of components and offering final assembly on several lines of vehicles that were critical to victory in World War II, including the Sherman line of combat tanks. In the years that have followed, the plant has supported operations in every active military engagement and has recently garnered attention through its role in the production of the Abrams and Stryker vehicle lines.

The facility has also been the subject of some scrutiny over the last twenty years as it has been included for consideration in a succession of rounds of the Base Closure and Realignment process. The most recent analysis concluded in 2005 and led to the recommendation that the facility be shuttered or leased for commercial production. The genesis for the Allen County Defense Initiative and Task Force LIMA stems from the debate over this recommendation.

Task Force LIMA was formed as a coalition of business, community, and government leaders that organized to advocate for the continued operation of the JSMC in the wake of the findings of the 2005 BRAC analysis. The advocacy work conducted by this group has successfully brought national attention to the facility and has maintained production levels. Task Force LIMA has also assumed a leading role in bringing attention to and support for the role that defense-related industries play in Ohio's economy. It was pivotal in the release of a white paper that described the imbalance of federal funding flows in 2013 and has also provided input to the Governor's Military Jobs Commission over the last year. The



task force has most recently secured a significant infrastructure and maintenance investment from the U.S. Army to modernize the facility.

The project that has culminated in the scenario planning process described in this report was initiated by the Allen County Board of Commissioners and Task Force LIMA through a defense industry adjustment funding request to the U.S. Department of Defense Office of Economic Adjustment (DoD-OEA). The award, received in 2014 represents the first phase in investment directed at building greater responsiveness and industry diversification in the regional economy. It is under this framework that the scenario planning process advanced.

2.2 STRATEGIC PLANNING 'THINK TANK' WORKSHOP

The culminating step in the Allen County Defense Initiative has been to conduct the Strategic Planning 'Think Tank' workshop, which developed a range of plausible future scenarios for the region. The Scenario Planning process, as outlined in this report, provides a 'vehicle' to be used in the process of building a shared vision for the future of Allen County and the broader region. In addition, the deliberations can assist in identifying key actions and can identify how various stakeholders might best contribute to future developments.

Approximately 31 key stakeholders attended the 'think-tank' workshop, held over two half-days on 15 and 16 April 2015. The participants who were invited to attend the workshop represented a cross section of organizations, interest groups and industry perspectives.





2.3 FUTURE IQ PARTNERS

The Allen County Board of Commissioners has partnered with Future iQ Partners (www.future-iq.com), an international consultancy company, to design a robust, innovative and far-reaching process. Extensive community engagement and input will be obtained through Future iQ Partners' unique tools and processes, in order to ascertain the what, where and how this region will reach its full potential.

The key role being played by Future iQ Partners includes:

- Conducting unique background research on community, demographic, and economic assets.
- Performing a broad-scale social network mapping analysis of community leaders and stakeholders.
- Designing and facilitating the Allen County Defense Initiative Strategic 'Think-Tank' process, to explore a range of plausible futures.
- Designing a comprehensive Strategic Action Plan that describes possible community priorities and initiatives for funding consideration and implementation.

This initiative has the potential to establish an innovative and original framework for greater regional collaboration, industry innovation, and workforce readiness in Allen County. It has been identified as a strategic priority both for the Allen County Board of Commissioners and the U.S. Department of Defense Office of Economic Adjustment.



Photo Credit General Dynamics Land Systems



3.0 ALLEN COUNTY REGIONAL PROFILE

HISTORY

Allen County began its life on the frontier of a new nation's westward expansion but did not truly find its place on the map of the nation's consciousness until the mid-1850's when the rail industry began to make a lasting impression on its landscape and workforce. The blip that appeared on the map became a beacon after 1885 when the discovery of oil would bring the first proper industrial boom to the region. The attention, investment, and prosperity brought by the intersection of transportation and commerce over the next twenty five years would define much of the region for the last century.

The transition of the Lima Agricultural Works to the Lima Machine Works and later the Lima Locomotive Works marked the growth of heavy industry in the area, paving the way for other prominent manufacturers such as the Ohio Power Shovel Company and Superior Coach in the 1920's and the Lima Tank Plant in 1942. These industrial giants, along with strong regional ties to agriculture and the automotive industry defined the landscape of the region's economy throughout much of the twentieth century. While many of these large firms closed during a period of industrial decline in the 1970's and 1980's, the region still boasts a strong and proud manufacturing base through the presence of global firms such as Ford, Proctor-Gamble, and Potash.

The legacy of these predecessor firms defined much of the civic investment in the county's communities and supported a number of cultural amenities, such as the Lima Symphony Orchestra that may seem out of place in a region of this size. References to the county's cultural and economic history can also be seen in the architecture of downtown Delphos and Lima. Rather than viewing this as a vestige to the past, community leaders are now embracing the potential of the built environment for preservation and redevelopment.



Allen County's Residents At A Glance

Population (2013)	105,298	Population over the Age of 65	16%
Population Growth (since 2010)	-0.9%	Population with a Bachelor's or Advanced Degree	17.10%
Projected Population Growth (2010 to 2040)	-5.9%	Labor Force Participation Rate	63%
Median Age	38.7 Years	Average Annual Wage (2013)	\$38,815
Birth Rate (2014)	1,275	Per Capita Personal Income (2013)	\$34,428

POPULATION DYNAMICS

Allen County's population reached its high point in 1980 at 112,241 residents. This period represents the height of the concentration of two key generations in the county, both the pre-World War II generation and the Baby Boom generation of the post-war years. This period also represents the height of labor force participation in the region at more than 74 percent.

Population has been slowly declining in the thirty-five years that have followed, losing around 7,000 residents during this period. Three factors have combined to dictate the losses. First, a period of deindustrialization that occurred in a series of waves from the 1970's through mid-2000's depressed economic opportunities for younger workers, leading to significant outmigration. Second, the presence of a generally older population also corresponded with a gradual decline in the region's birth rate. Finally, these dynamics have been stabilized as the declining birth rate correlates with a slowing rate of outmigration. The challenge facing the region's leaders is how to first reverse these patterns and then attract larger numbers of young residents into the region.

INDUSTRY AND EMPLOYMENT TRENDS

The economic composition of this region is strongly dominated by three industry sectors – petroleum and chemical processing, manufacturing, and health care. Each of the two traditional heavy industries have defined Allen County's economic landscape for more than a century while the growth in health care is a more recent phenomenon, largely in response to the needs of an aging population. Growth

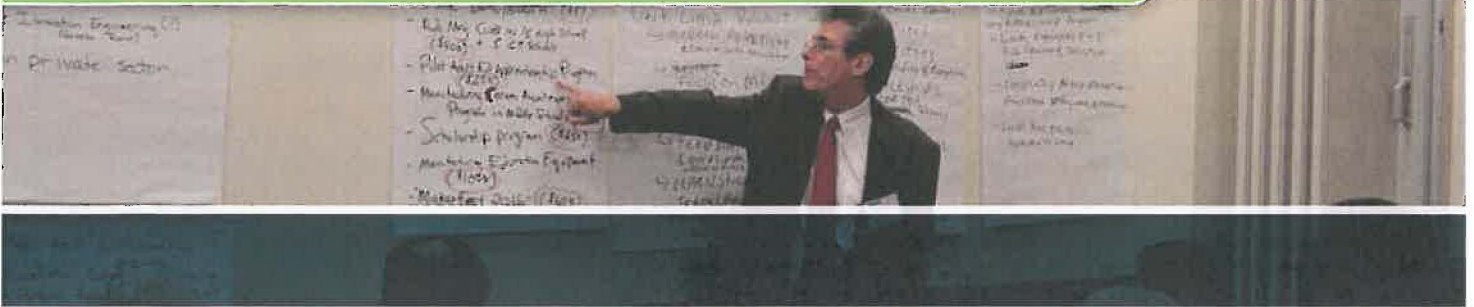
in manufacturing employment has largely been dictated both by government contracting activity at the JSMC and global changes in the automotive industry. The combination of negative trends in both of these sectors has depressed manufacturing employment over the last seven years, though the sector has shown some sign of rebounding.

One competitive advantage that the region has over its neighbors is the tremendously high level of manufacturing productivity demonstrated within the county. This is more than twice the state average and has increased by 36.4 percent over the last four years. Productivity in other principal industry sectors is also significantly higher than the state average, suggesting that the region continues to benefit from a high-class workforce. This will increase in importance over the next decade as the aging of the region's workforce will lead to labor shortages in a number of key industries.

INCOME DYNAMICS

Average wages in Allen County have historically lagged behind state and national averages across most industry sectors. Manufacturing (11 percent above average) and education and health services (1 percent above average) are two key exceptions. This wage disparity has historically been defined by a relative lack of professional, high value-added workers in a number of key industries and has been offset by a comparatively low cost of living. This difference also results in a relatively lower per capita personal income in the region. These trends are likely to moderate to some extent as the region continues to recover from the most recent recession, though they will need to reverse in order to retain and attract significant numbers of young professionals to the area.

For additional information about Allen County's economy and the critical trends facing the region, please see the Allen County Asset Inventory and Readiness Analysis.



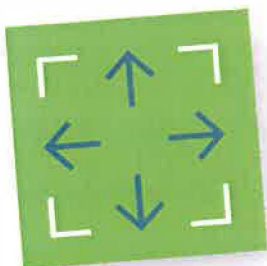
4.0 SETTING THE STAGE – SCENARIO PLANNING

The Allen County Board of Commissioners and U.S. Department of Defense have identified the need to building greater regional collaboration to promote economic resiliency. As part of this work, the Board of Commissioners has contracted Future iQ Partners to undertake the Allen County Defense Initiative Strategic Planning ‘Think-Tank’ workshop. This workshop aimed to:

- Deepen the understanding and examination of how external events and local conditions shape decision-making;
- Identify and understand the key influences, trends, and dynamics that will shape the County over the next 10 years;
- Create and describe four plausible long-term scenarios for the County; and,
- Begin exploring alignment around a shared County and regional vision

The scenarios developed during this Scenario Planning Process and outlined in this report are important to provide a “vehicle” to be used in the process of building a shared vision for the future of Allen County. In addition, the workshop deliberations can assist in identifying key actions for the region and assist in identifying how various groups might best contribute to future developments.

The Scenario Planning process, as applied in Allen County, offered an excellent opportunity for the community to examine the future in a thoughtful and structured manner. The design of the workshop included presentation and discussion about key forces shaping the future, at a global and local level. These exercises and work were aimed to build a robust basis for the scenario formulation.

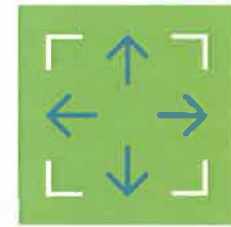


Scenarios are not predictions, but are a way of exploring plausible futures



4.1 SCENARIO PLANNING PROCESS

This report presents the background, results, and recommendations from the scenario planning process. This process aimed to explore the future directions and opportunities for the region, and commence work on creating a regional vision for collaboration and growth. Leaders from across the region attended the workshop held on April 15th and 16th, 2015. At this workshop, participants discussed the region's future and developed plausible scenarios for Allen County in 2025.



DecisionPath

The participants were then guided through a Scenario Planning process to develop four plausible scenarios for the future of the region. This process has been applied by Future iQ Partners in numerous planning projects across North America, Australia and Europe.

SCENARIO
PLANNING

The process, which is described in detail below, involves exploration and discussion of global, regional, and local trends and forces of change; identification and ranking of drivers and influences that **will likely** shape the future of the region; development of a scenario matrix defining four plausible scenarios spaces for the future; and the development of descriptive narratives of each scenario. The event concluded with discussion of the scenarios and their desirability in contributing to a regional vision of the future. An important part of the Scenario Planning process is that it aims not merely to develop plausible scenarios for the future, but to identify how they may be turned into tangible actions in Allen County and compiled in a strategic action plan.

4.2 WHY SCENARIO PLANNING?

Scenario Planning is a method that is used to develop plausible scenarios for the future. Scenarios are not predictions, but are a way of exploring plausible futures. The method differs from traditional strategic planning as it allows the exploration of many factors, or drivers of the future, concurrently. It does so by using local knowledge and expectations about the drivers to produce a framework that defines and explores a range of plausible futures. In this manner the approach enables people to explore the impacts and consequences of a range of different future pathways.



Generally, Scenario Planning processes are run over several days, weeks, or even months. A condensed form of Scenario Planning, developed by Future iQ Partners, was used in this project so that the scenario session was completed in two days. This design is intended to allow otherwise busy and committed people to contribute and participate in a future planning process in an effective and efficient manner.

This design relies on sufficient background information being presented to enable realistic and informed evaluation by the participants. It also requires participants who are broad-minded and freethinking, and who collectively and individually can bring their experience to the identification of the key drivers and to the development of the scenarios.

4.3 DEVELOPING FOUR PLAUSIBLE SCENARIOS FOR THE FUTURE

The regional stakeholders explored the future and developed plausible future scenarios, looking out as far as 2025. To set the context for their thinking, the planning session included discussion of global, national, and local forces that could impact the region. The project facilitator presented an overview of prior work that has been conducted in this project, including the findings of asset inventory and social network mapping exercises. Participants reviewed and discussed these findings, considering how they could impact on the future direction of the region.

4.4 DRIVERS SHAPING THE FUTURE

An extensive array of prior research and series of conversations with community leaders during two site visits in February and March 2015 revealed two prominent trends shaping community and economic growth in the future – industry innovation and workforce development. Each of these key themes has been mentioned time and again in conversations with community and industry leaders and a great deal of work is already underway in the region to attempt to address their respective challenges. Similarly, issues of industry innovation and entrepreneurship and workforce readiness and availability are being addressed in regions throughout North America and nationally. Addressing each of these areas will require collaborative solutions. The two issue areas also present significant overlap both in the types of organizations and resources required, but also in their potential impact on the region's prominent industries.



Photo Credit: General Dynamics Land Systems

The key insights regarding the current state and future of industry innovation and entrepreneurship in the Allen County region include the following:

- Some manufacturing innovation has occurred in existing industries.
- Challenges exist in developing commercialization strategies for many existing processes.
- Entrepreneurship is being promoted through an incubator strategy, though interest is uncertain.
- The region has built some connections with local research universities, though little applied research occurs.

This suggests that the region has extended its history as a source of some industry innovation, though little entrepreneurship or commercialization occurs within the broader economy. Developing a more innovation-forward development culture is essential to ensure the continued economic competitiveness of the region.

Similar insights were gleaned from conversations with key stakeholders in the workforce development community. These concerns have been amplified in recent years as the signs of an aging and declining population have started to affect workforce availability in the region. Some of the conclusions offered include:

- The region is dominated by skills needs in traditional industries, such as manufacturing.
- Workforce availability is a growing concern, both in quality and quantity.
- The region has promoted collaboration across a number of industry sectors, such as manufacturing and automotive, but little collaboration exists across sectors.
- Regional training providers are divided by flexibility and credentials.

This again suggests that the Allen County region has significant resources at their disposal to address key issues of workforce readiness and availability, but the workforce development interests are largely disjointed. A more collaborative strategy is required to prevent competition and duplication of services.



4.5 CREATING SCENARIO SPACES – FOUR PLAUSIBLE SCENARIOS FOR THE FUTURE

Once the two key regional drivers of industry innovation and entrepreneurship and workforce development were presented to workshop participants and approved, they formed the basis of the axes that define the scenario space where the workshop participants would apply their collective knowledge. Brief descriptions were also attached to the end points of each driver axes. While these end points do not necessarily represent two extremes on a linear continuum, they are distinct enough to suggest some degree of separation and a plausible range of outcomes between them.

The four quadrants (scenario spaces), based on different combinations of the two cluster themes, were reviewed and discussed with the participants. This discussion explored the description of the end points included in each scenario space, the possible interaction between these drivers, and how they formed the axes that defined the four scenario spaces. The participants were asked to consider the main attributes of each of the quadrants and to begin to speculate about how the region would look in a future based on each of the quadrants.

4.6 CREATING NARRATIVES FOR EACH SCENARIO QUADRANT

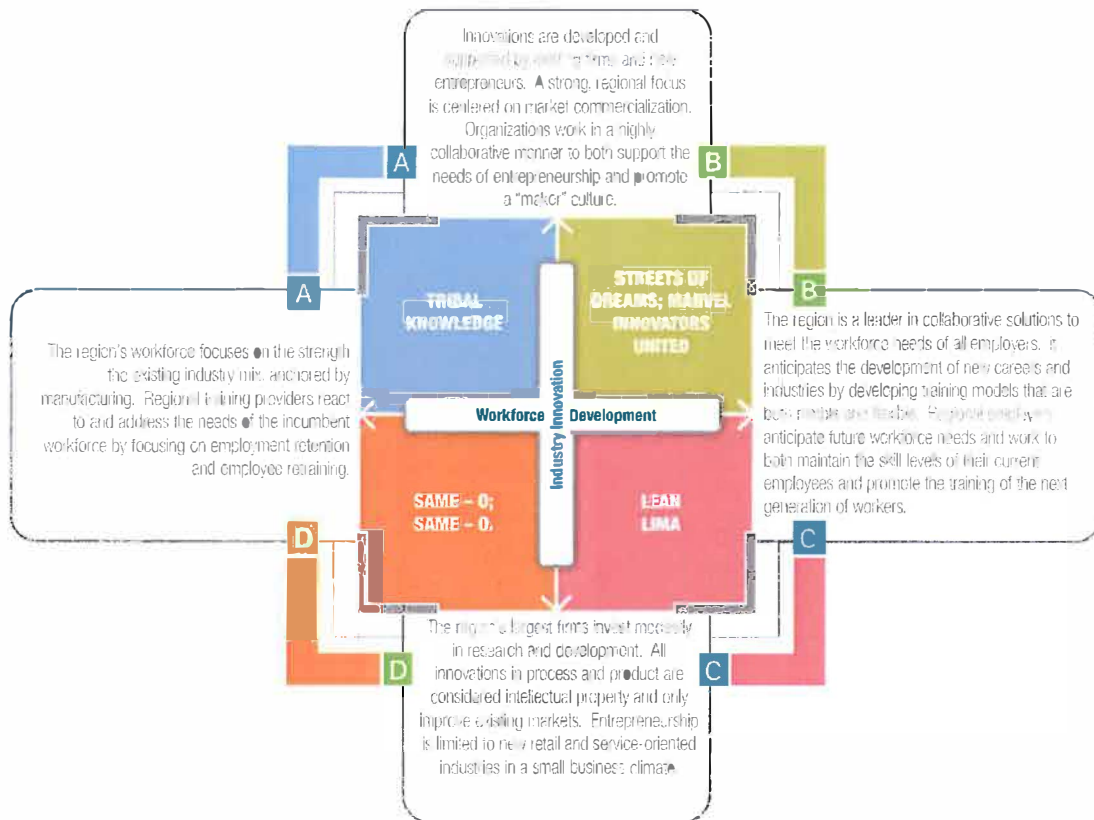
Event participants were randomly allocated to one of four groups and asked to formulate a scenario for their respective quadrant. Each group was facilitated by community leaders and Future IQ staff to describe the Allen County region in 2025 under the conditions of the scenario quadrant that they had been given in terms of the triple-bottom line of business profile, workforce profile, and ecosystem characteristics.

In addition, they were asked to devise major events or headlines of how the scenario occurred using the years 2015, 2020, and 2025 and to give their scenario a descriptive name. Once the scenarios had been developed, each group reported back, describing their scenario to the symposium participants.

This allowed for clarification, questions, and an assessment of the plausibility of each scenario. Each group's notes for their scenario and the description of it when it was presented to the other participants were used to produce the detailed narrative for each scenario that is presented in the next section of this report.



THE SCENARIO QUADRANTS DEFINED BY THE CLUSTER THEMES SHOWING THE NAMES OF EACH SCENARIO AS CREATED BY THE PARTICIPANTS.



These four scenarios paint very different plausible futures for the region. The workshop participants considered them all as plausible futures, as in, they could actually happen. Narratives and descriptions of each scenario, as developed by the workshop participants, are included in the following section.

Each scenario has its subsequent consequences and impacts on the fabric of the region – impacting the community, economy, organizational fabric in different ways. No one future is the 'perfect' future, as each comes with its attendant challenges and implications. The process, however, does provide a way to tease out the future scenarios and examine them from a speculative standpoint. They represent different possibilities for the future, and are not predictions.

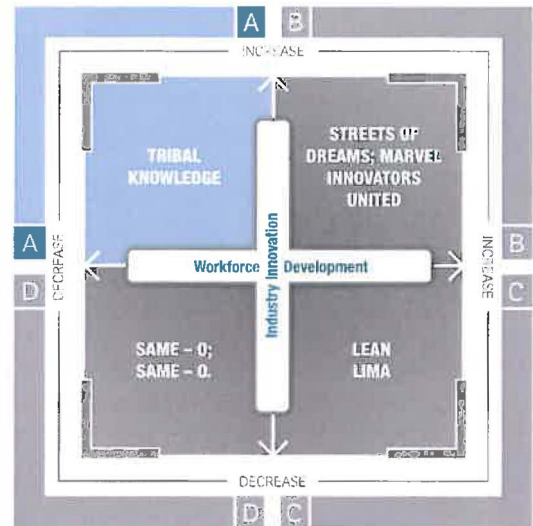


5.0 SCENARIO DESCRIPTIONS

Photo Credit Ayers Inc.

5.1 SCENARIO A – TRIBAL KNOWLEDGE

This scenario represents a plausible future where the region invests its energies and resources into fostering a strong innovation and entrepreneurial infrastructure in all sectors while maintaining the existing focus of its workforce development activities on meeting the needs of the region's dominant industries. This creates a commitment to innovation and business formation that may not necessarily generate strong job creation, such as the development of more efficient production processes or automation solutions. The region's workforce continues to age and eventually decline but the needs of existing employers are met both by employing the new innovations that are introduced and encouraging the young workers in the region to pursue traditional careers. The innovation focus drives entrepreneurship while the workforce development strategy stresses retention. This scenario marks a slight shift in regional orientation but also stresses the need to make the most of what is available.



An interesting aspect of the workgroup's discussion in the creation of this scenario is the fact that they alluded to two quite disparate examples for inspiration – the science, technology, engineering, and math (STEM) innovation hubs of Austin, Texas and the Research Triangle of Raleigh-Durham-Chapel Hill, North Carolina, as well as the broad scale community revitalization efforts that are occurring in Detroit, Michigan. It is difficult to conclude whether the group believed that the region possesses the potential of the former, or if it requires the repair of the latter.



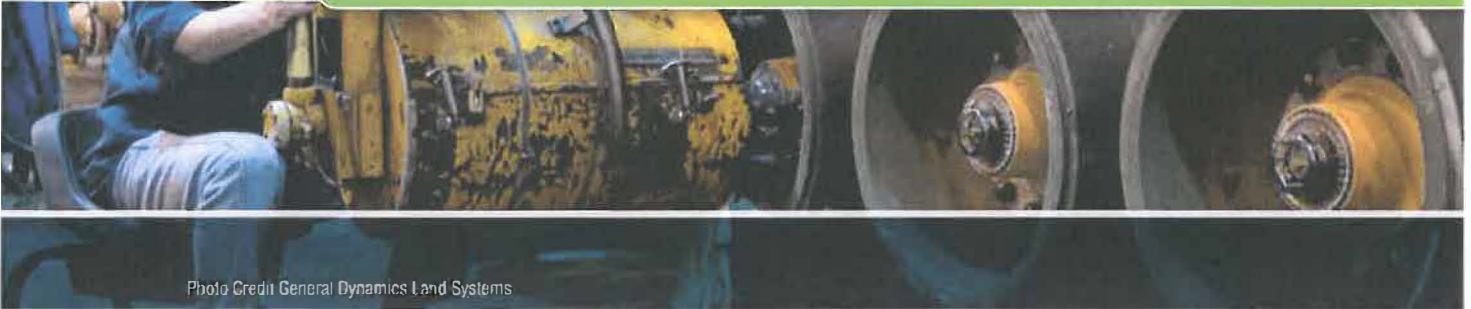


Photo Credit General Dynamics Land Systems

5.1.1 TRIBAL KNOWLEDGE - SCENARIO CHARACTERISTICS 2025

Business Sector

- The region focuses on supporting major manufacturing business – growth is limited.
- Innovative process improvements, but few innovations occur.
- Industry growth is moderate and incremental.
- Focus on traditional industries such as petrochemical, automotive, agriculture, and military.

Workforce Profile

- 'OWG receiving OJT' or 'Old, White Guys receive On-the-Job-Training.' Most workforce development resources are focused on retaining existing workers or placed dislocated jobseekers.
- Shop knowledge and tribal knowledge become critical as processes improve incrementally and older workers are asked to mentor younger incoming workers.
- The available workforce pool will shrink.
- Investment in and older workforce reduces the return on investment for most firms as benefits costs increase and the marginal value of training decreases.

Ecosystem Function

- Retention and retraining focus of regional organizations. Training providers compete for federal resources with little state or local investment.
- Large employers communicate to workforce development system what needs are, ignoring the needs of smaller businesses.
- The region assumes a generally reactive posture.



TRIBAL KNOWLEDGE - HEADLINE NEWS FROM THE FUTURE

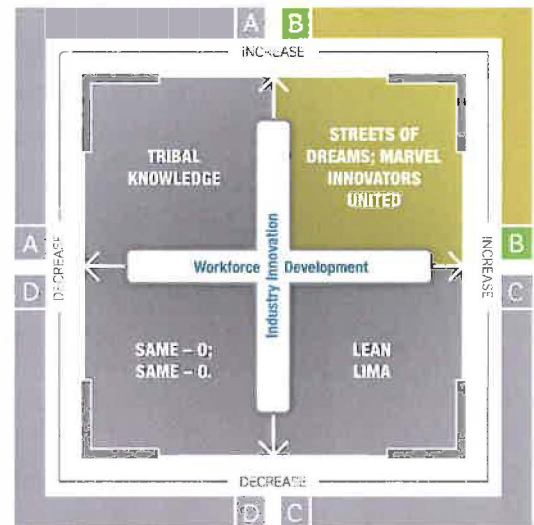
	2015	2020	2025
Business Sector	"Old companies feed service sector."	"Companies improve processes."	"Process is king; product is same but improved."
Workforce Profile	"Old White Guys learn new tricks."	"Processes change; workers don't."	"Walkers in the workplace" – old employees transitioning out."
Ecosystem Function	"Local leaders meet with business community to understand workforce needs."	"Local colleges introduce new leadership training programs."	"Spending on senior services closing in on education spending for the first time."

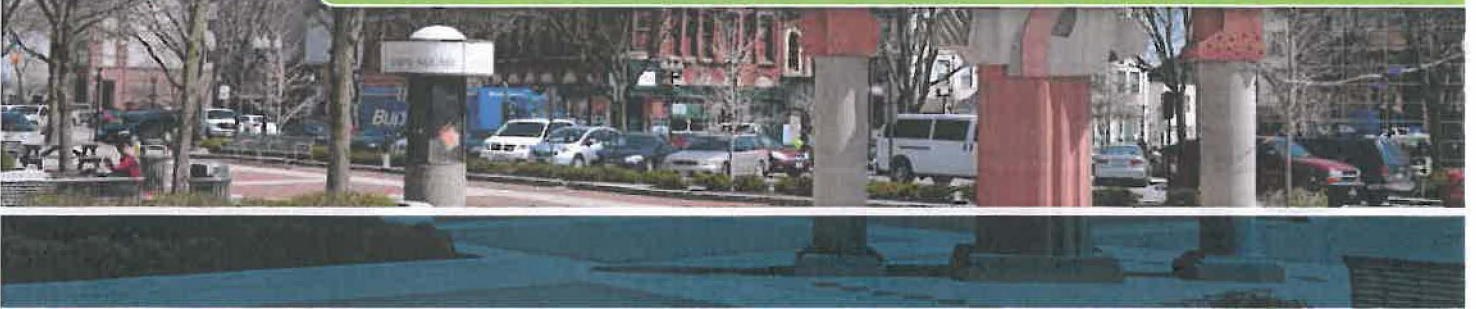
DETAILED DESCRIPTIONS OF THE SCENARIOS



5.2 SCENARIO B – STREETS OF DREAMS; MARVEL'S INNOVATORS UNITED

This scenario represents an increased investment by the region's community leaders to both spur additional innovation as well as to meet current and future workforce needs. This suggests a shared awareness among business and community leaders of the importance of proactive strategies to both maintain the vibrancy of existing and new businesses as well as to meet some of their most vital needs. It is also a scenario that focuses on the general vitality of the region as efforts are made to encourage young professionals to both remain in the region and to relocate from elsewhere. This leads to additional family formation and a gradual reversing of population trends. The realization of this future will require significant effort on the part of all regional actors as well as the marshalling of new resources as the changes required to realize this future must also come with a related increase in the region's capacity to anticipate and manage change.





5.2.1 STREETS OF DREAMS; MARVEL'S INNOVATORS UNITED - SCENARIO CHARACTERISTICS 2025

Business Sector

- Regional leaders speak with one voice and one mission.
- The region celebrates innovation and accomplishments.
- Intellectual property is shared within the region for competitive advantage.
- Workforce and community diversity is a non-issue.
- Investor engagement increases significantly.
- Corporate engagement strategy for localized decision-making is embraced.

Workforce Profile

- The region's per capita personal income rises above the national average.
- Population growth starts with a younger age concentration in the region.
- Innovative think tanks develop crossing company lines.
- Diversity is no longer issue in the community, as evidenced by data.
- Educational attainment is also above national average, as a result of documenting alternative learning.

Ecosystem Function

- The region has a clear STEM/STEAM focus.
- A regional clearinghouse for skill sets is deployed as needed.
- Early engagement in career options occurs in junior high.
- Community innovation think tank is also formed.
- The region is recognized for becoming a knowledge, skills, and innovation community.
- Quality of life opportunities are enhanced.
- The region considers metropolitan government or shared services.

STREETS OF DREAMS; MARVEL'S INNOVATORS UNITED - HEADLINE NEWS FROM THE FUTURE

	2015	2020	2025
Business Sector	<i>"Opportunity knocks: Companies band together to form manufacturing innovation think tank."</i>	<i>"Lima, Ohio leading nation in manufacturing developments."</i>	<i>"Innovation think tank receives ten new patents."</i>
Workforce Profile	<i>"Manufacturers and educators successfully identify skills gap; curriculum now in development."</i>	<i>"Integrated education system now completed within local schools and colleges."</i>	<i>"Lima hosts global symposium on creative manufacturing solutions."</i>
Ecosystem Function	<i>"Community leaders to create one common development platform."</i>	<i>"Washington, D.C. names Lima, Ohio as model community for collaborative growth by government, education, and business."</i>	<i>"Government coffers are overflowing; personal income taxes at all-time low."</i>

DETAILED DESCRIPTIONS OF THE SCENARIOS

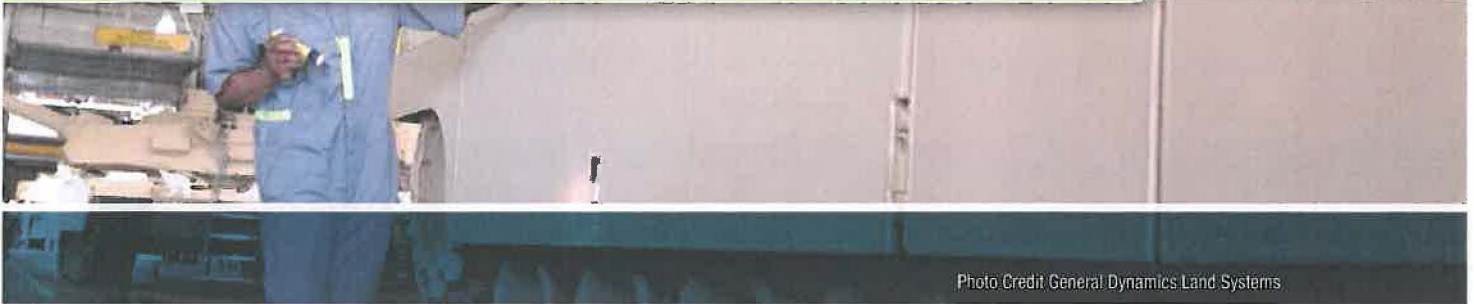


Photo Credit General Dynamics Land Systems

5.3 SCENARIO C – LEAN LIMA

This scenario is defined by an increase in regional collaboration around workforce development coupled with maintenance of the current level of effort and focus in promoting industry innovation and entrepreneurship. Within this context, the scenario describes a future where existing industries and firms continue to serve as the focus of innovation and research activities in the region. Conversely, the workforce development ecosystem innovates to both meet the needs of existing industries and to anticipate the future skills needs of these same firms as innovations developed begin to take hold. While there is little commercialization activity, the innovative processes and products that firms develop increase profitability and lead to some regional economic growth. Some young professionals may be retained in the regions as the innovative activities that occur will require new skill sets that the region's educational system is prepared to develop.

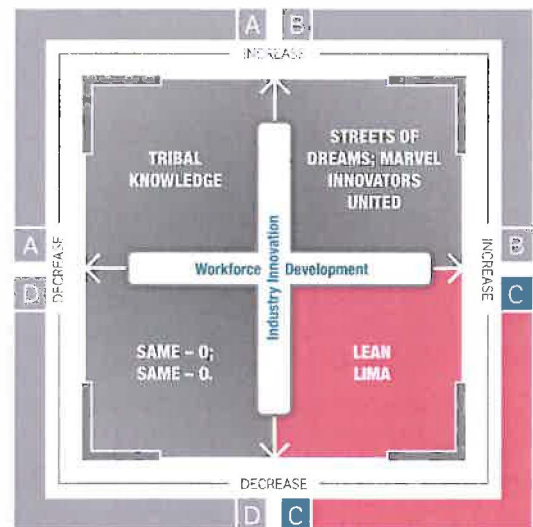




Photo Credit Ayers Inc.

5.3.1 LEAN LIMA - SCENARIO CHARACTERISTICS 2025

Business Sector

- The region maintains a solid manufacturing base.
- Retail and sales activity increase as incomes rise.
- Small business and niche retail markets also increase to meet resident needs.
- High-technology and information technology businesses also benefit from the growing demands of existing industries.
- Higher output results in lower costs and possibly fewer jobs.

Workforce Profile

- Population growth remains flat.
- Retention of younger workers (under 25) increases slightly.
- Incumbent worker training increases, as does worker retention.
- More companies rely on remote workforce delivery through information technology.

Ecosystem Function

- Community support systems increase to meet the needs of an aging population.
- Eldercare and childcare options increase.
- There are niche innovations in transportation.
- More collaborations form between industry and education.

LEAN LIMA - HEADLINE NEWS FROM THE FUTURE

	2015	2020	2025
Business Sector	"Lima prepares for the future."	"New vehicles roll out at the JSMC."	"Manufacturing is still king."
Workforce Profile	"Unemployment is back at pre-recession levels."	"Lima attracts young professionals."	"Lima area boasts the highest workforce productivity highest in the state."
Ecosystem Function	"New courses roll out at postsecondary institutions."	"High speed rail system connects through Lima."	"Local colleges reach a combined 20,000 students enrolled."



5.4 SCENARIO D – SAME O; SAME O

The final scenario described represents a future where resources continue to be invested in maintaining the strength of the region's industrial core. Industry innovation again occurs largely within existing firms and any entrepreneurship that does occur is focused on meeting the needs of local firms and regional markets. The workforce development ecosystem is again focused principally on worker retraining and retention. New workforce entrants are encouraged to consider traditional careers, and a focus on manufacturing and other heavy industry is also prevalent in the region's education system.

It would be a mistake to characterize this scenario as that which best represents a "status quo" state for the region. There is the potential for significant growth within this scenario space even if the industry innovation or workforce development focus does not change. Similarly, the region's leaders will still be required to develop innovative solutions to the industry and workforce challenges facing the region. As such, a regional future within this scenario space will still look sharply different in the next decade as in any of the other three scenario spaces.

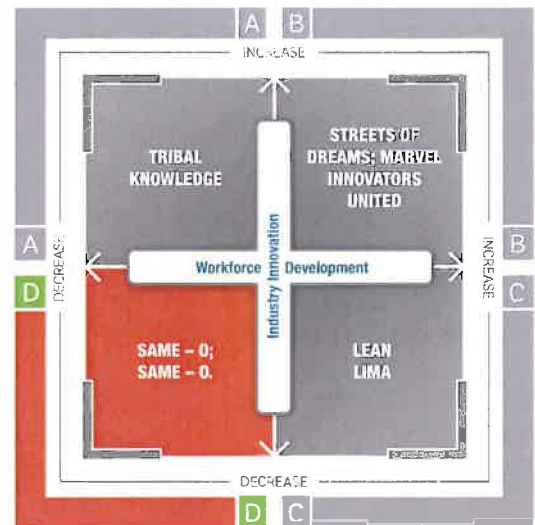


Photo Credit: General Dynamics Land Systems



5.4.1 SAME 0; SAME 0 - SCENARIO CHARACTERISTICS 2025

Business Sector

- If no innovation occurs, where does the money come from?
- Difficulty in replacing and retaining the skilled technology positions created.
- Focus on trying to retain our existing businesses with dependence on national and global trends.
- The JSMC lacks the ability to bring in outside (commercial or foreign military) work.

Workforce Profile

- Difficulty in attracting and retaining the necessary skills along with an aging workforce puts strain on our business base.
- The region fights against an aging workforce as healthcare costs rise and primary care services increase.
- Job growth is dependent on foreign labor markets and competition among manufacturers.

Ecosystem Function

- The challenge will be if our isolated companies will work within the community for job growth or continue to be fragmented.
- Communities will continue to compete for smaller pieces of a shrinking pie.
- Infrastructure spending will be a growing concern as roadways and other infrastructure deteriorates.



LEAN LIMA - HEADLINE NEWS FROM THE FUTURE			
	2015	2020	2025
Business Sector	"Manufacturing jobs are increasing, as are potholes."	"An aging population brings business to local stores; waiting rooms."	"Manufacturers large and small view consolidation as a means to survive."
Workforce Profile	"Local leaders stress STEM; technical opportunities target young people."	"'Help Wanted' signs increase as there is more jobs than workers."	"Community leaders consider broad incentives to attract new residents."
Ecosystem Function	"Regional healthcare system is ramping up for Mayor Berger's retirement."	"No depth in community engagement as most candidates in election run unopposed."	"Mayor Berger finally announces his retirement."

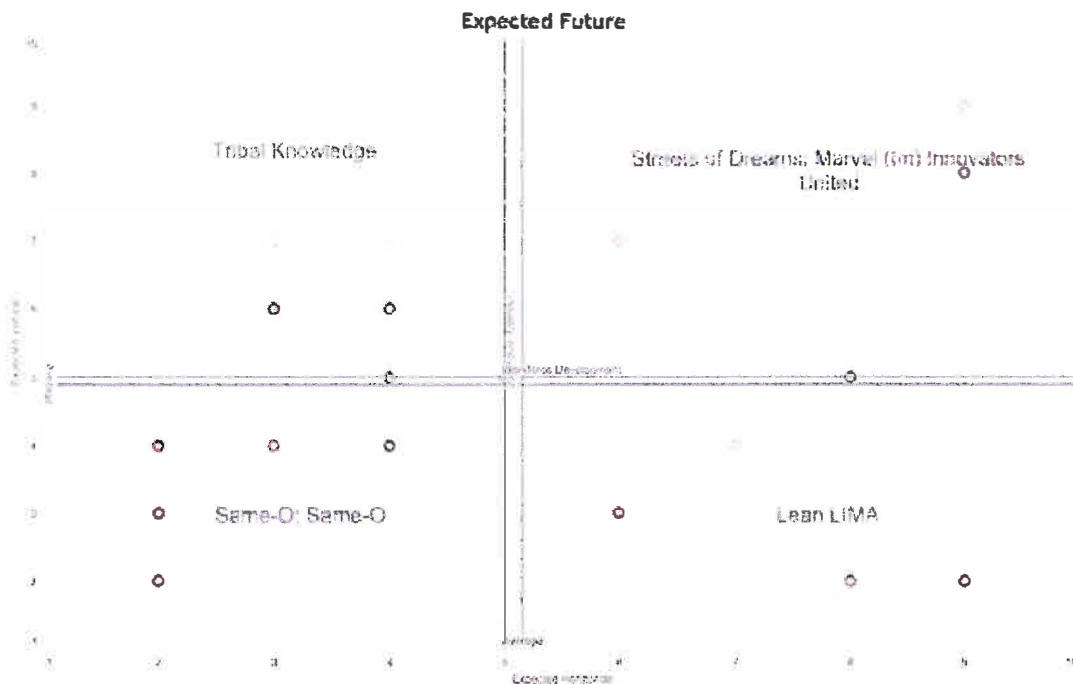
SELECTING A PREFERRED SCENARIO



6.0 SELECTING A PREFERRED SCENARIO

Each of the four scenarios described represent plausible outcomes for Allen County's regional future. They are based on certain expectations of the future role of the region's economic and workforce development ecosystems and the potential for the region's industries to innovate. While each of these scenarios may be viewed as possible, think tank participants expressed a clear preference for one of the presented outcomes.

Think tank participants were asked a series of questions regarding their preference for change along each of the scenario axes at the end of the first day's session. They were also asked to provide their personal opinion on both where the region may be expected to head, given no change in the current economic and ecosystem composition, and where they may prefer it to grow if change was indeed possible. The aggregation of these perspectives is presented on the scatterplots below.



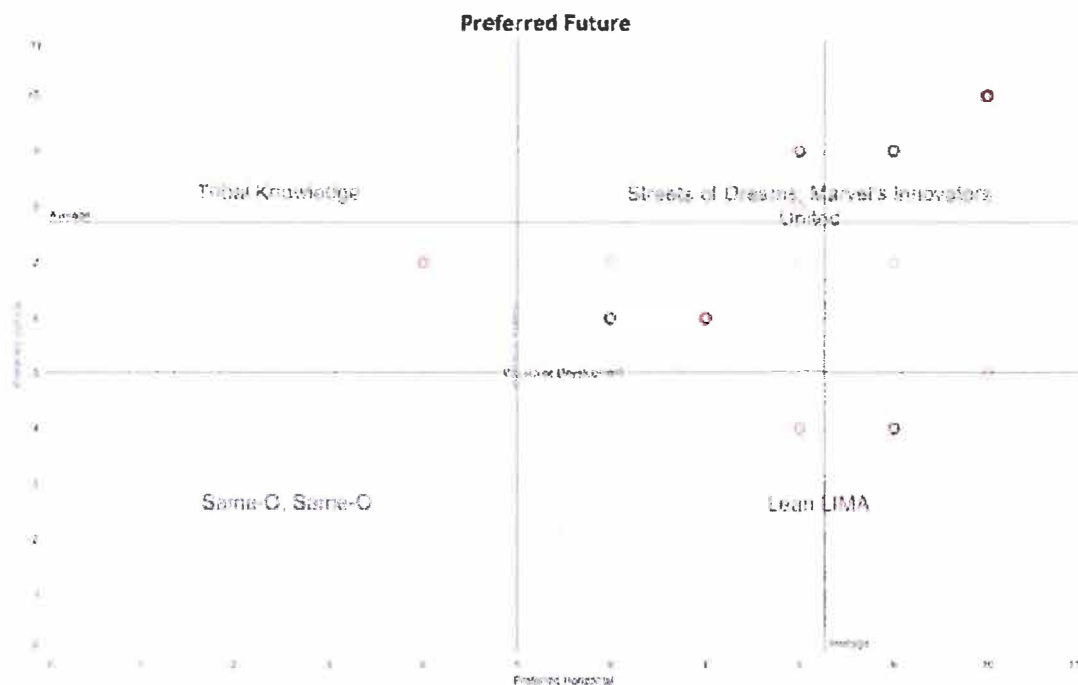
The expectations of the think tank participants are fairly evenly dispersed across each of the four plausible scenarios presented. Their perspectives appear to conclude that some additional regional



Photo Credit: Ayers Inc.

collaboration will occur naturally, but that the industry mix will promote innovation from within. This produces a consensus point that is close to the equilibrium point and located in Scenario B: Streets of Dreams; Marvel Innovators United. This represents a relatively uncertain but somewhat conservative outlook for the future.

The expected future scenario identified by the think tank participants differs quite significantly from their preferred future. Again, participants were asked to locate their preferred future point in the same four-quadrant scenario space. The aggregation of these data points is presented on the scatterplot below.



The preferred future predictions presented above mark a significant change in the participant's collective mindset. We see that each of the participants independently aggregated their perspectives around Scenario B: Streets of Dreams; Marvel Innovators United. In doing so, their collective expectations have essentially eliminated Scenario D: Same-O; Same-O as a possibility and there was significant movement of all respondents to the left and up. This scenario space is again marked by significant increases both in regional collaboration around workforce development and industry innovation. What is equally striking

SELECTING A PREFERRED SCENARIO



about the distribution of perspectives is that a significant number of respondents (6 of 26) placed their preferences at each of the two most upper-right points on the scatterplot. This suggests the presence of a great deal of optimism that the future presented in the preferred scenario can be achieved.

Another observation that must be kept in mind is that a considerable distance exists on the scenario space (approximately three point movement on both axes) between the expected and preferred scenario consensus points. This is a visual representation of the considerable distance and change that may need to be affected in the region over the next ten years to alter its future trajectory. In addition, respondents expressed a significantly higher level of overall confidence in the region's capacity to meet the expected scenario than to achieve the preferred scenario.

The visual depiction of the expected and preferred scenario points were further validated through participants' responses to a number of categorical statements on a variety of characteristics that define both the industry innovation and workforce development axes. A summary of a number of the key findings of these survey questions is presented below.

INDUSTRY INNOVATION

- When asked what the primary focus of any regional industry diversification effort should be, 60 percent of participants agreed that the region should look to build a balanced mix of traditional and new economy industries.
- Thirty-eight percent of participants further suggested that industry diversification could best be achieved through an entrepreneurial-based strategy that supports the development of new "home grown" businesses.
- Innovation was also identified as one of the key drivers of industry diversification. Fifty percent of participants believe that "we need to embrace the next generation of innovators and entrepreneurs to help our leading businesses grow."



Photo Credit Ayers Inc.

REGIONAL COLLABORATION

- There was some disagreement among participants as to the most appropriate future alignment of the workforce development ecosystem. While a large majority of participants believed that that worker retraining was an appropriate strategy, 46 percent of participants agreed that this should take place for dislocated and adult jobseekers, while 35 percent preferred to enhance this practice with an added focus on career exploration.
- There is a clear desire (65 percent) among the participants for the region to develop a more integrated service provider ecosystem that can anticipate and respond to emerging challenges and opportunities.
- Similarly, a majority (56 percent) of participants want the region's elected officials to pursue an orientation that establishes the region as a state and national leader in collaboration and industry diversification.

Taken in sum, the average of all responses to these questions largely validates the preferred scenario consensus point described earlier. Participants may have expressed a perspective on industry diversification and innovation that is somewhat more conservative than previously, but their expectation of the prospects for workforce development and regional collaboration is slightly more optimistic.

What is more important is that the responses to these questions validate two important conclusions regarding the think tank participants and their perceived role in shaping the region's future. First, they believe that change is both needed and feasible. Second, and more importantly, they believe that they and the organizations they represent can play a vital role in the shaping of that future. Each of these perspectives is an important precondition to affecting change at any level.

Finally, the findings presented above largely validate the perspectives of the broader region as suggested in the prior work leading up to the think tank event. This suggests that the perspectives of the think tank participants are not merely indicative of their personal preferences, but rather the outlook of the region, as a whole.



7.0 DEFINING THE PREFERRED SCENARIO

The first day of the Strategic Planning Think Tank and all of the precipitating analysis leading up to it was focused on the definition of a range of plausible scenario outcomes and the selection of a preferred scenario space. The second day of the think tank event shifted the participant's focus to further define the preferred scenario of Streets of Dreams; Marvel's Innovators United and to begin to identify strategic actions that could affect the changes needed to achieve it. Participants reviewed the basic parameters of the preferred scenario, and were reminded that the pursuit of the preferred future may require some stakeholders to temper expectations while others will be challenged to expand their horizons. This is true in any consensus-building exercise.

The think tank participants were asked to self-select and organize around the following strategic areas:

- Regional and Local Collaboration and Private Sector Engagement
- Economic Development Structure and Alignment
- Workforce Development Structure and Alignment
- Industry Innovation and Entrepreneurship

This division allowed each of the participants to share his or her specialized technical knowledge and experience with others in order to craft a comprehensive and detailed vision of the preferred future. Participants were first asked to identify the key characteristics of each of these issue areas at one, five, and ten year intervals. Next, they were tasked with the formation of a series of strategic recommendations of actions that could be taken in the next twelve to eighteen months by stakeholders in the region to affect the trajectory towards the preferred future. All issue groups were also asked to consider the collaborative framework and partnerships between public and private sectors interests that may be needed to implement these strategies.

The following section identifies the ten-year characteristics of each issue area, as defined by the participants of the Strategic Planning Think Tank.



7.1 ISSUE AREA CHARACTERISTICS

7.1.1 LOCAL AND REGIONAL COLLABORATION AND PRIVATE SECTOR ENGAGEMENT

The first workgroup addressed an issue that was clearly identified in the network mapping exercises as well as in a number of pre-workshop conversations. The region has a long history of fostering close relationships and collaboration between public sector and community actors. However, the same level of collaboration does not traditionally extend into the private sector, nor are there many examples of effective public private partnerships. The workgroup chose to begin their efforts by focusing on local best practices and expanding the scope of a regional definition.

These are their one, five, and ten year objectives.

1-Year

- Leverage groups such as the Auto Task Force and Task Force LIMA to expand into further supplier relationships, a larger radius, and more industries. Key characteristics include:
 - Continuity of effort
 - Schedules
 - Calendars
 - Meetings
- Create opportunities for broadening eco-system connections in organizational design and program, data-driven with external expertise, led by businesses as demand force/drive, to make intense conversations that advance efforts.
- Geography – choose Putnam and Auglaize Counties as initial focus.



5-Year

- Specify crossover services that lessen restrictions of structures that are boundary-driven to address labor shed needs in 45-60 mile radius, i.e. confining political and services structures.
- Geography – expand into Van Wert and Hardin Counties.

10-Year

- Result is regional cohesion and common development objectives.
- Systematic, broad-based set of relationships with common goals of region, including:
 - Innovation
 - Workforce development
 - Service development as needed

7.1.2 ECONOMIC DEVELOPMENT STRUCTURE AND ALIGNMENT

Two of the remaining three issue workgroups considered ways to build collaboration between economic and workforce development stakeholders in the region. This was identified as one of the region's key organizational issues in both survey work and the network mapping platform. The formation of a collaborative ecosystem both between jurisdictions and functional areas will eliminate duplication and fill any gaps in service that may arise.

The focus of the economic development ecosystem workgroup's visioning discussion is built on the definition of roles and responsibilities among actors in the region, as well as the formation of a strong regional identity. Achieving both of these goals will lead to a region with clearly defined goals and is prepared to anticipate any future challenges.

Their one, five, and ten-year objectives are outlined below.

1-Year

- Initial industrial development and economic development resources develop a seamless one stop construction review for best practices.



5-Year

- Identify local innovators and entrepreneurs; innovation needs.
- Support research needs of clusters to identify entrepreneurial opportunities.
- Identify and categorize existing supports and needed supports for entrepreneurship.
 - Finance
 - Technical Assistance
 - Mentorship
- Recruit potential entrepreneurial leaders in clusters.
- Develop and document transferable skills to entrepreneurship.
- Innovation/entrepreneurship – define process impact or commercialization.
- Economic development – focus on politics, incentives, infrastructure, job ready sites.
- Develop a model that documents support for innovation and entrepreneurship.

10-Year

- Economic development structure to focus on regional collaboration for entrepreneurship and innovation building upon local infrastructure assets and regional economic development cooperation.
- The region has a strong and modernized infrastructure including rail, roads, water, and electric.
- Potential gaps may include: startup support, job ready sites, gas supply, and how to harness local college graduates.



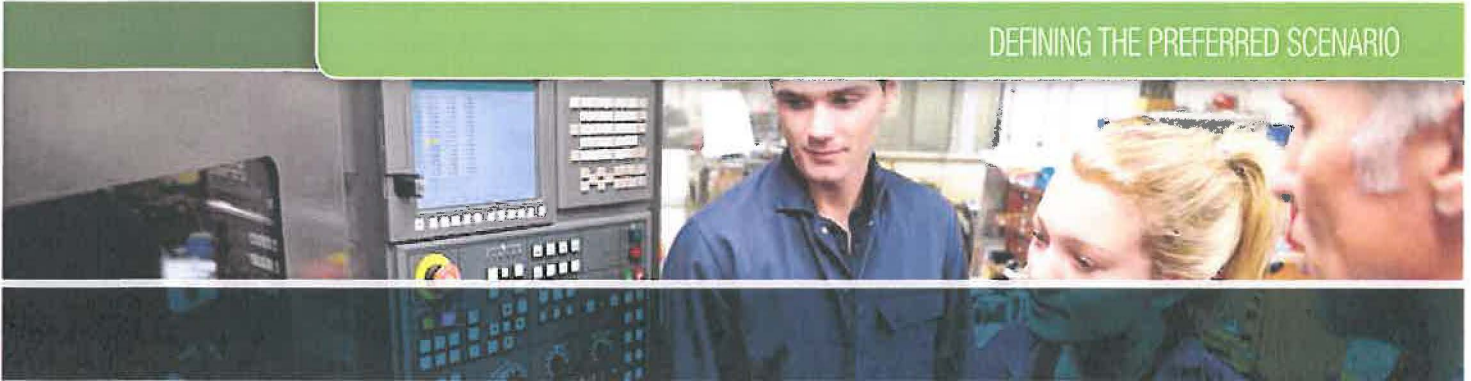
7.1.3 WORKFORCE DEVELOPMENT STRUCTURE AND ALIGNMENT

The challenges faced by the workforce development ecosystem in building stronger collaborations differ from those of their counterparts in the economic development community as interests are inherently defined on a regional basis (i.e. the workforce development area model). There have been a number of efforts to connect industry and training providers in the past, such as the West Central Ohio Manufacturers Consortium and Link LIMA. However, there are still significant disconnects between training providers and in bringing career exploration into earlier levels of education. The workgroup assigned to this issue decided to focus on the development of a more integrated infrastructure that brings business, education and workforce development together. The partnerships that form from this model are essential in that the workforce needs of businesses have historically been communicated poorly to educators.

The statements below describe their ideal characteristics and objectives at a one, five, and ten year horizon.

1-Year

- Link LIMA rolls out.
 - Increase advertising and community knowledge.
 - Focus on manufacturing.
 - Get information on employer needs.
 - Feed data to educational institutions including K-12 and technical colleges.
 - Learn skilled trade needs from AFL/UAW (labor unions).



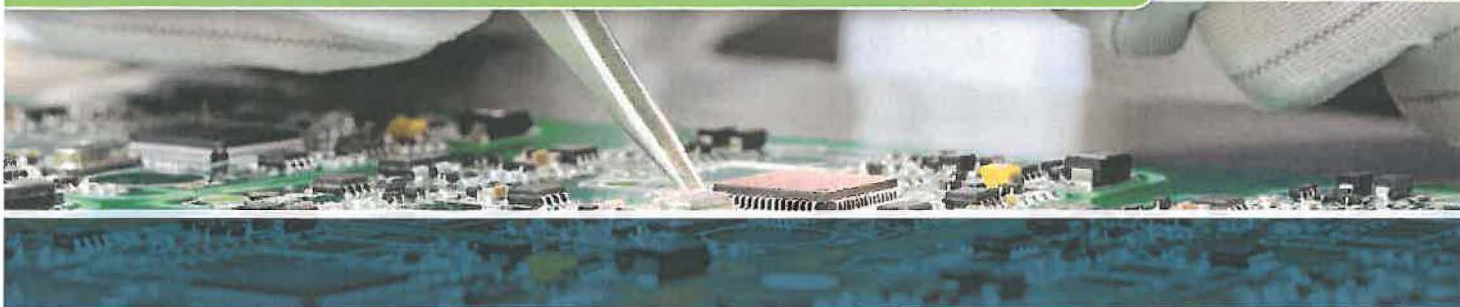
5-Year

- Encourage local careers and opportunities among students.
- Expand model to all industry sectors.
- Build and document a robust portfolio of training programs.
- Create apprenticeship programs with career tech schools.
- Require all local K-12 schools to include career assessments.
- Promote all job opportunities.
- Improve educational curriculum linkage and credit certification.

10-Year

- The region has a nationally-recognized and certified apprenticeship program.
- Local employers find rich pipeline of talent.
- Competency-based education is accepted regionally and statewide.
- Local children are excited to return to Lima.





7.1.4 INDUSTRY INNOVATION AND ENTREPRENEURSHIP

The final workgroup focused their energies on the second major issue and opportunity facing the region – industry innovation and entrepreneurship. There has historically been a strong tradition of industry innovation in the region and that tradition is carried on by organizations such as the Ohio Energy and Advanced Manufacturing Center. The challenge facing the region, as recognized by the workgroup is how to capitalize on this facility and instill a “maker” culture throughout the region.

These are their one, five, and ten-year objectives.

1-Year

- Center for Innovation Excellence formed.
 - Support and funding identified
 - Website and development of resources
- Connect with elected officials to re-enact 3rd frontier development program at OEAMC.
- Promote youth technology and innovation.
 - Establish focus groups of entrepreneurs and industry leaders.
 - Identify all applicable youth-focused programs.
 - Identify funding streams.
- Remove government obstacles at local, state, and national levels.
 - Reduce/streamline the number of approvals.
 - Increase awareness of public funding and assistance.
 - Form action group to maintain advocacy efforts.
 - Advocacy to state and federal government grows.
 - Grow the education and public awareness within the community.



5-Year

- Companies, schools, parents, and economic development groups all fostering goals.
- Focus groups matured to the point that ideas are being implemented.
- Sharing of expertise by companies through the center.
- Funding streams established.
- Local "shark tank investors" are identified and active.

10-Year

- Students have become business leaders in the community.
- Other cities and state governments recognize the model as a best practice.
- Center is the go-to source for innovation technology.
- National recognition and participation in international studies and symposia.
- Increased business startups in area.
- People and companies are actively coming into the community.





8.0 CONCLUSION AND NEXT STEPS

Allen County Ohio has demonstrated through its history that it possesses a strong work ethic, a desire to innovate, and great resiliency. Each of these are characterized in the Joint Systems Manufacturing Center. The region has survived and thrived through its share of economic challenges through the strength of a number of community partnerships and a vibrant private sector. While the region does face considerable demographic and workforce challenges in its immediate future, conversations are already underway to identify innovative solutions to meet these head on.

The perspectives of the workshop participants and community leaders shared in this report suggest that the region recognizes the need to develop collaborative solutions to meet the innovation and workforce needs of its key industries. It also views the present moment as a critical turning point to reshape the trajectory of future trends. By adopting a proactive stance that anticipates challenges, identifies key assets, and coordinates efforts, the region may effectively realize its preferred future outcome.

Many of the findings of the strategic planning think tank workshop and related efforts will be further distilled into the formation of a rapid action plan for the region. This report will contain a series of targeted actions and initiatives identified by workshop participants and community stakeholders as being of critical importance to bringing change in each of the four functional areas described through the workshop process. These recommendations will then be submitted to the U.S. Department of Defense Office of Economic Adjustment and other funding entities for consideration. The conversation will also continue among the region's leaders as to how best to effectively guide Allen County into a prosperous future.

9.0 ABOUT FUTURE IQ PARTNERS

Future iQ Partners is a market leader in the development and application of scenario planning; network analysis, industry and regional analysis, and community engagement and capacity building. We specialize in applying innovative tools and approaches to assist organizations, regions and industries shape their economic and community futures. We take a practical, hands-on approach to working with groups and communities. With over a decade of business experience, the company has grown to have a global clientele spanning three continents.

To learn more about Future iQ Partners, and our recent projects visit www.future-iq.com or by email at info@future-iq.com

REPORT AND SCENARIO PLANNING WORKSHOP PREPARED BY:



DAVID BEURLE, CEO FUTURE IQ PARTNERS

As CEO of Future iQ Partners, David specializes in creating future planning approaches for the use in regional, community and organizational settings. David has worked in the field of organizational and regional economic and community planning for over 20 years. His work in community and economic development has earned his work international, national and state awards.



DR. JEFFREY A. SACHSE -- SENIOR ECONOMIST

Jeffery specializes in detailed economic analysis and data interpretation. He has worked on industry clusters, regional partnerships, workforce development and economic trends and indicators. He has led research and development projects in transportation, and conducted program monitoring. He has detailed local knowledge of the economic landscape in the Midwest, having worked professionally in this area for over a decade.

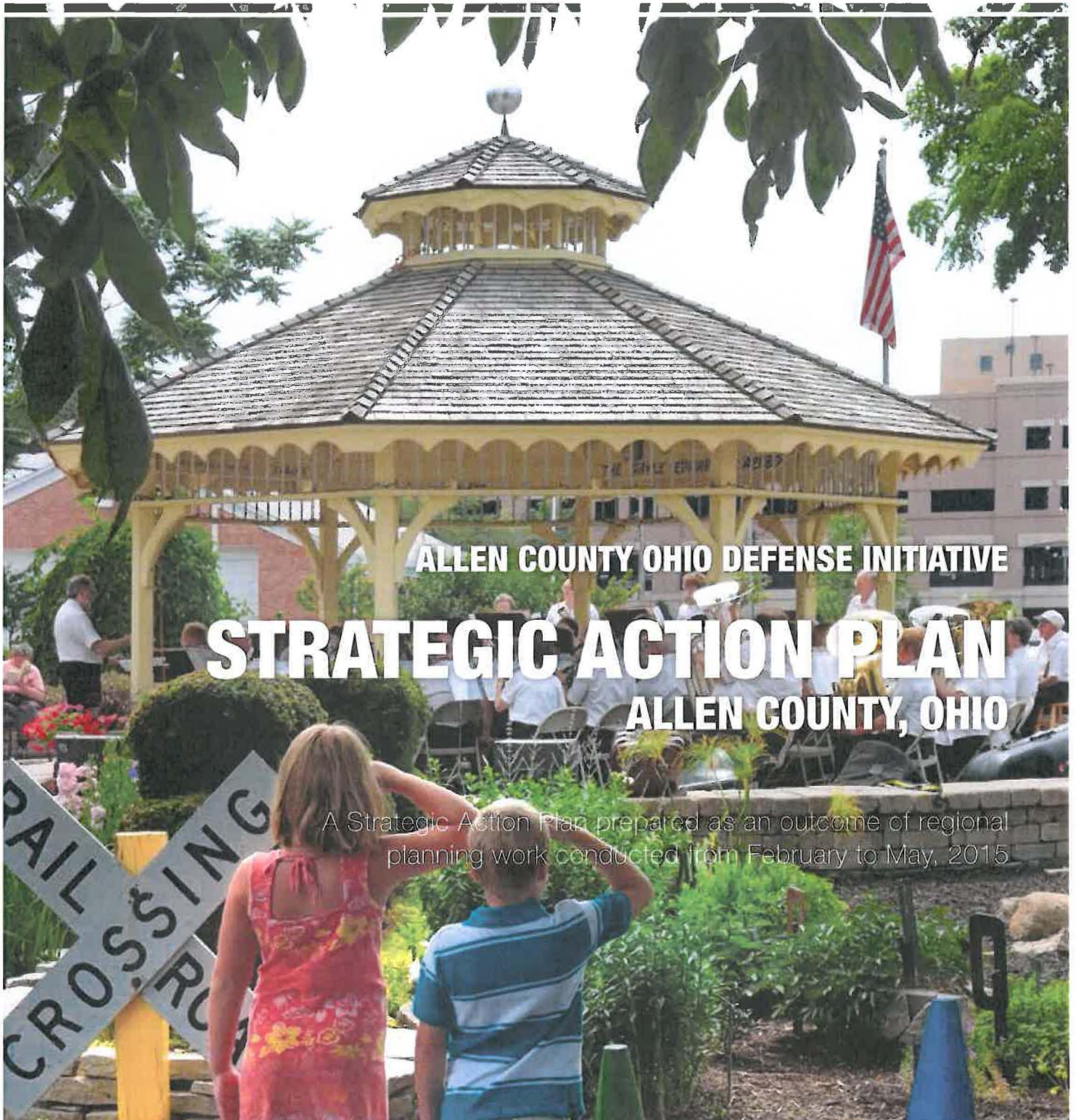
10.0 ABOUT TASK FORCE LIMA AND THE ALLEN COUNTY DEFENSE INITIATIVE

This study is one of many to be produced under an award issued by the U.S. Department of Defense Office of Economic Adjustment to assist Allen County and Task Force LIMA in developing strategies to ensure the economic health and vitality of the Joint Systems Manufacturing Center and the broader region.

**For more information regarding Task Force LIMA
or any aspect of this project, please contact:**

Denis Glenn, CM
Project Manager,
DoD Community Assistance Program
Board of Commissioners,
Allen County, Ohio
630 E State Road
Lima, Ohio 45801
Cell: 567-204-3631
Fax: 419-224-0183
dglenn@allencountyohio.com





ALLEN COUNTY DEFENSE INITIATIVE STRATEGIC ACTION PLAN

May, 2015.

PREPARED BY:



ALLEN COUNTY DEFENSE INITIATIVE HOSTED BY:



Cover Photo Credit Ayers Inc.

TABLE OF CONTENTS

1.0	Summary	4
2.0	Action Planning Process	6
3.0	Preferred Future Scenario – The Basis for Strong Action	8
4.0	Action Plan - Recommendations	10
4.1	Local and Regional Collaboration and Private Sector Engagement	11
4.1.1	Opportunity	11
4.1.2	Challenges	11
4.1.3	Strategic Recommendations	12
4.1.4	Bright Ideas	14
4.1.5	Key Partners	14
4.1.6	Resources Needed	14
4.2	Economic Development Structure and Alignment	15
4.2.1	Opportunity	15
4.2.2	Challenges	15
4.2.3	Strategic Recommendations	16
4.2.4	Bright Ideas	18
4.2.5	Key Partners	18
4.2.6	Resources Needed	18
4.3	Workforce Development Structure and Alignment	19
4.3.1	Opportunity	19
4.3.2	Challenges	20
4.3.3	Strategic Recommendations	20
4.3.4	Bright Ideas	21
4.3.5	Key Partners	22
4.3.6	Resources Needed	22
4.4	Industry Innovation and Entrepreneurship	23
4.4.1	Opportunity	23
4.4.2	Challenges	23
4.4.3	Recommended Strategies	23
4.4.4	Bright Ideas	25
4.4.5	Key Partners	25
4.4.6	Resources Needed	26
4.5	Summary of Recommended Actions	27
5.0	Prioritizing Actions and Strategies	28
5.1	Respondent Characteristics	28
5.2	Validation of Recommended Actions	29
5.3	Actions Prioritization	32
6.0	Conclusion and Next Steps	36
7.0	About Future iQ Partners	37
8.0	About Task Force LIMA and the Allen County Defense Initiative	38



1.0 SUMMARY

The Action Plan represents the collective knowledge and vision of the regional stakeholders who have been engaged in the three-month Allen County Defense Initiative. This strategic community visioning and action planning process culminated in a two-day Strategic Planning Think Tank hosted in Lima, Ohio on April 15 and 16, 2015. The results of the conversations that occurred are presented in the strategic recommendations that follow.

The Allen County Defense Initiative is funded through a partnership between the United States Department of Defense Office of Economic Adjustment and the Allen County Ohio Board of Commissioners. The defense community readjustment grant was precipitated by concerns regarding the workforce alignment and future of the Joint Forces Manufacturing Center (JSMC) – a unique government-owned, contractor-operated production facility responsible for most of the heavy-armored combat vehicles in the U.S. military's inventory, including the Abrams line of combat tanks and the Stryker heavy-combat vehicle.

The recent history of the JSMC closely mirrors the Allen County regional economy more broadly. The region has experienced a number of significant challenges over the last forty years and has demonstrated a great level of resiliency. Each challenge has been met with a coherent community response and has ultimately led to greater future growth. The recommendations and initiatives proposed in this report build upon that framework in focusing specifically on the region's workforce and industry innovation challenges.

These have been identified as two of the most significant challenges affecting the regional economy, and community leaders are unified in their view that collaborative solutions are needed in order to meet them.

The action plan builds upon a number of other research pieces prepared as part of Future iQ Partners' work in the region. This includes:

- Allen County Asset Inventory and Readiness Analysis
- Allen County Network Mapping Platform and Analysis
- Allen County, Ohio Defense Initiative "Scenarios of the Future" Scenario Planning Report

In addition, Future iQ Partners has extensively surveyed key stakeholders in the region, including an action prioritization survey, the results of which are presented in this action plan. This engagement allowed those involved to solicit the insight of more than 200 regional leaders.

The recommendations presented in this Action Plan are not intended to be viewed as comprehensive, but rather depict strategic actions that need to be taken in the next year to build more collaborative relationships and solutions in the region. The dialogue initiated in this process has already sparked new ideas to build local capacity and to leverage key assets. Each of the recommendations presented may help guide the region towards its preferred future. The success of any action depends heavily on the participation of regional actors.

The recommendations have been organized around four key areas as follows:

- Local and Regional Collaboration and Private Sector Engagement
- Workforce Development Systems Alignment
- Economic Development Systems Alignment
- Industry Innovation and Entrepreneurship

These thematic areas were developed through the course of conversation with regional stakeholders and community leaders during visits to the region in February and March, 2015. They represent areas where a great deal of promise exists for future growth, yet historical barriers have also existed.

The Action Plan recommendations presented represent a total annual funding commitment of \$3.345 million, depending on actual costs. Think Tank participants developed the cost estimates presented in this report, which are based on functional needs and existing organizational capacity. Specific funding requests will be submitted for consideration to the U.S. Department of Defense Office of Economic Adjustment and other potential funders.

2.0 ACTION PLANNING PROCESS

The action plan represents the culmination of a three-month study and dialogue between Future IQ Partners and regional leaders. However, it is also the continuation of the efforts of a number of key actors and organizations that have developed over the course of the last decade to address many of the critical issues facing Allen County and the surrounding region. The most recent engagement was funded under a defense industry readjustment grant administered by the United States Department of Defense Office of Economic Adjustment and was precipitated by staffing pattern and production cycle changes at the Joint Systems Manufacturing Center. (For more information regarding the region and stakeholder involvement in this process, please see the Allen County Regional Asset Inventory and Readiness Analysis and Allen County, Ohio Defense Initiative "Scenarios of the Future" Scenario Planning Report, conducted on April 15 and 16, 2015.)

The Allen County Regional Asset Inventory and Readiness Analysis provide a detailed profile of the region's population, economy, and organizational infrastructure. It also serves as an update to the community analysis conducted during the 2005 Base Realignment and Closure (BRAC) process. The inventory also identifies a number of key issues affecting the broader region both now and into the next decade, including an aging and declining population, a significant growth in the hiring needs of local companies, and the lack of a strong culture of innovation. These findings set the tone for much of the dialogue that has followed.

A second essential component of the research that has informed the formation of this Action Plan is the conduct of a social network mapping analysis of the key community and industry leaders of Allen County. More information regarding this work and its findings can be found at <http://allencountynetwork.com>.

The analysis yielded two essential findings. First, it was concluded that the region benefits from the presence of a closely-connected and highly-engaged core of community stakeholders. However, this network is persistent throughout a number of core functional areas creating the perception that only a few key actors do much of the important work in areas of community, economic, and workforce development. Second, the network mapping analysis revealed a lack of the same level of collaboration or connectedness in the region's business community. The disconnection between the public and private sector that may exist has the potential to limit the ultimate effectiveness of the initiatives and actions outlined here.

The Action Plan and other components of this project have been developed through the invaluable contribution of extensive public engagement and stakeholder input. This has included the following:

- Allen County Network Mapping Analysis Survey (N = 156)
- Allen County Strategic Planning Think Tank Workshop (N = 31)
- Allen County Action Plan Perceptions and Priorities Survey (N = 64)

The network mapping analysis survey provided the context of the key actors and the current level of collaboration active in the region. The Strategic Planning Think Tank Workshop participants both explored where people saw opportunities for community and economic growth through the key drivers of industry innovation and workforce development, but also how the organizations currently active in the region could most effectively be leveraged. The Action Plan Perceptions and Priorities Survey presented the recommendations in this report to a broader cross-section of community and business leaders to both validate and prioritize which actions are most feasible, impactful, and worthy of funding consideration.

In total, more than 240 data points have been collected and participants have been able to provide input at each step of the development process. This represents a comprehensive community engagement process. This, in turn provides a sense of legitimacy to the recommendations presented in this Action Plan.

The concepts outlined in the following sections are based on the dominant themes and ideas presented by workshop participants. They may be expanded at times to provide greater context **without** altering their original intent. In total they represent a compelling view of those steps needed to realize a strongly preferred future.



3.0 PREFERRED FUTURE SCENARIO – THE BASIS FOR STRONG ACTION

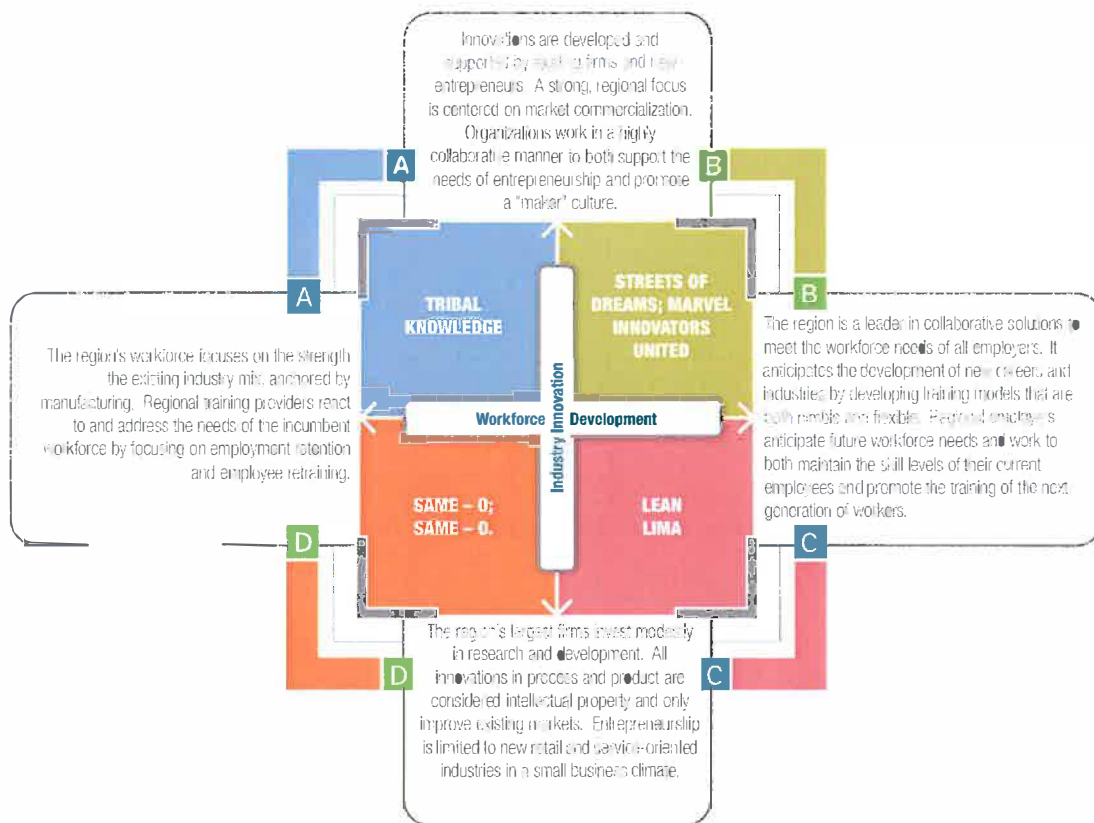
Participants that attended the Strategic Planning Think Tank workshop on April 15 and 16, 2015 started their work to develop the recommendations presented in this report here with an analysis of the key drivers affecting the region's possible future. These community, demographic, and economic drivers were used to develop and define four plausible scenario spaces, from which specific recommendations were crafted. The full description of this process and each of the scenario spaces is included in the Allen County, Ohio Defense Initiative 'Scenarios of the Future' report.

The four scenarios presented in the diagram below are divided by two key driver axes:

- Industry Innovation
- Workforce Development

These drivers and descriptions that define each end point on the respective axes were developed on the basis of previous research and conversations with key stakeholders conducted in preparation for the workshop.

Workshop participants were divided into groups assigned to the four scenario spaces and asked to assign specific attributes and names to each. The scenario names are presented below.



At the end of the first day, participants were asked to complete a short survey which included their identification of both an expected and preferred scenario outcome. The consensus points for both the expected and preferred scenarios both fall in the 'Streets of Dreams; Marvel Innovators United' scenario space, though the expected consensus point lies close to the intersection of both driver axes. The preferred consensus is located more firmly in the scenario space.

The preferred future scenario of 'Streets of Dreams; Marvel Innovators United' is built on the premise that the region develops an innovation culture that supports both the commercialization of products and processes created by existing firms as well as a new class of entrepreneurs. It also envisions a collaborative model where economic development and education partner to support innovation and to instill a 'maker' culture in all students. The scenario also envisions a collaborative solution to meet the workforce needs of the region's employer base. The education system is again essential in the development of flexible and adaptable training solutions in both traditional and emerging career fields. The system moves from a reactive model responding to worker dislocations to one that proactively anticipates employer needs.

The sum of these initiatives will promote the development and retention of both the region's business community but also its young professionals. This will, in turn increase the economic vitality of the region and the families that are formed will both stabilize the region's population and invigorate its educational community. The region will be more successful and resilient in anticipating and preparing for future challenges and opportunities.

In each of these regards, collaboration among business and community organizations plays a critical role in the realization of the preferred future. This theme is common in many of the projects that Future iQ Partners has completed over the last twelve years. Its experience in this space and key lessons learned are summarized in the recently-released "Economics of Collaboration" technical brief. Collaboration lies at the heart of many effective regional initiatives. It depends on the concepts of trust, civic investment, and mutual accountability that are already prevalent in Allen County and the surrounding region. Collaborative solutions are also found throughout the recommendations presented in this Action Plan.

Each of the recommendations presented in the next section were built on the framework of the scenario planning process summarized in this report. Workshop participants were asked to suggest possible actions that may move the region towards realizing the preferred future. All proposed actions could be implemented within a twelve-month timeframe and are informed by the key driver axes of 'Industry Innovation' and 'Workforce Development.'



4.0 ACTION PLAN – RECOMMENDATIONS

The recommendations that are presented in the following section have been drawn directly from the collective knowledge of the key stakeholders engaged in the planning process. They have been validated and prioritized through an extensive community engagement process. It is important to remember that the recommended actions presented in this report are designed to enhance the capacity and alignment of organizations currently engaged in the region. The recommendations are not intended to duplicate or replace any existing activities. In many instances, the recommended actions and funding requests are proposed to enhance the capacity of the region's community, economic, and workforce development infrastructure. Some of the organizations specifically referenced in the Allen County Asset Inventory and Readiness Analysis and the Action Plan recommendations include:

- Allen Economic Development Group
- Automotive Supplier Task Force
- LINK Lima
- Ohio Energy and Advanced Manufacturing Center
- Task Force LIMA
- West Central Ohio Manufacturing Consortium

Each of these organizations has significantly advanced awareness of the core driver issues facing the region and has played vital roles in ensuring the resiliency of the regional economy. While this is not an exhaustive list of all organizations active in the region, it is expected that they will play a pivotal role in the execution of the recommendations presented in this report here. Again, it is important to remember that the recommendations presented are not intended to be viewed as a comprehensive solution to all of the issues that the region may face in the future. Rather, they have been identified as actions that may play a catalytic role in the transformation of the region's economy and workforce. They are intended to represent a series of medium-term (twelve to eighteen month) proposals that most effectively leverage existing community assets to capitalize on new potential funding. The recommendations are also intended to spark conversation within the region as to additional ways to work more collaboratively and effectively. The recommended actions have been divided into four core areas, as defined by workshop participants.

- Local and Regional Collaboration and Private Sector Engagement
- Economic Development Structure and Alignment
- Workforce Development Structure and Alignment
- Industry Innovation and Entrepreneurship

Anticipated funding needs have also been allocated where identified by workshop participants or in follow-up conversations. A summary of all recommended actions and estimated costs follows at the end of the section.



4.1 LOCAL & REGIONAL COLLABORATION & PRIVATE SECTOR ENGAGEMENT

4.1.1 OPPORTUNITY

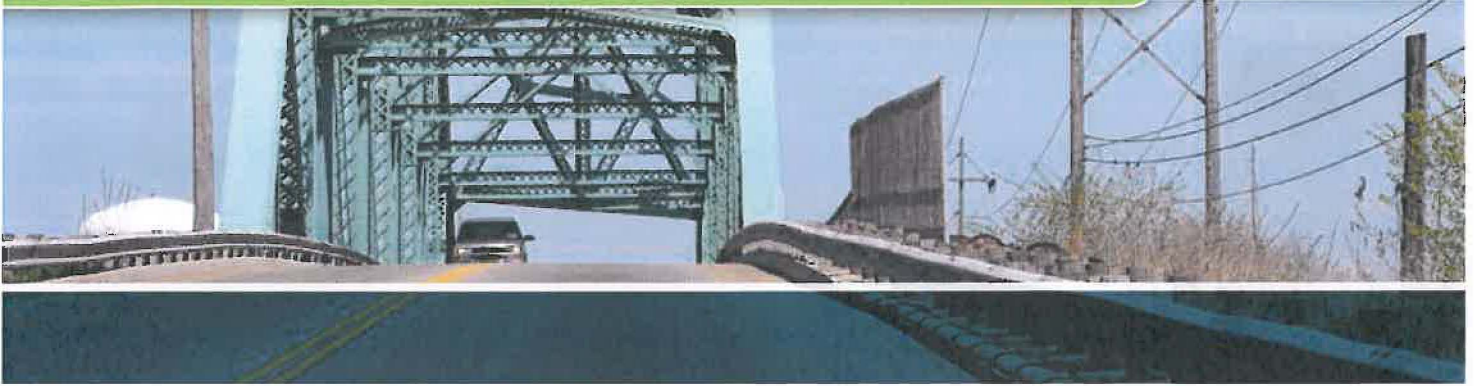
The Allen County region currently possesses a deep and expansive network of community organizations and leadership. Many of these organizations, including economic development and workforce development organizations, industry associations, and educational institutions routinely collaborate on a number of key initiatives related to the Joint Systems Manufacturing Center and other aspects of the regional economy and social issues. However, there is also a considerable opportunity to strengthen both the existing community partnerships but also to further engage private sector interests from the region's business community in these efforts. Prior research and analysis in the region has suggested:

- Both scenario driver axes identify collaboration as a critical success factor.
- Expanding the current group of strong community and business leaders could represent a considerable advantage for the region. This has already been demonstrated in the experience of Task Force LIMA and the Joint Systems Manufacturing Center. The region must assume a culture of proactive leadership where opportunities are both identified and acted upon quickly and efficiently.
- Many of the recommendations that follow require application of collaborative practices, future thinking and proactive long-term planning.

The scale of the opportunities and challenges facing the region suggest that the cultivation of the next generation of community leaders and the fostering of stronger relationships between business and community leaders is essential.

4.1.2 CHALLENGES

The need for strong regional collaborative partnerships and a capacity for change were identified throughout the planning process. The network mapping analysis identified strong lines of collaboration and connectedness in the community, but that a greater sense of connectivity could be fostered between business and community leaders. The asset inventory also suggested that a number of organizations, such as LINK Lima and the West Central Ohio Manufacturing Consortium have missions that could potentially overlap in the future, leading to confusion and duplication of services. The future success of regions such as Allen County will increasingly be decided by leaders who are proactive and collaborative. This includes the need to expand existing partnerships beyond the boundaries of Allen County and local neighboring communities.



4.1.3 STRATEGIC RECOMMENDATIONS



Action 1: Create an Allen County Plan for Collaborative Growth.

This plan will build on the capacity of existing organizations and identify the means for further collaboration. The focus of the plan will include:

- The creation of a community culture that promotes collaboration, cohesion, and convening.
- The organization of a forum for identifying goals and common ground for development. This may take the form of a leadership or executive forum or task force and will include representatives of regional economic development interests, local elected officials, and members of the business community. This structure will also utilize the network mapping platform to identify and strengthen greater connectedness within the region.
- A comprehensive analysis of the structure and progress of successful local organizations such as the Automotive Suppliers Task Force, the Lima/Allen County Chamber of Commerce Manufacturers Forum, the Ohio Energy and Advanced Manufacturing Center, Task Force LIMA, and the West Central Ohio Manufacturing Consortium. The analysis will focus on organizational structure, goals and objectives, and potential areas of collaboration.





Photo Credit General Dynamics Land Systems

2

Action 2: Fund an Initial Endowment of the Link LIMA Foundation.

This will serve as a community resource to promote career exploration through programming and scholarships in cooperation with the region's educational institutions. The Foundation will:

- Serve as the convening body for all public-private workforce development activities in Allen County.
- Collect and disseminate best practices both from within the region and nationally to education and workforce development professionals.
- Develop national best practices in career exploration, youth engagement, and proactive workforce development activities.

3

Action 3: Develop a community fund, to be administered by the Allen Economic Development Group or other appropriate entity to promote innovation and entrepreneurship activities in the region.

This fund will build on existing capacity by:

- Identifying recommended methodologies and national best practices to drive innovation, such as Innovation Engineering in the private sector.





Photo Credit Ayers Inc.



4.1.4 BRIGHT IDEAS

- Regional collaborations should look to include strong participation from private sector interests. This includes the development of leadership roles and collaborative funding mechanisms.
- Community leaders in Allen County should actively engage their counterparts in neighboring counties and nationally to build additional capacity and a strong regional identity. This also includes engagement through professional organizations such as the International Economic Development Council and U.S. Conference of Mayors.
- The region should also look to examples throughout Ohio and nationally regarding collaboration and partnership formation.



4.1.5 KEY PARTNERS

- State organizations such as **Ohio Means Jobs** and higher educational institutions including **Apollo Career Center** and **Rhodes State College**.
- **City** and **county** elected officials.
- Community and regional organizations such as **local economic development organizations**, **chambers of commerce**, and **industry associations**.
- Potential funding sources, such as local and national philanthropic organizations, state and federal organizations.



4.1.6 RESOURCES NEEDED

- The Allen County Plan for Collaborative Growth would take between six and nine months to complete including background research, focus groups, plan formation, and regional adoption. It is expected that a consultant will be engaged in this process at the cost of \$150,000.
- The anticipated initial endowment of the Link LIMA Foundation would be \$300,000 based on similar efforts in other communities. This would fund at least the first two years of foundation programming.
- The initial budget for the community innovation and entrepreneurship fund is \$200,000, though the fund may become self-supporting depending on structure and activities.



4.2 ECONOMIC DEVELOPMENT STRUCTURE AND ALIGNMENT

4.2.1 OPPORTUNITY

The Allen County region's economic development ecosystem is comprised of a number of professionals at the local, county, and regional level, and includes such organizations as the Allen Economic Development Group, the Lima/Allen County Chamber of Commerce, as well as other local and state interests. Each of these groups works effectively and several groups regularly collaborate on business retention and expansion projects. However, the network mapping analysis and conversations with regional leaders suggest that the region lacks a cohesive vision and presence as it relates to economic development. The formation of such a strategy may position the region on the national and international stage as an attractive market for new business development. Other successfully growing regions have been able to capitalize on the economies of scale associated with presenting a portfolio of regional assets to prospective firms. There are a number of additional possible benefits to collaboration in this area, including:

- Identifying common objectives and assets will lead to a more effective distribution of resources and specializing duties among the organizations with the most local knowledge in them.
- A shared regional economic development strategy instills a sense of accountability among organizations as their participation will be vital to the success of the plan.
- A coordinated economic development strategy can be better communicated to decision makers, funders, and the general public.

This builds a compelling reason for more effective coordination between organizations in this sphere.

4.2.2 CHALLENGES

Many of the workshop respondents pointed to the previous actions of economic development organizations in promoting resiliency within the region. An expansion of their roles will be necessary to transition the region to a growth economy focused on innovation. It is possible that the region has grown more comfortable with its existing economic structure that this new orientation may be difficult to embrace. Economic development activities at the local level have the potential to become competitive as elected officials are more likely to measure 'wins' by firms and jobs that locate within their boundaries, rather than benefits accrued throughout the region.



4.2.3 STRATEGIC RECOMMENDATIONS

1

Action 1: Conduct a comprehensive gap analysis of the region.

This will expand upon the current asset inventory work conducted to measure such things as:

- The number of so-called 'job ready' development sites in the county
- Current and future workforce capacity
- The capacity of the existing business community to innovate and expand
- Entrepreneurship activities including business startups and access to capital

This will require the engagement of all local economic development organizations, as well as the formation of a number of local focus groups. It is suggested that a lead agency be designated for this and all other proposed actions in this section.

2

Action 2: Perform an analysis of local process and product innovation opportunities and needs.

This analysis will:

- Move the local culture from one focused on innovation to a commitment to product entrepreneurship.
- A consulting group will be engaged to analyze existing business process innovation practices. These may be compared against national and international best practices.
- The analysis will measure the extent to which local businesses support in-house product development or entrepreneurial activities.





3

Action 3: Coordinate the sharing of information with small-to-mid-size businesses regarding opportunities for growth.

These will be identified in the previous activities and will expand their reach by:

- Local economic groups will identify and contact potential businesses to share analysis results and best practices.
- Economic development groups will pursue the development of a supportive infrastructure of technical assistance, financing, and other incentives.
- A sustainable model of regular communications, analysis, and contact will be created.
- A consultant may be hired to assist in this effort.
- This action will also fund the hiring of a Manager of Industry Development for the region, to be possibly affiliated with the Allen Economic Development Group.

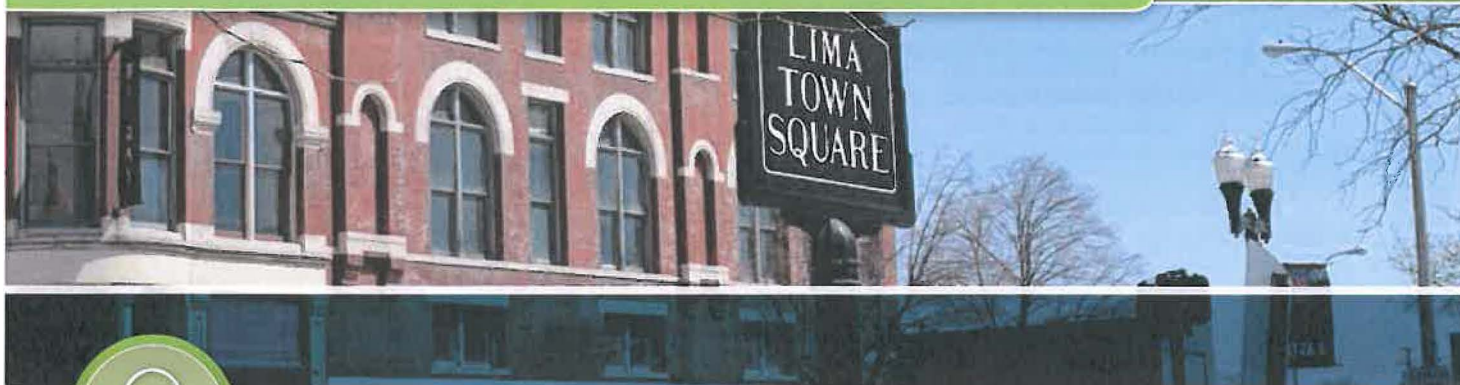
4

Action 4: Create a coordinated regional economic development marketing and communications plan for internal and external media markets.

This will promote and expand the regional identity through:

- The coordination of all major economic development and education websites with consistent data and messaging.
- Improving constant outreach coordination via a targeted communications strategy.
- This action would also promote the hiring of an experienced grant writer to sustain both outreach and analysis activities.





4.2.4 BRIGHT IDEAS

- The lead agency may not necessarily define the regional identity, but will be responsible for the promotion of this vision to external markets.
- The regional economic development plan should contain clear milestones for progress. It should also be revisited annually for updates and fully revised on a five-year basis.
- The regional economic development plan should also be consistent with other comprehensive planning efforts at the local, state, and national level.



4.2.5 KEY PARTNERS

- **Local, regional, and state economic development professionals** will be responsible for the development of the coordinated economic development plan and communications strategy.
- **State, county, and local elected officials** will be responsible for providing legal and financial support to many of the proposed activities.
- **Industry associations** will be helpful in identifying potential targeted firms and promoting the services provided by local agencies.



4.2.6 RESOURCES NEEDED

- The completion of both the gap and process and product opportunities analysis is expected to take between six and nine months at a cost of \$200,000.
- It is anticipated that the region's economic development organizations may need as much as \$500,000 to build out the infrastructure and incentives needed to support a comprehensive strategy.
- The proposed Manager of Industry Development would be funded at an annual cost of \$50,000 and the proposed grant writer would be funded at \$75,000 annually.
- The development of a coordinated marketing and communications strategy and its execution will cost an estimated \$200,000.



4.3 WORKFORCE DEVELOPMENT STRUCTURE AND ALIGNMENT

4.3.1 OPPORTUNITY

The Allen County region has identified a number of considerable workforce development challenges that will be confronted by its employer base in the next five to ten years. The world-class workforce that has met the needs of the region's businesses will gradually decrease over the next thirty years as the Baby Boom generation enters into retirement. This creates a tremendous opportunity to both reassess workforce needs, the alignment of the region's training providers, and the role that attracting and retaining young workers will play in sustaining the regional economy. Addressing this challenge requires a regional strategy given the nature of the local labor market. The unique opportunity presented by this challenge will allow the region to consider a comprehensive strategy to address the needs of all employers rather than targeted strategies that are employer-specific. The timing of this conversation is also crucial as:

- Many other regions nationally are having similar conversations. The region that develops the best practice to address these workforce challenges will have a considerable advantage.
- Support for career exploration and workforce training activities throughout all aspects of education has grown over the course of the last decade as parents and students consider the return on investment of postsecondary education.
- The recently-passed federal Workforce Innovation and Opportunity Act redefines the way that the workforce development ecosystem functions in a number of ways and stresses both the creation of regional solutions and collaboration between economic development and workforce development interests.

The confluence of each of these factors over the next twelve-to-eighteen months makes conversations regarding the creation of innovative and collaborative solutions especially timely. These recommendations are also appropriate for a wide variety of potential funding avenues.



Photo Credit General Dynamics Land Systems

4.3.2 CHALLENGES

The current and projected future transition of the workforce due to retirements, the application of technology, and global competition offers an opportunity for the region to distinguish itself. It also represents a considerable challenge given the region's underlying demographics. There is also significant overlap of service and mission within this area, and organizations and service providers may not be as effectively aligned as is the case among the region's economic development community. As such, a clear definition of mission and roles will be essential to ensure the success of the recommendations presented in this report.

4.3.3 STRATEGIC RECOMMENDATIONS

1

Action 1: Sponsor a Joint Systems Manufacturing Center/General Dynamics Land Systems booth at 'Makerfest 2015.'

This event, to be hosted in Fall 2015 will:

- Highlight the services, products, and capabilities of local firms.
- Expose local students to career possibilities and needed skills.
- Connect prospective job seekers with career opportunities at local firms.
- A Joint Systems Manufacturing Center presence at this event will further reinforce the importance of the facility in the region.

2

Action 2: Initiate a series of strategic investments in the region's K-12 system.

This will promote the exploration of manufacturing careers by:

- Sponsoring advanced manufacturing clubs at all local high schools and career technology schools.
- Create and initiate a manufacturing career awareness program at the middle school level.
- Fund the purchase or donation of new manufacturing equipment to support technical education at the high school and career technology school level.
- Sponsor a series of annual scholarships to be awarded to graduating high school seniors who intend to pursue advanced manufacturing careers.

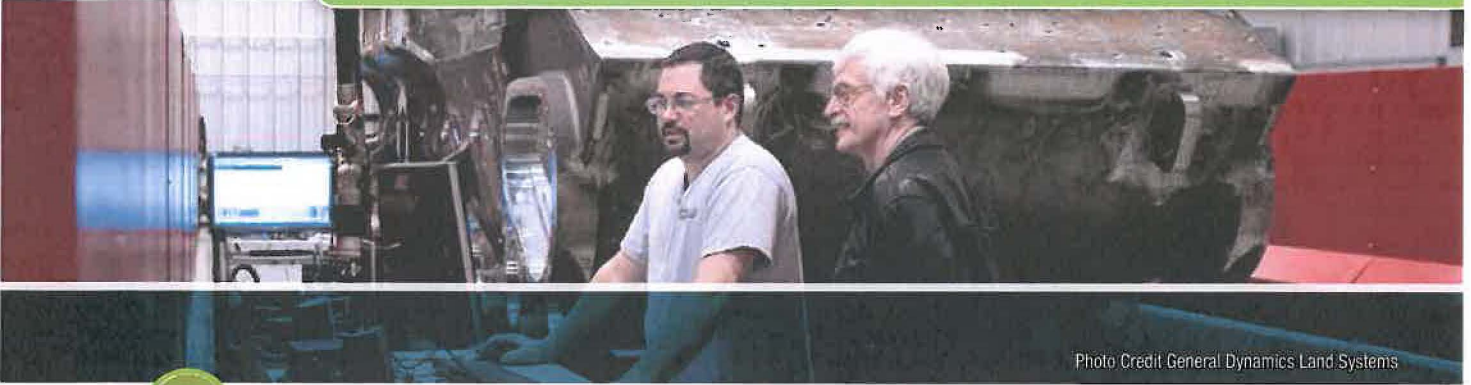


Photo Credit General Dynamics Land Systems

3

Action 3: Promote the development of a pilot Adult Apprenticeship Program, possibly in conjunction with Ohio Means Jobs or the Ohio Commission on Jobs and Families.

This will build upon the career exploration activities described earlier to:

- Encourage unemployed and underemployed job seekers to consider careers in advanced manufacturing.
- Provide incentives to employers who support the up-skilling of job candidates in in-demand fields.

4

Action 4: Support the planning and hosting of 'Makerfest 2016.'

By making this activity an annual event, it will build a culture of awareness and support for careers in advanced manufacturing.



4.3.4 BRIGHT IDEAS

- The region currently possesses considerable resources to support the local manufacturing sector. Many of the recommendations made in this report could eventually be replicated and transition to support for other key industry sectors, such as health care.
- The region's two principal career training institutions – Apollo Career Center and Rhodes State College each have strengths in a number of key areas and different processes for developing and delivering customized training solutions. These and other institutions should be involved in the formation of any collaborative strategy that leverages their respective strengths.
- Comprehensive regional solutions should also look to leverage the skills and experience of the retiring workforce either through career transitions or workforce mentorship programs.



4.3.5 KEY PARTNERS

- Local education institutions, including the **K-12 system**, **career technology centers**, and **colleges and universities** will develop comprehensive training solutions.
- **Link LIMA** and the **West Central Ohio Manufacturing Consortium** will conduct employer outreach and certify training programs.
- **Labor Unions**, such as the **United Auto Workers** and **International Brotherhood of Electrical Workers** among others can inform on current and projected needs and required skillsets.



4.3.6 RESOURCES NEEDED

- The Joint Systems Manufacturing Center/General Dynamics Land Systems Booth at Makerfest 2015 would cost \$5,000 to sponsor and staff.
- It is estimated that establishing and supporting advanced manufacturing clubs at each of the local **high schools** and **career technology schools** would cost \$40,000 annually to support.
- Support for manufacturing career awareness programs at the middle school level is estimated at \$25,000 annually.
- The workgroup has also requested an initial investment of \$100,000 to purchase manufacturing equipment to support technical education. This investment can also be leveraged against additional donations or contributions by local companies.
- The initial class of scholarships is estimated at \$25,000, though this could increase with industry and philanthropic donations.
- The development of the structure for the proposed adult apprenticeship program is estimated at \$25,000, though this will also be leveraged with additional state and employer resources.
- The planning and development of Makerfest 2016 is estimated at \$60,000, though this will also be offset through corporate, community, and philanthropic sponsorship.



4.4 INDUSTRY INNOVATION AND ENTREPRENEURSHIP

4.4.1 OPPORTUNITY

Photo Credit General Dynamics Land Systems

The Allen County region has a long history of being an industry leader in innovation and development in advanced manufacturing and energy production among other key sectors. The region has enjoyed the reputation of being a world-class manufacturing center. A number of recent innovative processes and products have been developed at the Joint Systems Manufacturing Center and other local companies, though few of these innovations have the potential to be widely commercialized. The region also has the benefit of an established organization in the Ohio Energy and Advanced Manufacturing Center that may foster further commercialization and entrepreneurship. A number of other communities are also pursuing similar entrepreneurial strategies and successful models can present a number of lessons learned.

4.4.2 CHALLENGES

The region's long history of innovation and industry leadership has depended on the commercialization of the products and processes developed both by existing firms and new entrepreneurs. More recently, however many of the innovative processes that are being developed are considered proprietary to the respective companies and are being applied to existing product lines. While this process benefits the firms that develop the innovation, it is less likely that these developments will be spun off into new commercial products. This climate may potentially hinder the creation of the innovation culture desired in the community since entrepreneurs may not be able to access prospective local markets.

4.4.3 RECOMMENDED STRATEGIES



Action 1: Establish a Regional Center for Innovation Excellence.

This center, to be housed at the Ohio Energy and Advanced Manufacturing Center (OEAMC) would:

- Serve as a regional focal point for research and development activities.
- Bring together entrepreneurs and technical resources such as academic faculty and industry mentors.
- Coordinate outreach throughout the region to inform companies about partnership ideas.



2

Action 2: Create a regional innovation and entrepreneurship website.

This would leverage information from a variety of sources including economic development and education institutions to provide a comprehensive resource for innovation companies and entrepreneurs, including:

- Consistent messaging about the innovation culture in the region.
- Access to technical information, business planning resources, and prospective financing.
- Serve as an external portal to promote local activities to national and international markets.

3

Action 3: Promote youth technology exploration and innovation.

This will build upon many of the recommendations included in the Workforce Development Structure and Alignment workgroup to help build a 'maker culture' in the region's youth through a number of activities, including:

- Support for Link LIMA's social media platform
- The hiring of a Youth project coordinator to share best practices and connect schools to resources.
- Promotion of activities, such as Lego Leagues and Robotic Leagues at all age levels.

4

Action 4: Phase II High Strain Rate Metal Forming Commercialization Center.

This funding would build upon existing investments by the State of Ohio and U.S. Department of Commerce to create a world-class facility focused on developing innovations in this critical area by:

- Underwriting the purchase of new machinery and equipment. This will be made available to local companies and entrepreneurs.
- The hiring of support personnel to provide both technical support and training on the use of all center equipment.
- The center would also host a series of entrepreneurship and innovation training programs in partnership with regional colleges and universities and technical experts.



5

Action 5: Engagement of specialized marketing consultant and initiation of a regional media advertising campaign.

This would be focused on branding the region as a world-class innovation destination, including:

- The rebranding of the region as an innovation leader.
- Strategies to highlight the productive capabilities of existing firms to external markets.
- A marketing strategy to connect new entrepreneurs to markets.



4.4.4 BRIGHT IDEAS

- The Ohio Energy and Advanced Manufacturing Center must be positioned at the nexus of innovation activity in the region.
- National and regional partners, such as Oak Ridge National Laboratories and regional colleges and universities can provide a great deal of technical support, but are also possible sources of new entrepreneurs.
- Other communities that are pursuing similar innovation practices, such as Youngstown and Columbus should be leveraged to create a statewide manufacturing innovation network.



4.4.5 KEY PARTNERS

- The Ohio Energy and Advanced Manufacturing Center is important to the support and promotion of an innovation culture.
- The region's educational institutions can provide technical support and training opportunities.
- Industry associations can promote innovation and entrepreneurship by identifying companies, markets, and opportunities.
- Federal, state, and local economic development organizations will provide financial and technical support for innovation and entrepreneurship activities.



4.4.6 RESOURCES NEEDED

- Formation of the Center for Innovation Excellence, including staff support is expected to cost \$50,000 per year.
- The development of a coordinated website and social media presence is estimated at \$10,000.
- The creation of a Youth Project Coordinator position is estimated at \$50,000 annually.
- Support for Link LIMA's social media activities is estimated at \$20,000 for staff support and may also be funded by other community partners.
- The total budget for the development of Phase II of the High Strain Rate Metal Forming Commercialization Center is estimated at \$1,000,000. This will be leveraged against other federal, state, and private sector funding commitments.
- The formation of a comprehensive media and marketing strategy is expected to cost \$160,000, to be divided between strategy development (\$60,000) and execution (\$100,000).



4.5 SUMMARY OF RECOMMENDED ACTIONS

The table below summarizes all of the recommended actions presented in the preceding sections. It also tabulates the estimated costs associated with each as presented by the workshop participants. The recommendations can be generally divided into three areas – strategy and planning, additional staff capacity, and foundation building. These themes suggest that the think tank participants considered those actions which may have an immediate impact as well as those which can be built upon in future years.

Recommended Action	Estimated Cost
Local and Regional Collaboration and Private Sector Engagement	
Allen County Plan for Collaborative Growth	\$150,000
Link LIMA Foundation Endowment	\$300,000
Community Fund for Innovation and Entrepreneurship	\$200,000
Total	\$650,000
Economic Development Structure and Alignment	
Gap and Process Analyses	\$200,000
Infrastructure Support	\$500,000
Industry Partnerships and Marketing Staff	\$125,000
Marketing and Communications Strategy	\$200,000
Total	\$1,025,000
Workforce Development Structure and Alignment	
JSMC/GDLS Booth at Makerfest 2015	\$5,000
Establish Advanced Manufacturing Clubs at High School Level	\$40,000
Middle School Manufacturing Career Awareness Programs	\$25,000
Manufacturing Equipment Fund	\$100,000
Manufacturing Careers Scholarships	\$25,000
Manufacturing Apprenticeship Programs	\$25,000
Makerfest 2016 Planning	\$60,000
Total	\$280,000
Industry Innovation and Entrepreneurship	
Center for Innovation Excellence	\$150,000
Website and Social Media Development	\$10,000
Youth Project Coordinator Support	\$50,000
Link LIMA Social Media Support	\$20,000
Phase II of the High Strain Rate Metal Forming Commercialization Center	\$1,000,000
Media and Marketing Strategy	\$160,000
Total	\$1,390,000
TOTAL OF ALL RECOMMENDED ACTIONS	\$3,345,000

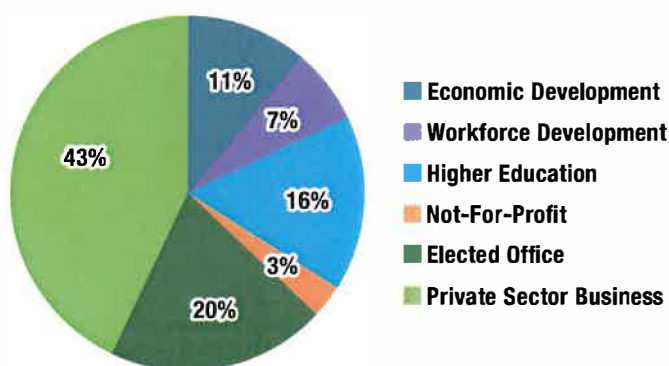
5.0 PRIORITIZING ACTIONS AND STRATEGIES

The final step in establishing a clear action plan for the region was to seek the input of business and community leaders in both validating and prioritizing the proposed action steps. To this end, a survey was administered online to a sample of 274 possible respondents in Allen County and the surrounding region during the two weeks between May 4 and May 15, 2015. The findings of that survey are summarized below.

5.1 RESPONDENT CHARACTERISTICS

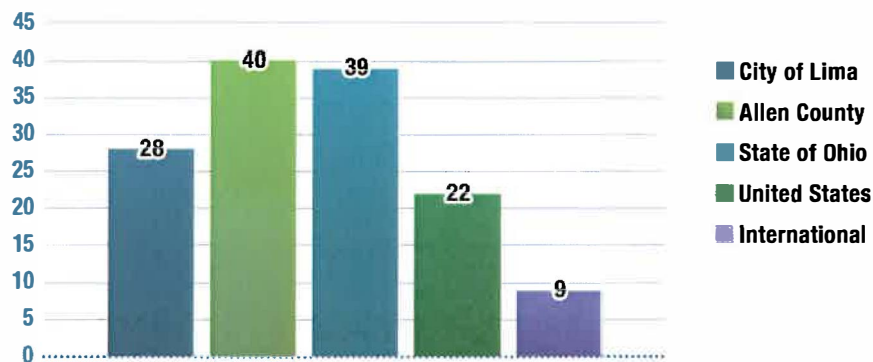
The survey sample was constructed from those individuals who were identified during the social network mapping exercise completed through this initiative. An additional number of individuals were included as being important voices in the community and were also invited to share their perspectives. Of the 274 individuals surveyed, 64 responses were received, yielding a response rate of 23.4 percent. The responses are considered to be statistically significant at a 90 percentile confidence interval within the sample. As such, one can conclude that the responses of those who completed the survey are representative of the perspectives of all possible respondents. Further, one can also conclude that the perspectives and priorities expressed are common throughout the region.

Respondents were asked two characterizing questions as a means of grounding them within a regional context. They were first asked to identify the type of organization that they are affiliated with. The distribution of responses is summarized in the chart below.



Survey respondents were fairly evenly divided between private and public sector interests. This distribution is consistent with the distribution of organizations in the social network mapping platform. Respondents are also well distributed among the various public sector organization types included. One respondent group that may be somewhat overrepresented is that of elected officials, as they submitted twenty percent of all responses.

Respondents were also asked to associate their organization with the markets in which it operates. This question was designed to identify both degree of 'locality' expressed in the survey, as well as the extent to which respondents viewed themselves as being active in a broader regional context. The distribution of responses is included in the following table. Please note that respondents were asked to identify each of the markets in which they are active, which frequently yielded multiple responses.



The distribution suggests that while the bulk of respondents to the survey are located within Allen County, they consider their respective markets as having a broader scope. The relatively low number of individuals who engage in international markets limits this perspective somewhat.

5.2 VALIDATION OF RECOMMENDED ACTIONS

The principal focus of the survey instrument was to first ask respondents to validate the various recommended actions as being both plausible and important and then to prioritize those actions that were viewed as the most feasible or impactful. Actions were divided by functional area and prioritized within each area. In order to validate each of the proposed actions, respondents were asked to rate each on a five-point scale, with 1 representing a low priority or viable action and 5 representing a highly viable action.

In order to determine the validation scores presented in the following tables, all responses were transformed using a value-weighting process. The scores therefore represent a weighted average of all responses for each action. They are presented to allow for comparability between recommended actions and in the interest of relative brevity. Also note that the action descriptions are truncated here for presentation. The full descriptions that are presented in the Action Plan were reproduced in the survey instrument.

Local and Regional Collaboration and Private Sector Engagement

Proposed Action	Weighted Validation Score
Action 1: Create an Allen County Plan for Collaborative Growth.	4.19
Action 2: Fund an Initial Endowment of the Link LIMA Foundation.	3.87
Action 3: Develop a community fund, to be administered by the Allen Economic Development Group or other appropriate entity to promote innovation and entrepreneurship activities in the region.	3.52

Each of the proposed actions offered by the Local and Regional Collaboration and Private Sector Engagement workgroup was viewed to be valid by the survey respondents, if one assumes that a weighted score higher than three signifies validation. The distribution of responses to each action corroborates these findings as 45 respondents considered Action 1 to be either impactful or highly impactful where only 26 respondents viewed Action 3 in the same light.

Economic Development Structure and Alignment

Proposed Action	Weighted Validation Score
Action 1: Conduct a comprehensive gap analysis of the region.	3.86
Action 2: Perform an analysis of local process and product innovation opportunities and needs.	3.34
Action 3: Coordinate the sharing of information with small-to-mid-size businesses regarding opportunities for growth.	3.96
Action 4: Create a coordinated regional economic development marketing and communications plan for internal and external media markets.	3.86

Again, each of the proposed actions offered by the Economic Development Structure and Alignment workgroup was viewed to be valid by the survey respondents. The scores here differ from those of the other workgroup as there is no clear differentiation, suggesting that three of the four recommendations were viewed more or less equally.

Workforce Development Structure and Alignment

Proposed Action	Weighted Validation Score
Action 1: Sponsor a Joint Systems Manufacturing Center/General Dynamics Land Systems booth at 'Makerfest 2015.'	3.63
Action 2: Initiate a series of strategic investments in the region's K-12 system.	4.20
Action 3: Promote the development of a pilot Adult Apprenticeship Program, possibly in conjunction with Ohio Means Jobs or the Ohio Commission on Jobs and Families.	3.44
Action 4: Support the planning and hosting of 'Makerfest 2016.'	3.71

Again, each of the proposed actions offered by the Workforce Development Structure and Alignment workgroup was viewed to be valid by the survey respondents. One of the more significant findings here is that Action 2, or those actions aligned with manufacturing career exploration and promotion in the region's K-12 system yielded the highest validation score of any of the recommended actions presented, suggesting that it received the strongest support from respondents.

Industry Innovation and Entrepreneurship

Proposed Action	Weighted Validation Score
Action 1: Establish a Regional Center for Innovation Excellence.	3.80
Action 2: Create a regional innovation and entrepreneurship website.	3.40
Action 3: Promote youth technology exploration and innovation.	4.02
Action 4: Phase II High Strain Rate Metal Forming Commercialization Center.	3.91
Action 5: Engagement of specialized marketing consultant and initiation of a regional media advertising campaign.	3.56

The final action area of Industry Innovation and Entrepreneurship again yielded a series of validated recommendations. It is important to note that both of the largely promotional action proposals expressed in Actions 2 and 5 received lower levels of support than most other recommended actions. It is possible that respondents assumed that these actions would be incorporated in other activities making them somewhat duplicative.

As a whole, we see that each of the recommendations developed by the workshop participants was deemed plausible and validated by these survey responses. Each received a varying level of support with some actions viewed to be more viable than others. These responses also illuminate another underlying theme in the body of recommendations, namely that there is a high level of support for actions which promote youth exploration and development, in order to build the future workforce. This is consistent with the selection of one of the driver axes of workforce development.

5.3 ACTIONS PRIORITIZATION

Each of the recommended actions developed by the participants in that Strategic Planning Think Tank Workshop have been validated by the participants themselves as well as a broader array of business and community leaders through a post-workshop survey. This suggests that each of the recommended actions is perceived to yield some future value in advancing the community and economic objectives of the region. However, each of these proposed actions requires the coordination of significant resources. As such, it is important that they are prioritized in order to capitalize on the resources already available or those that may become available to the region.

Survey respondents were asked to rank by priority each of the proposed actions by their perceived value and effectiveness. Respondents were further asked not to consider the relative cost of each action as ranking on this basis may introduce undue bias into the process. The sum of all individual rankings was then subjected to the same weighted-value analysis presented in the actions validation discussion. These are presented in the tables below, with a ranking of 1 indicating the most favored or highest priority action and lower ranks indicating lesser priorities.

Local and Regional Collaboration and Private Sector Engagement		
Rank	Proposed Action	Ranking Score
1	Action 1: Create an Allen County Plan for Collaborative Growth.	1.54
2	Action 2: Fund an Initial Endowment of the Link LIMA Foundation.	1.97
3	Action 3: Develop a community fund, to be administered by the Allen Economic Development Group or other appropriate entity to promote innovation and entrepreneurship activities in the region.	2.50

The ranking of priorities in the first recommended action section closely mirrors the validation scores discussed earlier. Note that the ranking scores presented here suggest that all three actions were assessed relatively similarly but that Actions 1 and 2 take greater precedence. This trend does not necessarily follow through the remaining proposed actions.

Economic Development Structure and Alignment

Rank	Proposed Action	Ranking Score
1	Action 1: Conduct a comprehensive gap analysis of the region.	2.14
2	Action 3: Coordinate the sharing of information with small-to-mid-size businesses regarding opportunities for growth.	2.34
3	Action 2: Perform an analysis of local process and product innovation opportunities and needs.	2.67
4	Action 4: Create a coordinated regional economic development marketing and communications plan for internal and external media markets.	2.84

The ranking of the proposed actions in the Economic Development Structure and Alignment section are both lower than those found in the Local and Regional Collaboration and Private Sector Engagement section and diverge from the validation measures presented above. A ranking of the validation scores would yield an order of Action 3, 1, 4, and 2. The reordering of priorities here suggests that respondents viewed certain actions to be more likely to implement and to assign a sense of timing to those actions.

Workforce Development Structure and Alignment

Rank	Proposed Action	Ranking Score
1	Action 2: Initiate a series of strategic investments in the region's K-12 system.	1.57
2	Action 3: Promote the development of a pilot Adult Apprenticeship Program, possibly in conjunction with Ohio Means Jobs or the Ohio Commission on Jobs and Families.	2.26
3	Action 1: Sponsor a Joint Systems Manufacturing Center/General Dynamics Land Systems booth at 'Makerfest 2015.'	2.83
4	Action 4: Support the planning and hosting of 'Makerfest 2016.'	3.33

The ranking of proposed actions in the area of Workforce Development Structure and Alignment again diverges from the prioritization scores assigned. This further suggests that respondents viewed each of these questions separately, per the intent of the survey instrument. A ranking of prioritization scores would yield an order of Action 2, 4, 1, and 3. Support for Action 2 is quite clear, though the case of Action 3 is more interesting. The disparity between the ranked support for the creation of Adult Apprenticeship Program and its feasibility is significant. As such, this suggests some uncertainty as to who might best implement such a program.

Industry Innovation and Entrepreneurship		
Rank	Proposed Action	Ranking Score
1	Action 1: Establish a Regional Center for Innovation Excellence.	2.25
2	Action 3: Promote youth technology exploration and innovation.	2.49
3	Action 4: Phase II High Strain Rate Metal Forming Commercialization Center.	3.09
4	Action 2: Create a regional innovation and entrepreneurship website.	3.32
5	Action 5: Engagement of specialized marketing consultant and initiation of a regional media advertising campaign.	3.83

The proposed recommendations in the final issue area – Industry Innovation and Entrepreneurship further cements the conclusion that survey respondents balanced their judgement of impact and timing when ordering the proposed actions. The rankings here again diverge from a ranked order of the Validation Scores (Actions 3, 4, 1, 5, and 2). This again suggests that respondents here viewed the recommended actions as following a certain order with the establishment of a Regional Center for Innovation Excellence serving as the springboard for other initiatives.

Once the proposed actions recommended by each Strategic Planning Think Tank Workshop workgroup were presented for validation and prioritization, a clearer picture of regional needs and priorities emerges. While respondents were asked to rank each list of proposed actions in their respective issue areas, the ranking scores generated allows for the tabulation of a full rank order listing of all recommendations. The table below presents the top five proposed actions ranked across all issue areas along with their estimated costs.

TOP FIVE PROPOSED ACTIONS

Top Five Proposed Actions – by Ranking

Rank	Proposed Action	Estimated Cost
1	Create an Allen County Plan for Collaborative Growth.	\$150,000
2	Initiate a series of strategic investments in the region's K-12 system.	\$190,000
3	Fund an Initial Endowment of the Link LIMA Foundation.	\$300,000
4	Conduct a comprehensive gap analysis of the region.	\$200,000
5	Establish a Regional Center for Innovation Excellence.	\$150,000
TOTAL ESTIMATED COST		\$990,000

It should again be noted here that the activities of a number of proposed actions can be coordinated as they serve common needs if the scope is expanded. As such, the highest priorities can be distilled into three major themes.

- The completion of a series of studies that identifies regional capacity, gaps and opportunities and establishes a framework for greater collaboration among business and community leaders. The region also has a number of possible models in Task Force LIMA and Link LIMA to build upon.
- The execution of a series of strategic investments to encourage career and technology exploration at the K-12 level. Emphasis should be directed at developing greater interest in advanced manufacturing careers and entrepreneurship.
- The establishment of a stronger innovation culture throughout the region beginning with the formation of a Regional Center for Innovation Excellence. This will build upon earlier efforts in the region and is a natural bridge to other innovation activities as it serves as a connecting and coordinating hub.

These prioritized actions may all potentially be executed within a short (12-18 months) timeframe and can be highly impactful given both the scale and the degree of interconnectedness in the region. Implementation of these strategies may also establish the Allen County region as a regional and national example of successful collaboration and innovation.



6.0 CONCLUSION AND NEXT STEPS

Allen County, Ohio is renowned for its strong manufacturing heritage, an established history of industry innovation, a world-class workforce, and a strong sense of community and economic resiliency. Each of these assets has been tested over the last twenty years, as changes in the global economy and other external forces have both impacted the region's standing. Business and community leaders recognize the nature and impact of these challenges and further recognize that the identification of collaborative solutions offers the best chance to reestablish the region as one of the nation's strongest manufacturing and innovation centers.

The recommendations presented in this Action Plan were developed through an intensive exploration process that highlights the regional strengths and the assets. The leaders that have contributed their time, knowledge, and insight in considering these opportunities have recognized the potential that exists within the region as well as the targeted actions that can be taken to redirect the region's economic and innovative energies.

The challenges faced by the Allen County region and the Joint Systems Manufacturing Center are common to a number of manufacturing and defense industry regions throughout the United States. What will differentiate the region from their peers is how it responds to these challenges. The recommendations presented in this report describe an approach built upon capacity building and collaboration to spur the development of the future workforce and foster a culture of innovation. This model has the potential to both meet the needs of the present and to shape a more prosperous future.

This Action Plan marks the end of the first phase of the Allen County Defense Initiative, but it is also a beginning. The recommendations included in this report will serve as the basis for a series of additional funding requests through both the U.S. Department of Defense Office of Economic Adjustment and other potential funding entities. It will also serve as a roadmap for future dialogue and planning efforts in the region. In this respect, the efforts of those individuals who contributed in the plan's formation have created an excellent starting point.

7.0 ABOUT FUTURE IQ PARTNERS

Future iQ Partners is a market leader in the development and application of scenario planning; network analysis, industry and regional analysis, and community engagement and capacity building. We specialize in applying innovative tools and approaches to assist organizations, regions and industries shape their economic and community futures. We take a practical, hands-on approach to working with groups and communities. With over a decade of business experience, the company has grown to have a global clientele spanning three continents.

To learn more about Future iQ Partners, and our recent projects visit www.future-iq.com or by email at info@future-iq.com.

REPORT AND STRATEGIC PLANNING THINK TANK WORKSHOP PREPARED BY:



DR. JEFFREY A. SACHSE – SENIOR ECONOMIST

Jeffery specializes in detailed economic analysis and data interpretation. He has worked on industry clusters, regional partnerships, workforce development and economic trends and indicators. He has led research and development projects in transportation, and conducted program monitoring. He has detailed local knowledge of the USA economic landscape, having worked professionally in this area for over a decade.



DAVID BEURLE, CEO FUTURE IQ PARTNERS

As CEO of Future iQ Partners, David specializes in creating future planning approaches for the use in regional, community and organizational settings. David has worked in the field of organizational and regional economic and community planning for over 20 years. His work in community and economic development has earned his work international, national and state awards.



Create Future Intelligence™
www.future-iq.com



8.0 ABOUT TASK FORCE LIMA AND THE ALLEN COUNTY DEFENSE INITIATIVE

This study is one of many to be produced under an award issued by the U.S. Department of Defense Office of Economic Adjustment to assist Allen County and Task Force LIMA in developing strategies to ensure the economic health and vitality of the Joint Systems Manufacturing Center and the broader region.

For more information regarding Task Force LIMA or any aspect of this project, please contact:

Denis Glenn, CM

Project Manager,
DoD Community Assistance Program
Board of Commissioners,
Allen County, Ohio
630 E State Road
Lima, Ohio 45801
Cell: 567-204-3631
Fax: 419-224-0183
dglenn@allencountyohio.com

**FOR MORE DETAILS, AND TO ACCESS COPIES
OF ADDITIONAL REPORTS, PLEASE VISIT:**

<http://future-iq.com/projects/task-force-lima-defense-initiative>
or www.allencountynetwork.com



**Asset
Inventory**

March 2015



**Scenarios of
the Future**

April 2015



**Strategic
Action Plan**

May 2015

