



Washington County, Ohio

Comprehensive Plan

July, 2004

Prepared For:

Washington County Commissioners

Prepared By:

**Edwards
AND Kelcey**



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Executive Summary

The Washington County Comprehensive Plan was initiated to provide a foundation for the County's future decisions. Careful consideration was placed on Washington County's unique rural and scenic appeal, and a series of goals were established to protect these important qualities. This Plan is designed to maintain that character and act as a guide for future growth, development, and enhancement.

Learning about what the community desired and their vision for the future was the essence of establishing Goals and Objectives. The Washington County Comprehensive Plan is based upon an extensive public participation program that resulted in the definition of the Plan's Goals and Objectives.



Washington County's identity and economy depends to a great extent on the County's unique rural and scenic character and its exceptional cultural and historic integrity. Planning effectively for the future of Washington County required careful attention to all of the natural and rural qualities as well as future growth due to the planned improvements to Corridor D, SR 7 and other major roadways.

Land use planning is an important component of the planning process because it provides the best location for desired land uses, based upon Washington County's physical characteristics and needs. Land use planning is also used to anticipate and prevent inappropriate uses and provides a basis for implementing strategies and other regulations to ensure that the County's goals are met.

The creation of a Comprehensive Plan will allow Washington County to consider its future and determine its goals. This is the first step toward organized growth and development. Any plan, however, is only made effective through implementation. Implementation may require adoption of development controls and a set of recommendations that encourage growth, and adoption of the implementation strategies. The Comprehensive Plan articulates the goals of the County, and sets out recommendations for future growth through its recommended land use plan and development strategies.

Recommendations for Washington County as a whole have been provided. These recommendations have been divided by topic for the four geographic Planning Areas as well as recommendations for the entire County. The recommendations were separated by topic areas from the issues and concerns developed from the public SWOT (Strengths, Weaknesses, Opportunities, and Threats) meetings, and Citizen Survey and Steering Committee meetings.

Critical elements that have been considered during this review and evaluation effort include:

- Preservation of the existing agricultural and rural atmosphere and density in terms of smart growth and infrastructure capacity and integrity;
- Identification and timing of roadway improvements to the County-wide transportation system;
- Establishment of "smart growth" principles that can be easily installed either through development controls including zoning or local land development strategies;

- Provision of tourism and recreational opportunities that build upon existing programs and enhance biking and pedestrian connections;
- Identifying economic development opportunities in conjunction with the existing infrastructure demands and projected growth;
- Formulation of attainable implementation strategies; and
- Identifying land along the riverbanks to be preserved and developed into park land.

The assessment of the plans becomes an important reference to guide the decisions regarding the choices for implementation strategies for the County and developing the preferred land use scenario.

SWOT Analysis

A Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis was conducted early in the Plan process to provide a basic understanding of the broad issues facing Washington County. Participants at the session worked in groups to identify Washington County's Strengths, Weaknesses, Opportunities, and Threats, and were then asked to evaluate each response based on their perceived importance.

SWOT analyses are an effective tool when studying the feasibility of community growth because the analysis requires that planners and community members think about all of the positive aspects of growth as well as the negative impacts and barriers to growth. From the community meetings, the planners, County officials and residents came up with a list of the strengths, weaknesses, opportunities, and threats to future growth in their community.

The following list summarizes the top four issues identified through the SWOT analysis and Citizen Survey.

Strengths

To summarize the Strengths of Washington County, it can be noted that the participating groups nominated the top four strengths in Washington County as:

1. Tourism and Area Heritage;
2. Quality of Life (Rural and Scenic Qualities);
3. Intergovernmental Cooperation; and
4. Economic Opportunities (Appalachian Corridor D, strong labor management relationships).

Weaknesses

Washington County's most noted weaknesses include its lack of good job opportunities, topographical constraints, lack of capital improvement plan for infrastructure and the underdeveloped perception or Appalachian backwardness of the County. The meeting results indicate that weaknesses in Washington County are:

1. Economic development resources/strong tax revenue base;
2. Lack of coordinated infrastructure-sewer and water;
3. Lack of job opportunities-college graduate migration; and
4. County is underdeveloped.

Opportunities

Washington County identified the top four opportunities as:

1. Corridor D expansion –Economic and Residential growth;
2. Medical Industry Expansion;
3. Tourism; and
4. Economic Development and Employment opportunities with new bridge, Corridor and new schools.

Threats

Threats can be defined as factors which we have little or no control over. These are usually obstacles that hinder or prevent good development or implementation of opportunities. The leading threats identified in Washington County are:

1. Population loss-migration of young people;
2. Education system;
3. No development controls; and
4. Flooding/drainage concerns.

Other perceived threats are pressures on Township and Village government, natural gas prices could hurt industry, local industries are being bought out by bigger corporations and medical malpractice issues in West Virginia could affect Washington County health care issues which could arise in Ohio.

After the identification of issues concerning Washington County, an analytical framework was developed that divided the County into four Planning Areas that share common elements including: land use, waterways, and roadways. The Planning Areas did not include the incorporated City of Marietta. By dividing the County into different Planning Areas, specific recommendations that were appropriate for each could be identified. Figure 2.1 in the Plan Report shows the four Planning Areas.

Planning Area 1 – West

This Planning Area consists of the Townships of Palmer, Fairfield, Decatur, Wesley, Watertown and the community of Barlett. The area is primarily rural, covered with forests and farmland (pasture and row crops). The major access routes are SR 339, SR 550 and SR 555. This area also holds a significant part of Washington County's history with its six covered bridges: the Harra, Bell, Shinn, Henry, Root, and Mill Branch Bridges and underground railroad sites. The perimeters of Planning Area 1 are as follows: Waterford and Adams Townships, and the County boundary to the north, Muskingum, Warren, Barlow, Dunham, and Belpre Townships to the east, and the County boundary to the south and west.

Planning Area 2 – South

Planning Area 2 consists of the Townships of Warren, Barlow, Dunham, Belpre and the City of Belpre and communities of Barlow, Vincent, Little Hocking, and Veto. The area is primarily rural, covered with forests and farmland (pasture and row crops). The major access routes are SR 550, SR 339, SR 7, SR 50, and SR 124. Belpre Township has the highest amount of urban land use and densities in the South part of the County. Two primary points of interest are the WCJVC in Warren Township and the Veto Lake State Wildlife Area that is primarily in Dunham Township. Industry is located along the Ohio River. The perimeters of Planning Area 2 are as follows: Palmer, Watertown, and Muskingum Townships to the north, Marietta Township to the east, the Ohio River to the south, and Decatur, Fairfield and Palmer Townships to the west.

Planning Area 3 – Central

Planning Area 3 consists of the Townships of Aurelius, Salem, Fearing, Marietta, Waterford, Adams, and Muskingum, the City of Marietta, the Villages of Beverly, Lowell, Lower Salem, and Macksburg, and the communities of Waterford, Devola, Oak Grove, Reno, Warner, and Whipple. The area is somewhat rural, with rural residential, light industry, and commercial around Marietta covered primarily with forests and farmland (pasture and row crops). The major access routes are SR 60, SR 339, SR 7, SR 821, and Interstate 77. The perimeters of Planning Area 3 are as follows: The County boundary to the north, Liberty, Lawrence, and Newport Townships to the east, the Ohio River to the south, and Watertown and Warren Townships to the west.

Planning Area 4 - East

Planning Area 4 consists of the Townships of Liberty, Lawrence, Newport, Ludlow, Independence, Grandview, the Village of Matamoras and the community of Newport. The area is primarily rural, covered with forests and farmland (pasture and row crops). The major access routes are SR 26, and SR 7. The Ohio, and the Little Muskingum Rivers run through or along Planning Area 4. Matamoras is incorporated and Grandview Township has the highest amount of urban land use. The perimeters of Planning Area 4 are as follows: the County boundary to the north and east, the Ohio River to the south, and Marietta, Fearing, and Salem Townships to the west. Wayne National Forest is located in Planning Area 4.

Topic Areas

The results of the SWOT analyses and the Citizen Survey combined with the analysis of the existing conditions were translated into development strategies and a list of topic areas that are important and critical to the development of Washington County. The topic areas developed out of the SWOT analyses and Citizen Survey are:

- o Land Use;
- o Regulatory;
- o Transportation;
- o Economic;
- o Infrastructure; and
- o Parks and Recreation.

These topic areas were developed into a matrix of strategies and recommendations and were grouped by Planning Area listed above. The summary of the recommendations by Topic area are listed below for the entire County.

Recommendations for the County

Land Use

- Encourage open space development with new development especially with commercial and industrial developments along SR 7 and Corridor D. Implement controlled development along SR 7, focusing on the River "side" of the roadway.
- Develop a farmland preservation program. Maintain agricultural uses within the County.
- Explore new methods to guide and manage development in the County. Establish additional development controls to promote cohesive residential development with controlled densities. Developing regulatory controls and coordinating with local and state agencies for funding and infrastructure development.
- Coordinate Environmental issues for contaminants with existing organizations.
- Establish requirements for residential development. Implement "smart growth" strategies (see Chapter 9) for the incorporated areas.
- Integrate landscape buffers for new developments.
- Analyze population projections for potential high school/grade school location. Ensure land area for future schools.
- Establish the appropriate body or designate appropriate body with authority to provide design review for new and redeveloped parcels within this study area. Design architectural, landscape and lighting design standards. Appoint a design review committee to evaluate.
- Coordinate and encourage single family residential development with infrastructure expansions, new school facilities and transportation improvements.
- Preserve open space.
- New development should not be located in or near farmland or environmentally sensitive areas.
- Develop and plan for increasing elderly population with the Area Agency on Aging –conduct a plan and inventory of assisted living/nursing homes. Coordinate land use and smart growth planning for walkable communities and access to health care.
- Coordinate with the Marietta City Comprehensive Plan.
- Developing a County image or identity through the use streetscape design elements.

Regulatory

- Water Quality should be evaluated and monitored by appropriate and governing agencies on a regular basis. It is recommended that a County-Wide Advisory group be formed. Coordinate with Wood County, West Virginia on environmental issues.
- To better define the health concerns, regular monitoring and data collection should be coordinated with appropriate governing agencies for air, water soils and flooding.
- A Unified Development Ordinance (UDO) is defined as a single land-use ordinance that combines the provisions found within a jurisdiction's zoning code and subdivision regulations. It is recommended that Washington County develop a Unified Code Ordinance that incorporates the erosion control, stormwater management and regulations, flood plain ordinance, urban design guidelines and zoning where applicable. This will provide a single document and issuing agency to regulate the development in a unified manner.
- Provide a uniform set of definitions that are consistent.
- Provide a coordinated system for development and code enforcement.
- It is recommended that the County consider educating and implementing zoning at the township level, and develop a plan of action to target the townships that are growing substantially.

- A coordinated building permit process could be developed to monitor and track all new development, including construction of new facilities. The process should be developed so new construction permits can be evaluated separately. The building permit process should also be developed so that it is coordinated with the unified code ordinance and acts as a filter for development in the flood plain.

Transportation

- Link transportation improvements with economic development and infrastructure growth strategies. Improve roads to accommodate current and future traffic volumes.
- Encourage a commercial and redeveloped industrial development plan along Corridor D.
- Implement regulation controls to encourage developers to pay for roadway expansion and improvements.
- Coordinate appropriate transportation and roadway expansion efforts with WWW, ODOT and the County.
- Coordinate with surrounding communities to improve air service for the region.
- Improve local roads to accommodate changes in traffic patterns resulting from the construction of Corridor D.
- Adopt controls that will permit a regulating body to consider fiscal impact on County resources prior to approval of proposed development.
- Develop regulations restricting the locations of land uses including heavy industry. Require adequate screening and buffering between uses.
- Discourage through traffic patterns in residential areas. Coordinate access management efforts with the County and State agencies.
- Identify scenic areas and areas of conversion along the riverfront. Develop regulations or easements to protect the land. Identify riverbank areas to preserve, restore and protect, especially along the west bank of the Muskingum River where proposed SR 7 links to SR 821 and SR 60 at the north bridge bypass.
- Connect the system of pathways and trails to future pathways and trails that connect existing recreational uses.
- Minimize traffic impacts on the Historic District of Marietta.
- Support improvements to MOV Regional Airport.
- Pursue an interchange along I-77 to the Duck Creek Area watershed communities.

Economic

- Develop incentive programs with potential employers, state agencies local colleges and universities and the Chambers of Commerce to coordinate economic development in Washington County.
- Partner with WSCC, Career Center and employers to develop workforce development programs.
- Develop and encourage additional heritage tourism efforts in the County.
- Coordinate with state and local agencies to attract high quality/high paying jobs, and environmentally friendly employers that provide living wage positions.
- Encourage mechanisms that support existing and new small, locally owned businesses throughout the County.
- Encourage local school districts to provide academic programs that will support new economic development opportunities.
- Emphasize additional public investment in Washington County.
- Establish Enterprise Zone, Tax Increment Finance Districts or Community Redevelopment Area Districts.
- Pursue funding options to finance infrastructure.
- Develop industry in conjunction with roadway improvements.

- Develop programs and incentives to attract and retain business in Washington County including both business start-ups and proven players with local colleges, agencies, organizations and local governments.
- Promote commercial development in close proximity to I-77 and Corridor D.
- Coordinate economic development with land uses.
- Link transportation and infrastructure improvements with economic development.
- Explore the potential for additional industrial parks in area.
- Encourage commercial and redeveloped industrial development.
- Offer incentives to attract and retain business.

Infrastructure

- Coordinate an infrastructure expansion plan. Conduct an inventory of all existing infrastructure and develop a phased infrastructure plan. Develop a coordinated plan for water service expansion, sewer service expansion and telecommunications and utility service. Develop an infrastructure coordinating committee.
- Conduct an inventory and analysis of existing development controls. Update development controls where necessary.
- Establish digitized mapping throughout the County.
- Coordinate infrastructure expansion to development controls, soil conditions, wetland, slope and floodplain conditions. Develop incentive programs for commercial businesses to locate and tie into infrastructure development.
- Coordinate infrastructure expansion with the Ohio School Facilities Commission, the Ohio Department of Education and local school districts. Review community services such as safety, fire, health, and emergency medical services to ensure a high quality delivery system.
- Target sewer improvements and cooperation near Belpre, Marietta, Matamoras and Beverly. Consider development of a water and sewage system consortium to ensure they are operating together.
- Develop a coordinated telecommunications plan for installation of cell towers due to a limited network architecture and system capacity. Work with carriers to develop additional cell towers in the area. Develop a cell tower ordinance to coordinate placement and standards for future cell towers.
- Develop water extension plans for Palmer and Grandview Townships; Adams Township near Lowell; and Lawrence and Newport Townships near Newport and Reno.
- Coordinate a sewer system analyses between the Belpre and Marietta areas, and water system improvements in Matamoras and Grandview.
- Develop Sewer extensions in the Grandview suburb of Matamoras, in Reno, Oak Grove and Devola communities near Marietta, along the Duck Creek Watershed at Macksburg and Whipple; adjacent to Beverly; and along SR 339 and in the communities of Bartlett and Little Hocking.
- Establish a body to develop priorities for infrastructure expansion and extension to report to the County Commissioners.

Parks and Recreation

- Develop and coordinate existing and additional recreation and camping facilities in coordination with the Wayne National Forest.
- Coordinate with the planned bike trail in Marietta and develop bike/activity facilities along the Ohio and Muskingum Rivers. Expand upon existing bike plans and extend a program along SR 60.
- Coordinate and plan additional park and playground facilities as needed as population increases and school facilities are added to the County.
- Expand recreation opportunities in conjunction with economic development and residential growth activities.
- Plan for increased utilization of the rivers as a public recreation resource.

- Combine passive recreation areas with conservation easements in environmentally sensitive areas. Capitalize on covered bridges, history, and other landscape/cultural elements for recreation opportunities.
- Purchase and maintain public control of sensitive and historic areas. The County should encourage the development of a Park and Recreation plan that follows the general guidelines of the 2003 Ohio SCORP.
- Identify and promote revenue-generating activities, programs, and facilities to help offset costs associated with providing excellent public recreation.
- Periodically administer a citizen preference survey and a recreational facility user survey to help determine facility and program deficiencies and future community needs.
- Utilize County school facilities for public recreational programs and as neighborhood or community parks.
- Create a Comprehensive Parks Master Plan to guide the acquisition and development of park facilities and recreational programs.
- Install local directional signs to all public park facilities Countywide.
- Develop history-based programs by identifying and preserving historic sites.
- Identify, plan, design, and develop a community center that would include a gymnasium, community space, indoor playground, and zero depth recreation pool among other innovative and needed community amenities for the Barlow/Vincent area of the County.
- Preserve Fairfield Township's Natural Bridge and Piers area.
- Plan, design, and develop an indoor sports complex that would serve the needs of the community and the region. Consider the establishment of joint public/private partnerships.
- Develop/acquire land for land banking/acquisition of title or conservation easements for areas along major streams, rivers and arteries for preservation and recreation uses.
- Incorporate language in the Unified Development Ordinance for sediment and erosion control and riparian buffer strips along rivers.
- Develop riverbank protection language or guidelines for future development.
- Conduct a riverbank assessment to identify areas to be best protected for public access. Coordinate uses compatible with the rivers.
- Develop a coordinated buffer plan along Corridor D development.
- Consider development of a County-Wide Park District.
- Consider preservation measures for the Churchtown community, the backwater Sawyers Run adjacent to the Belpre Township Park; Camp Hervida in Watertown Township, the locks and dams of the Muskingum River; Buell Island in Lowell, the Little Muskingum River (among Ohio's Highest Quality Streams) for consideration as natural or cultural amenities and preservation.

Chapter 1: Introduction

Purpose and Scope

In February of 2002, Washington County retained the consulting firm of Edwards and Kelcey in Cincinnati, Ohio, formerly known as Pflum, Klausmeier & Gehrum Consultants, Inc., to prepare a Comprehensive Plan for Washington County. This will be the first Comprehensive Plan for Washington County. The intent of the Plan is to aid decision-makers on what investments and steps should be made for the future of the County. Washington County has unmistakable appeal and distinctive scenic qualities. Washington County is recognized for its vast amount of protected forest and wildlife, unique heritage tourism opportunities, its rural character, and the quality of life it provides. Maintaining the community's unique character is vital to ensuring the County's future. This Plan is designed to maintain the rural and scenic character and help the County find new opportunities that respect its heritage.

The Washington County Comprehensive Plan was initiated by the County Commissioners to help guide its future growth, development, and enhancement. The preparation of this Comprehensive Plan for Washington County is the result of proactive efforts by the Washington County Commissioners, County staff and citizens. The purpose of this document is to guide future land use decisions associated with the growth and development in the County.

The Comprehensive Planning process utilizes the existing conditions and resources as a framework for the recommendation of future strategies. Current trends can be identified within the existing conditions that may provide insight to what may happen in the future. The strategies outlined in this Plan address its future land use, growth and development, County-wide infrastructure improvements, and a variety of other issues.



County residents and leaders have been actively involved in the preparation of the Plan by means of a Steering Committee. The Committee worked in collaboration with the Consulting team in the development of the Plan by assessing data, providing insight on local conditions, and by creating goals and objectives for the County.

Washington County is situated in the southeast portion of the state and is included in territory known as Appalachia. Overall the County is agricultural or is comprised of woodlands, but is subject

to the development pressures along its major corridors, and certain areas SR 7, US 50 (Corridor D) and SR 339/SR 550 are anticipated to grow at a fast pace and Washington County must be prepared to deal with this development pressure. This Plan will contain a strategy for assisting the County in the management of growth as it transpires.

Washington County residents enjoy the rural and scenic qualities that presently exist in the County. In order to maintain this character and quality for years to come, great emphasis should be placed on preserving and promoting the existing character of the County. This Plan is designed to provide a strategy to allow growth to occur while protecting the overall character of Washington County.

Events that occur in the incorporated areas, including Marietta and Belpre, neighboring Counties and also the state of Ohio will have an influence on Washington County's future. Great importance should be placed on the communication, correlation, and understanding between political jurisdictions in order to create a network where essential information can be shared. With this Plan, the Planning Commission can best take a leadership position on this ongoing issue.

Ultimately, the success of this Comprehensive Plan will depend upon the adoption of updated regulations and the interpretation and explanation of these regulations by County officials.

Planning Process

The planning process for the Washington County Comprehensive Plan involved several elements, including the following:

- Regular working meetings with the County Commissioners, Staff and Steering Committee.
- An extensive amount of public participation. These include a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis that was conducted with the Steering Committee at the first public meeting, and a Citizen Survey. Information gathered through these methods was an important part of the comprehensive planning process because it formed the basis for development of the goals and objectives of the Washington County Comprehensive Plan.
- The development of Goals and Objectives provides a clear policy foundation for the Plan elements. These Goals and Objectives were developed in close consultation with the Steering Committee and from public meetings and surveys.
- The strategic prioritization of the issues was determined by the Steering Committee to be most important for the Plan to address. The Steering Committee adopted the goals and objectives developed for the Comprehensive Plan in August 2002.
- The development of Planning Areas and Topic Areas and their review and refinement by the Steering Committee, and
- The creation of a draft for review and final Comprehensive Plan document.

The first part of this Report outlines the existing conditions in Washington County today. It analyzes employment, population and housing trends and future projections as well as land use, infrastructure, recreation and parks and the current transportation system. The data in this portion provides a factual and technical basis on which the Plan's Objectives and Implementation Strategies are based.

The second part spells out the specific details of the Plan. It establishes goals and objectives for the development activities in the County for the next twenty years and outlines the steps that need to be taken to accomplish these goals and objectives. The Plan puts a particular focus on areas that have the greatest need and potential for change and proposes planning/development activities for the next twenty years. The last part of the Plan will include the Implementation Strategies and the preferred Land Use Plan.

Review of Previous Planning

- Comprehensive Long Range Multimodal Transportation Plan DRAFT document – Wilbur Smith Associates
- Vision 20/20 Managing Regional Accessibility – A Long Range Transportation Plan –WWW Interstate Planning Commission
- Wastewater Feasibility Study/Master Plan – Washington County – Finkbeiner, Pettis and Strout, Inc.
- Recreation Feasibility Study for the Wayne National Forest –Strategic Research Group Team
- Washington County Subdivision Regulations

The above planning studies have been incorporated and their information considered as part of the recommendations and implementation strategies in developing the Comprehensive Plan. Reviewing these plans allows us to articulate a vision for the community that builds upon the objectives and efforts established in the mentioned documents. It is important to consider the previous planning work and studies conducted to date. It provides a framework and understanding of the critical issues facing Washington County, in particular, for the transportation improvements and the water and sewer infrastructure improvements that are being planned help guide the course of development over the next twenty years.

Critical elements that have been considered during this review and evaluation effort include:

- Preservation of the existing agricultural and rural atmosphere and density in terms of “smart growth” and infrastructure capacity and integrity;
- Identification and timing of roadway improvements to the County-wide transportation system;
- Establishment of “smart growth” principles that can be easily installed either through development controls including zoning or local land development strategies;
- Provision of tourism and recreational opportunities that build upon existing programs and enhance biking and pedestrian connections;
- Identifying economic development opportunities in conjunction with the existing infrastructure demands and projected growth and;
- Formulation of practical implementation strategies.

The assessment of the plans becomes an important reference to guide the decisions regarding the choices for implementation strategies for the County and developing the preferred land use scenario.

History



Located in southeastern Ohio on the Ohio River, Washington County is rich in farmland and vast hills and plateaus covered in deciduous forests. Washington County is known for its many covered bridges and was home to such famous people as Charles Gates Dawes, *U.S. Vice-President from 1925 to 1929 under President Calvin Coolidge*, and Rufus Putnam, *Land Dealer who was known as Father of Ohio*.

Washington County, originally about one-half the territory now included in the State of Ohio, was established by proclamation of Gov. Arthur St. Clair, Governor of the Northwest Territory, on the 26th day of July, 1788. Events

which led up to this establishment were due to the perseverance of two great men, Gen. Rufus Putnam and Rev. Dr. Manasseh Cutler, the formation and function of the Ohio Company and the passage by the Continental Congress of the “Ordinance of 1787”.

Washington County, also part of the Muskingum Valley, was first claimed by the French in 1749, which had claim to the Ohio Valley. After the French and Indian War of 1763, France was forced out of North America and England assumed claim of the Ohio Valley with the “sea to sea” charters they granted to the colonies. England’s possession of the Ohio Valley came to an end when George Rogers Clark captured British forts in Illinois Country, which led to the treaty of 1783. This treaty made the Mississippi River the western boundary of the United States.

The early settlers to the area were Post American Revolution Veterans who received military land grants under the guidance of Rev. Manasseh Cutler, to locate there. Although there were no Indians residing permanently there, the Indians would still come to the area from Lake Erie and the western part of Ohio to hunt and trade their furs. The land had an abundance of wildlife ranging from hunted game such as elk and deer to bears, wolves, panthers and wild cats that were destructive to crops and livestock.



Cutler was later the driving force involved with the famous Ordinance of 1787 which enabled governance of the land northwest of the Ohio River. Gen. Putnam was Superintendent of the Colony of 47 pioneers who landed in Marietta for the first lawful, organized English settlement in the Northwest Territory. He started a survey of the town of 8 acre lots. A stockade was built called Campus Martius where the first court held was Court of Common Pleas on September 2, 1788. Rufus Putnam led the 47 settlers to the area today known as Marietta. On July 26, 1778, this area in the Muskingum Valley became Washington County, the first County in Ohio.

The Ohio River became a major asset to the Ohio Valley as goods were easily transported to and from the settlers. This allowed Marietta, like many other cities in the Ohio Valley, to become a significant trade center. By 1811 Washington County became a major riverboat community with its many busy steamboat building yards. The land that was rich in natural resources such as coal and oil influenced the development of the County. The mid-1800’s brought an economic boom to the County with the development of the oil and gas industry. Marietta became known as the gateway to the Northwest.

Washington County also played an important role in the Underground Railroad. The Ohio and Muskingum Rivers which meet in the County were major routes for slaves escaping from Virginia. David Putnam, Jr., an Underground Railroad Conductor from Marietta, played a key role in the abolitionist movement supported by a small group of residents with a strong influence. There are sixteen documented Underground Railroad sites in the County.

Plan Development

Study Area

The Study Area for Washington County Comprehensive Plan includes the entire County excluding the City of Marietta. See Figure 1.1. The Study area includes the 22 townships and the smaller incorporated villages. It also includes Belpre, the second largest city in Washington County.



Figure 1.1
Study Area

Regional Context – Washington County

Washington County is located in the southeastern portion of the state of Ohio bounded by the Ohio River to the east and south, Monroe and Noble Counties to the north, Morgan County to the northwest and Athens County to the west. The state of West Virginia is located across the Ohio River to the south. The County has a total land area of 635 square miles. Approximately 96,000 acres or 24% of the total land area is designated as farmland. An additional 258 square miles or 41% of the total land area is part of the Wayne National Forest, which encompasses the entire eastern third of the County. Marietta is the largest city at about 15,000 people and is the County seat of Washington County. The other city in the County is Belpre, located about 13 miles south. Area villages include Beverly in the northern part of the County and Matamoras in the east. Lowell, Macksburg, and Lower Salem are Villages in the north central part of the County. The population of the County is about 63,000. The local economy is good with an unemployment rate of 5.2 percent in September 2002. The County is following state trends that see a shift from manufacturing to that of service-oriented jobs. Agriculture and tourism also contribute significantly to the local economy.

There are 22 Townships located in Washington County as follows: Grandview, Ludlow, Independence, Newport, Liberty, Lawrence, Aurelius, Salem, Fearing, Marietta, Adams, Muskingum, Waterford, Watertown, Warren, Palmer, Barlow, Dunham, Belpre, Fairfield, Wesley, and Decatur. The main incorporated communities in the County are the City of Marietta, City of Belpre, Village of Beverly, Village of Matamoras, Village of Lowell, Village of Macksburg and the Village of Lower Salem. Major population centers are the Cities of Marietta, and Belpre. Athens, Ohio is located approximately 40 miles west of Washington County and Parkersburg, West Virginia is located across the Ohio River to the south.

The County is currently experiencing residential and commercial growth in the western portion of the County along SR 339 from Beverly, to Belpre and is trying to retain the existing rural character to the highest degree possible through the Comprehensive Planning process. Washington County has many parks, woodland areas and waterways. Washington County has many waterways including the Muskingum and Ohio Rivers, the Little Muskingum River, the Little Hocking River, Duck Creek, Wolf Creek, numerous streams ponds and other bodies of water. Washington County is also the home of Veto Lake State Wildlife Area, the Boord Preserve east of Bartlett, Acadia Cliffs southwest of Cutler, the Ladd Natural Bridge, and the Irish Run Natural Bridge in Wayne National Forest.

The Wayne National Forest is one of Washington County's most well known parks. The park contains approximately 63,075 acres of natural forest. Visitors can enjoy a quiet stay with amenities such as camping, hiking trails, swimming, fishing, hunting and picnicking. There are approximately 73.9 miles of foot trails, and a large amount of public land to hunt for grouse, deer, turkey, and squirrel. The Wayne National Forest is part of the attraction of Washington County because it brings visitors from all over the State and region.

Washington County's present and future development is contingent upon the growth and development of its incorporated communities, adjacent counties, County-wide roadway improvements and water and sewer infrastructure improvements. It is important to address specific and regular coordination efforts between the coordinating agencies and political jurisdictions to assure a controlled and desirable growth.

Chapter 2: Planning Areas

After the identification of issues concerning Washington County, an analytical framework was developed that divided the Study Area into four Planning Areas that share common elements including: land use, waterways, and roadways. Note that the City of Marietta is not included in this Plan. By dividing the County into different Planning Areas, specific recommendations that were appropriate for each could be identified. Figure 2.1 shows the four Planning Areas.

The following is a brief description of each Planning Area within the County.

Planning Area 1 – West

This Planning Area consists of the Townships of Palmer, Fairfield, Decatur, Wesley, Watertown and the community of Barlett. The area is primarily rural, covered with forests and farmland (pasture and row crops). The major access routes are SR 339, SR 550 and SR 555. This area also holds a significant part of Washington County's history with its six covered bridges: the Harra, Bell, Shinn, Henry, Root, and Mill Branch Bridges and underground railroad sites. The perimeters of Planning Area 1 are as follows: Waterford and Adams Townships, and the County boundary to the north, Muskingum, Warren, Barlow, Dunham, and Belpre Townships to the east, and the County boundary to the south and west.

Planning Area 2 – South

Planning Area 2 consists of the Townships of Warren, Barlow, Dunham, Belpre and the City of Belpre and communities of Barlow, Vincent, Little Hocking, and Veto. The area is primarily rural, covered with forests and farmland (pasture and row crops). The major access routes are 550, 339, 7, 50, and 618. Belpre Township has the highest amount of urban land use and densities in the South part of the County. Two primary points of interest are the WCJVC in Warren Township and the Veto Lake State Wildlife Area that is primarily in Dunham Township. Industry is located along the Ohio River. The perimeters of Planning Area 2 are as follows: Palmer, Watertown, and Muskingum Townships to the north, Marietta Township to the east, the Ohio River to the south, and Decatur, Fairfield and Palmer Townships to the west.

Planning Area 3 – Central

Planning Area 3 consists of the Townships of Aurelius, Salem, Fearing, Marietta, Waterford, Adams, and Muskingum, the City of Marietta, the villages of Beverly, Lowell, Lower Salem, and Macksburg, and the communities of Waterford, Devola, Oak Grove, Reno, Warner, and Whipple. The area is somewhat rural, with rural residential, light industry, and commercial around Marietta covered primarily with forests and farmland (pasture and row crops). The major access routes are SR 60, SR 339, SR 7, SR 821, and Interstate 77. Beverly, Lowell, Marietta, Macksburg, and Lower Salem are incorporated with Muskingum and Marietta Townships having the highest percent of urban land use. There are three power plants located in Planning Area 3. The Ohio, Muskingum, and the Little Muskingum Rivers run through or along this Planning Area. The Muskingum River Parkway has four locks which are:

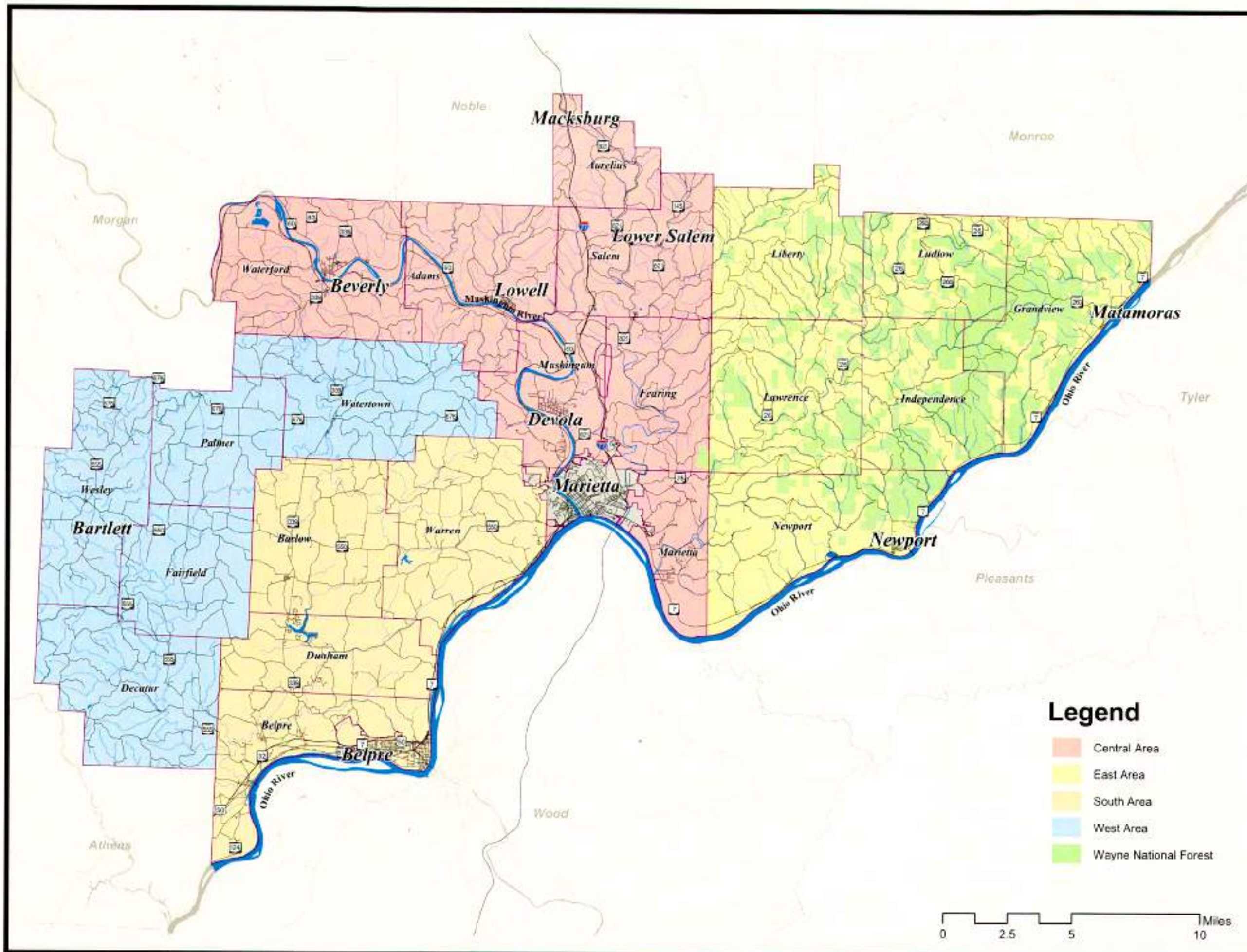
- Lock #2: Devola Dam off Route 60, Devola;
- Lock #3: Route 60, Lowell;
- Lock #4: Route 60, Beverly; and
- Lock #5: Luke Chute, Waterford.

The perimeters of Planning Area 3 are as follows: The County boundary to the north, Liberty, Lawrence, and Newport Townships to the east, the Ohio River to the south, and Watertown and Warren Townships to the west.

Planning Area 4 – East

Planning Area 4 consists of the Townships of Liberty, Lawrence, Newport, Ludlow, Independence, Grandview, the Village of Matamoras and the community of Newport. The area is primarily rural, covered with forests and farmland (pasture and row crops). The major access routes are 26, and 7. The Ohio, and the Little Muskingum Rivers run through or along Planning Area 4. Matamoras is incorporated and Grandview Township has the highest amount of urban land use. The perimeters of Planning Area 4 are as follows: the County boundary to the north and east, the Ohio River to the south, and Marietta, Fearing, and Salem Townships to the west. Wayne National Forest is located in Planning Area 4.





Proposed Planning Areas

Washington County, Ohio Comprehensive Plan

**Edwards
AND Kelcey**

Figure 2.1

December, 2003



Chapter 3: Existing Conditions

An existing conditions study provides a basis for the assessment of Washington County's current and future needs, development trends, and constraints for particular courses of action. Present conditions also provide a reference point for discussion of the future and identification of goals and objectives for the County. The inventory of existing conditions includes the County's current land use, environmental constraints to development, and transportation infrastructure and capacity, and a potential growth analysis.

Physical Conditions

Slope

Washington County is situated entirely within the unglaciated Allegheny Plateau physiographic region of Ohio. The landscape is strongly dissected and the topography ranges from rolling to very steep. The eastern portion



of the County is characterized by steep, rugged slopes and ridge tops. The central and western portions of the County have a more rolling topography, with wider ridge tops and fewer steep side slopes. Washington County has slopes that range from 0%-25%. The East Planning Area is where steeper slopes can be found, throughout the Wayne National Forest and along the Ohio River. The Central Area contains a mixture of varying slope levels, the steepest being along waterways including the Muskingum River. The West and South Planning Areas contain the flatter land which is suitable for development and agriculture. Areas with steeper slope should be preserved and put to uses other than development. The entire County either drains directly or indirectly to the Ohio River. There are three main drainage basins for the

County. The eastern portion of the County drains to the Ohio River through the many small streams located in the Wayne National Forest and within the northern portion tributary to the Little Muskingum River. The central portion of the County primarily drains to the Ohio River through Duck Creek and the Muskingum River. The western portion of the County generally drains to the Ohio River through the Little Hocking River. There are no rivers within the County currently designated as scenic rivers by the Ohio Department of Natural Resources. Figure 3.1 (Slope Analysis) illustrates the varying slope conditions.

Floodplain and Wetlands Analysis

Floodplain

The 100 year floodplain is shown predominantly along the Ohio River on the southern border of the County and the Muskingum River which runs north to south through Washington County. Other areas shown include the borders of the rivers and streams that flow throughout Washington County. Figure 3.2 (Environmental Constraints) illustrates the 500 year floodplain, 100 year floodplain and wetlands analysis within Washington County. The unincorporated areas of Washington County located in the flood plain are regulated by the Flood Damage Reduction Resolution adopted in 1981 and administered by the Washington County Building Department. Development constraints and new building design standards are controlled through this resolution. Stricter new construction design standards for buildings to be located in the Special Flood Hazard Area should be coordinated through the Washington County Building Department, Floodplain Manager.

National Flood Insurance Program (NFIP)

The U.S. Congress established the National Flood Insurance Program (NFIP) with the passage of the National Flood Insurance Act of 1968. The NFIP is a Federal program enabling property owners in participating communities to purchase insurance as a protection against flood losses in exchange for State and community floodplain management regulations that reduce future flood damages. Participation in the NFIP is based on an agreement between communities and the Federal Government. If a community adopts and enforces a floodplain management ordinance to reduce future flood risk to new construction in floodplains, the Federal Government will make flood insurance available within the community as a financial protection against flood losses. This insurance is designed to provide an insurance alternative to disaster assistance to reduce the escalating costs of repairing damage to buildings and their contents caused by floods.

The Federal Emergency Management Agency (FEMA), manages the National Flood Insurance Program. The three components of the National Flood Insurance Program (NFIP) are:

- Flood Insurance;
- Floodplain Management; and
- Flood Hazard Mapping.

Nearly 20,000 communities across the United States and its territories participate in the NFIP by adopting and enforcing floodplain management ordinances to reduce future flood damage. In exchange, the NFIP makes Federally-backed flood insurance available to homeowners, renters, and business owners in these communities. Community participation in the NFIP is voluntary.

Flood insurance is designed to provide an alternative to disaster assistance to reduce the escalating costs of repairing damage to buildings and their contents caused by floods. Flood damage is reduced by nearly \$1 billion a year through communities implementing sound floodplain management requirements and property owners' purchase of flood insurance. Additionally, buildings constructed in compliance with NFIP building standards suffer approximately 80 percent less damage annually than those not built in compliance. And, every \$3 paid in flood insurance claims saves \$1 in disaster assistance payments.

In addition to providing flood insurance and reducing flood damages through floodplain management regulations, the NFIP identifies and maps the Nation's floodplains. Mapping flood hazards creates broad-based awareness of the flood hazards and provides the data needed for floodplain management programs and to actuarially rate new construction for flood insurance.

The three basic components of the NFIP Program include: identifying and mapping flood-prone communities, the requirement that communities adopt and enforce floodplain management regulations, and the provision of flood insurance

The "100-year" Standard

The NFIP would not be able to offer insurance at affordable rates without the existence of risk management (floodplain management) to reduce flood losses. In order to assess and manage the flood risk, a national standard was needed. After extensive study and coordination with Federal and State agencies, this group recommended the 1-percent-annual-chance flood (also referred to as the 100-year or "Base Flood") be used as the standard for the NFIP.

The 1-percent-annual-chance flood was chosen on the basis that it provides a higher level of protection while not imposing overly stringent requirements or the burden of excessive costs on property owners. The 1-percent-annual-chance flood (or 100-year flood) represents a magnitude and frequency that has a statistical probability of being equaled or exceeded in any given year, or stated alternatively, the 100-year flood has a 26 percent (or 1 in 4) chance of occurring over the life of a 30-year mortgage.

The 1-percent-annual-chance flood is a regulatory standard used by Federal agencies, and most States, to administer floodplain management programs. The 1-percent-annual-chance flood standard has been used since the inception of the NFIP and is used for floodplain management purposes in all of the 19,200 participating communities that have been issued flood hazard maps.

Floodplain Management

Section 1315 of the 1968 Act prohibits FEMA from providing flood insurance to property owners unless the community adopts and enforces floodplain management criteria established under the authority of Section 1361(c) of the Act. These criteria are established in the NFIP regulations at 44 CFR §60.3. The community must adopt a floodplain management ordinance that meets or exceeds the minimum NFIP criteria. Under the NFIP, "community" is defined as:

"any State, or area or political subdivision thereof, or any Indian tribe or authorized tribal organization, or Alaska Native village or authorized native organization, which has authority to adopt and enforce floodplain management regulations for the areas within its jurisdiction."

The Program has served as an important impetus for the establishment of floodplain management programs nationwide in the approximately 19,700 participating communities and most States and territories. Community participation in the NFIP is voluntary.

Minimum NFIP Floodplain Management Requirements

Under the NFIP, the minimum floodplain management requirements that a community must adopt depends on the type of flood risk data (detailed FIS and FIRMs with BFEs or approximate A Zones and V Zones without BFEs) that the community has been provided by FEMA. Under the NFIP regulations, participating NFIP communities are required to regulate all development in SFHAs. "Development" is defined as:

"any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials."

Before a property owner can undertake any development in the SFHA, a permit must be obtained from the community. The community is responsible for reviewing the proposed development to ensure that it complies with the community's floodplain management ordinance. Communities are also required to review proposed development in SFHAs to ensure that all necessary permits have been received from those governmental agencies from which approval is required by Federal or State law, such as 404 wetland permits from the Army Corps of Engineers or permits under the Endangered Species Act.

Under the NFIP, communities must review subdivision proposals and other proposed new development, including manufactured home parks or subdivisions to ensure that these development proposals are reasonably safe from flooding and that utilities and facilities servicing these subdivisions or other development are constructed to minimize or eliminate flood damage.

In general, the NFIP minimum floodplain management regulations require that new construction or substantially improved or substantially damaged existing buildings in A Zones must have their lowest floor (including basement) elevated to or above the Base Flood Elevation (BFE). Non-residential structures in A Zones can be either elevated or dry-flood proofed. In V Zones, the building must be elevated on piles and columns and the bottom of the lowest horizontal structural member of the lowest floor of all new construction or substantially improved existing buildings must be elevated to or above the BFE.

Ordinance Adoption

Once FEMA provides a community with the flood hazard information upon which floodplain management regulations are based, the community is required to adopt a floodplain management ordinance that meets or exceeds the minimum NFIP requirements. FEMA can suspend communities from the Program for failure to adopt once the community is notified of being flood-prone or for failure to maintain a floodplain management ordinance that meets or exceeds the minimum requirements of the NFIP. The procedures for suspending a community from the Program for failure to adopt or maintain a floodplain management ordinance that meets or exceeds the minimum requirements of the NFIP are established in the NFIP regulations at 44 CFR §59.24(a) and (d).

Community Rating System

The NFIP's Community Rating System (CRS) provides discounts on flood insurance premiums in those communities that establish floodplain management programs that go beyond NFIP minimum requirements. Under the CRS, communities receive credit for more restrictive regulations, acquisition, relocation, or flood proofing of flood-prone buildings, preservation of open space, and other measures that reduce flood damages or protect the natural resources and functions of floodplains.

The CRS was implemented in 1990 to recognize and encourage community floodplain management activities that exceed the minimum NFIP standards. Section 541 of the 1994 Act amends Section 1315 of the 1968 Act to codify the Community Rating System in the NFIP, and to expand the CRS goals to specifically include incentives for reducing the risk of flood-related erosion and for encouraging measures that protect natural and beneficial floodplain functions. These goals have been incorporated into the CRS and communities now receive credit towards premium reductions for activities that contribute to them.

Under the CRS, flood insurance premium rates are adjusted to reflect the reduced flood risk resulting from community activities that meet the three goals of the CRS:

- (1) Reduce flood losses, i.e.,
 - Protect public health and safety,
 - Reduce damage to property,
 - Prevent increases in flood damage from new construction,
 - Reduce the risk of erosion damage, and
 - Protect natural and beneficial floodplain functions;
- (2) Facilitate accurate insurance rating; and
- (3) Promote the awareness of flood insurance.

Wetlands

There are several existing wetlands located throughout the County (See Figure 3.2). The largest concentrations appear to be located east of Macksburg, surrounding Bartlett, southwest of Marietta along the Ohio River and north of Newport. Wetlands in Washington County exist around the immediate banks of the Ohio River, Muskingum River and the streams that branch off of them. There are six different classifications that make up the wetlands. They include woods on hydric soils; open water; shallow water with emergent vegetation in less than three feet of water; shrub/scrub wetland with emergent wooded vegetation in less than three feet of water; wet meadow with grassy vegetation in less than six inches of water; and farmed wetland with wet meadow in agricultural areas. Careful research and investigation should be conducted prior to development in these areas and special emphasis to protect the wetlands should be considered.

Soils Analysis

The soil survey of Washington County shows that there are over 150 types of soils within the County. The most common of which is the Gilpin-Summitville-Upshur complex, 35-70 percent slopes, benched. However, there are three main types that should be considered when planning development. These types are Newark Silt Loam (Nn), Nolin Silt Loam (No) and Peoga Silt Loam (Pe). These soils are considered hydric soils because they are hazardous for building. Most of the hydric soils found in Washington County are along the riverbanks and are shown in Figure 3.3A (Soils Analysis.) Newark Silt Loam is found in depressions and abandoned stream channels. It is in addition generally ponded following heavy rains. Nolin Silt Loam occupies entire floodplains. Most flooding occurs in the winter and early spring seasons and is not a serious hazard for crops. Peoga Silt Loam soil is subject to flooding as well and wetness is a severe limitation for most farm and non-farm uses. Soils on very steep slopes and side slopes and ridge tops occur throughout the entire eastern portion of the County west to Muskingum Township and south west along the Ohio river in Warren, Dunham, Belpre and Decatur Townships. These soils vary from reddish clay soils formed in residuum from shale on side slopes and ridge tops to brownish loamy soils, to reddish clay and brownish clay.

Nn Newark Silt loam - The Newark series consists of very deep, somewhat poorly drained soils formed in mixed alluvium from limestone, shale, siltstone, sandstone and loess with some glacial material. The soil is on nearly level flood plains and in depressions. Slope ranges from 0 to 3 percent.

No Nolin Silt - The Nolin series consists of very deep well drained soils formed in alluvium derived from limestone, sandstones, siltstones, shale, and loess. These nearly level to moderately steep soils are on flood plains, in depressions which receive runoff from surrounding slopes, or on natural levees of major streams and rivers. Slope ranges from 0 to 25 percent, but is dominantly 0 to 3 percent. Mean annual temperature is 56 degrees Fahrenheit, and the mean annual precipitation is 43 inches.

Pe Peoga Silt Loam has a poor suitability for winter grading and has a high susceptibility to frost action. It is poor topsoil and is poor for use as road fill.

The good soils for farming and dwellings are shown on Figure 3.3B.

Soils are rated on a scale of Slight, Moderate, or Severe based on various limitations that are solely dependent upon the intended use. Farming soils are limited to cultivated crops only in this data set, and are ranked based on slope, erosion hazards, and the ease or difficulty of artificial drainage. Dwellings are ranked based on depth to bedrock, flooding, poor natural drainage, and excessive slope. When mapping the dwelling data, only those without basements were considered. The good soils are primarily located on the western portion of the County and along the river banks.

Environmental Issues

Natural Resources

Washington County has oil and natural gas wells, as well as mineral mines located throughout the County. In 1997, Washington County produced approximately 91,000 barrels of oil and 3.9 million cubic feet of gas according to the Ohio Department of Natural Resources. Mining is less productive. Washington County produced less than 100,000 tons of coal and between 250,000 and 500,000 tons of sand and gravel in 1997.

Air Quality – Ozone Attainment

Washington County has been determined by the Environmental Protection Agency (EPA) to be a non-attainment area for Ozone, Carbon Monoxide and Particulates. Some measurements in 2002 show Ozone levels that are slightly out of compliance, but they average to lower than the EPA standard of 0.08 parts per million over an eight hour average. However, the EPA is currently trying to determine if the stricter one hour standard, which has been approved by Congress, should be adopted. If it is adopted, than Washington County will still be in compliance for all pollutants, with the possible exception of Ozone. Ozone levels may be above EPA limits because the current, measured average in the County for Ozone with the one hour standard is 0.111 parts per million and the new limit will become 0.12.

2003 EPA Designations

Eight Hour Ozone Designations

Portions of Ohio have been recommended to the Environmental Protection Agency to be included in the eight-hour ozone non-attainment boundaries for the metropolitan areas. Ambient data for the periods 2000-2002 have been evaluated to determine which urban areas within the state are not attaining the revised standard. This evaluation also addressed the interstate metropolitan areas with only a rural portion of the metropolitan statistical area (MSA) within Ohio. These recommendations were initially based on the metropolitan statistical areas as they existed prior to June 9, 2003. These areas have been redefined in some cases. The EPA's recommendations identify where changes have occurred. The changes, though, do not significantly change the overall recommendations. It has been reported that EPA believes that the information on population, emissions and air quality supports the recommended status for a county whether or not it is part of the old or new metropolitan area definitions.

The interstate Parkersburg/Marietta MSA includes Washington County in Ohio and Wood County in West Virginia. EPA may designate some counties as partial non-attainment. EPA will make official designations in 2004. Washington County should monitor the EPA administrative actions carefully.

A *designation* is the term EPA uses to describe the air quality in a given area for any of six common pollutants known as *criteria pollutants*.

EPA designates an area as *non-attainment* if it has, or has contributed to, violations of the national 8-hour ozone standard over a three-year period. EPA also may designate an area as *attainment/unclassifiable*, if: 1) monitored air quality data show that area has not violated the ozone standard over a three-year period; or 2) there is not enough information to determine the air quality in the area.

In 2004, EPA will make final designations for areas across the U.S. for the 8-hour ozone standard. The designation process plays an important role in letting the public know whether air quality in a given area is healthy. Once designations take effect, they also become an important component of state and local governments' efforts to control ground-level ozone and may also impact certain funding programs.

EPA issued the 8-hour standard in 1997, based on information demonstrating that the 1-hour standard was inadequate for protecting public health. An area violates the standard if its fourth highest daily maximum 8-hour ozone average in a year, averaged over three consecutive years, is 0.085 parts per million or higher. The 1-hour standard also remains in effect at this time.

Ozone can irritate a person's airways, reduce lung function, aggravate asthma, and inflame and damage the cells lining the lungs. It also may aggravate chronic lung diseases like emphysema and bronchitis, may reduce the immune system's ability to fight off bacterial infections in the respiratory system, and long-term, repeated exposure may cause permanent lung damage. Washington County appears to have undetermined problems with air pollution; however it will be important to monitor air quality reports as the County and region continue to grow.

Local Contaminant Issues

Information contained in this section of the Report was contributed by members of the Steering Committee and included at the request of the Committee. Edwards and Kelcey cannot verify the accuracy of the information or any conclusions.

The environment of Washington County is relatively healthy, however, within the last three years the chemical Perfluorooctanoic acid, (C-8), has been discovered in several of the region's water wells. No serious health problems have been known to be caused by C-8 in humans. However, since 2001, the Environmental Protection Agency, and its counterpart in the State of West Virginia have been monitoring local water wells to determine if the level of C-8 changes.

C-8 has been detected in several public water systems. The discovery of the chemical in local water supplies in January 2002 prompted several government investigations into the possible health risks of the chemical.

C-8 has been detected in Little Hocking test wells in the amounts of 50 and 78 parts per billion; 150 parts per billion are designated as unsafe.

Perfluorooctanoic acid is known for its ability to contaminate air, water and soil and it is unusual in that it stays in the human body much longer than other chemical pollutants. In fact, in many cases C-8 stays within the body for over a year, while in contrast most chemicals are washed out of the body within eight weeks. While C-8 is not regulated by the government, in large doses it has been found to cause cancer in lab rats.

The Ohio Environmental Protection Agency (Ohio EPA) has collected air samples from a Total Suspended Particulate (TSP) monitor since November 2000. Ohio EPA staff reported that the monitor was sited in its current location in response to a citizen complaint, and not specifically to address exposures to specific emissions. The Ohio EPA was tasked with answering the question, "Do levels of metals in air pose a health risk to area residents?"

The Agency for Toxic Substances and Disease Registry (ATSDR), a public health agency of the U.S. Department of Health and Human Services, in February 2004 released its final public health consultation regarding Washington County Air Quality in Marietta, Ohio. On the basis of lack of data, the site is categorized

as an indeterminate public health hazard. ATSDR recommends that air modeling and additional air sampling be conducted to determine if there is contamination at levels that could cause adverse health effects.

- Available data suggest that metals in air, particularly arsenic and manganese (and to a lesser degree, chromium and cadmium) could potentially pose a threat to residents close to the facilities of concern because they exceeded health-based screenings values. However, at this time, the exposure is an indeterminate hazard (i.e., not enough information) because the locations for the air sampling data may not reflect the most highly exposed populations, and that data analysis has included a limited number of metals. As a result, the magnitude of exposures and the threat to public health is uncertain and inconclusive.
- Levels of particulates and volatile organic compounds are not present at concentrations of health concern at the current monitoring locations. However, no data are available to assess levels of these contaminants in areas closer to the industrial complex.

There are other air issues in the area. The Ohio River Valley Water Sanitation Committee found in 2002 that Marietta has a high concentration of PCBs. Washington County is one of 33 counties that failed to attain federal ozone standards, according to the recent Ohio EPA's report. According to the United States Environmental Protection Agency, Washington County ranked fourth in toxic air emissions in Ohio and 20th in the nation (of 2,472 counties) under the 2001 Toxic Release Inventory.

The Ohio Environmental Protection Agency is in the process of determining the source and risks posed by the elevated levels of PCB's. Polychlorinated biphenyls (PCBs) are a family of 209 individual chemical compounds for which there are no known natural sources. The production of PCBs was stopped in the United States in 1977 after low levels were proven to cause health problems. Marietta's PCB levels were tested in 2001 and 2002 by the Ohio River Valley Water Sanitation Committee (ORSANCO). In some instances their report showed Marietta samples were more than 10 times the readings of other sites, including highly industrialized areas of Pittsburgh, and in West Virginia: Weirton, Moundsville and Huntington.

The Ohio EPA has been reviewing the reports extensively, but said it has not received a request yet from Marietta officials or residents to look into the risks and possible source of PCBs.

All of the above are issues that can be resolved with positive citizen action, ongoing communication, and coordination with Federal and State regulating agencies.

PARKERSBURG-MARIETTA, WV-OH

Table 3.1 provides summary information for Metropolitan Statistical Area (MSA) 6020, PARKERSBURG-MARIETTA, WV-OH (See Figure 3.4). Table 3.2 also provides detailed information on PM-10 concentrations reported at the Wood County WV Monitoring station. There is also a station at Sharpsburg, Ohio. However, information was not available for this report.

A glossary provides an explanation of key terms reported in the MSA tables.

Table 3.1
MSA Summary Information

PM-10 Concentration	
1990-1994 Average Annual Mean:	27.2
Rank by PM-10 Concentration:	107 of 239
Mortality Attributable to Air Pollution	
Risk Ratio for Cardiopulmonary Mortality:	1.08
Adult Cardiopulmonary Attributable Deaths:	60 (36-83)
Attributable Deaths per 100,000 Population:	37
Rank by Number of Attributable Deaths:	154 of 239
Rank Attributable Death Rate:	85 of 239
Mortality (1989 data)	
Total Mortality:	1,527
Adult Cardiopulmonary Deaths:	779
Auto Accident Deaths:	30
Population (1980 data)	
Total Population:	163,000
Counties Assigned to MSA	
Washington Co, OH	
Wirt Co, WV	
Wood Co, WV	
Pleasants County, WV	

Table 3.2

Monitoring Station Location (State, County, City, Address)	Average Annual Mean PM-10 Concentration (1990-1994)	Peak 24-Hour PM-10 Concentration	Year of Peak Reading	Number of Years of Data
Wood County NEALE SCHOOL VIENNA WV	27.2	58	1992	1
Notes:				
	Annual Mean PM-10 Concentration	24-Hour PM-10 Concentration		
National Ambient Air Quality Standards:	50	150		
California Ambient Air Quality Standards:	30	50		
NRDC Recommended Standards:	17	33		
All PM-10 concentrations are reported in (ug/m³).				
Bold designates PM-10 Hotspots, individual monitoring stations among the top 50 annual mean concentrations in the U. S. (There were none in this MSA.)				
<i>Italic</i> designates PM-10 Hotspots, individual monitoring stations among the top 50 24-hour concentrations in the U. S. in 1994. (There were none in this MSA.)				
Peak 24-hour PM-10 concentration reported is the highest value of the 2nd highest 24-hour concentration reported during a year for which data is available.				
Metropolitan Statistical Areas are as defined by the Office of Management and Budget for 1980, except for New England, where areas are New England County Metropolitan Areas.				

GLOSSARY FOR MSA TABLES

This glossary provides an explanation of key terms reported in the MSA tables.

Each table provides summary information for the Metropolitan Statistical Area as a whole, and detailed information on PM-10 concentrations reported at individual monitoring stations within the MSA.

Tables for specific MSAs are from the May 1996 report by the Natural Resources Defense Council, *BREATH-TAKING: Premature Mortality Due to Particulate Air Pollution in 239 American Cities*. The report estimates that approximately 64,000 premature deaths from cardiopulmonary causes may be attributable to particulate air pollution each year.

PM-10 Concentration

This is the average of the annual mean concentration of PM-10 reported at all official monitoring stations within the MSA over the five year period, 1990 through 1994. PM-10 is particulate matter 10 microns or smaller in diameter. Concentrations are reported in $\mu\text{g}/\text{m}^3$.

The rank compares the average annual mean PM-10 concentration of this MSA with the 239 MSAs for which we have data. A rank of 1 indicates the highest concentration.

Mortality Attributable to Particulate Air Pollution

The risk ratio presents the relative risk of premature mortality from cardiopulmonary causes for residents of this MSA compared to residents of the cleanest city studied.

The risk ratio was calculated by combining the MSA-specific monitoring data with a risk factor derived from a study of an American Cancer Society (ACS) cohort (Pope, C. Arden, III, et al, "Particulate Air Pollution as a Predictor of Mortality in a Prospective Study of U.S. Adults," *American Journal of Respiratory Critical Care Medicine*, Vol. 151: 669-674, 1995.).

For each MSA, we present a point estimate of annual adult cardiopulmonary deaths attributable to air pollution, and a range. The point estimate is derived by applying the MSA-specific risk ratio to the actual number of annual deaths from cardiopulmonary causes in that MSA. The range estimates are derived from the upper and lower end of the confidence intervals for the risk ratio reported in the ACS study.

The rank compares the number of deaths attributable to air pollution to other MSAs, with a rank of 1 assigned to the city with most attributable deaths. The rate per 100,000 reflects the mortality attributable to particulate air pollution per 100,000 population, and the rank relative to other cities.

Mortality

To put the air pollution attributable deaths into perspective, we provide data on the actual number of deaths for each MSA, from selected causes and for total mortality. All data are for 1989, and are derived from the Vital Statistics report of the National Center for Health Statistics. In addition to total mortality, we report MSA statistics for total adult cardiopulmonary deaths and for deaths from car accidents.

Population

MSA population for 1980 is listed to provide a comparison with other MSAs of the same general size.

Counties Assigned to MSA

These are the counties, and in some cases cities, areas included in the MSA, as defined by the Office of Management and Budget for 1980, except for New England, where areas are New England County Metropolitan Areas. These were the definitions used in our analysis, for consistency with the mortality data. They are not necessarily the current definitions.

Monitoring Stations

All monitoring data is from the EPA AIRS database. We identify the location and report data from the official government monitoring networks, NAMS and SLAMS.

The monitoring stations are listed in order by state (if a multi-state MSA), County, and city, if available. The street address or location of each monitor is identified. Of special interest are monitors located at schools or other public buildings. Monitors were excluded if there were incomplete readings, or if the monitors were located in rural, forested areas.

The average annual mean PM-10 concentration is reported for each monitoring station, along with the number of years for which data were available. This data can be compared with the average annual mean reported for the MSA as a whole.

The peak 24-hour PM-10 concentration is the second highest 24-hour concentration during a year for which data was available for this monitoring station. The year of the peak reading is also identified.

PM-10 Hotspots

We identify as hotspots the top 50 monitoring stations in the U.S. that reported the highest average annual mean concentrations of PM-10 for the period 1990-1994, and the top 50 monitoring stations that reported the second highest 24-hour PM-10 concentration in 1994.

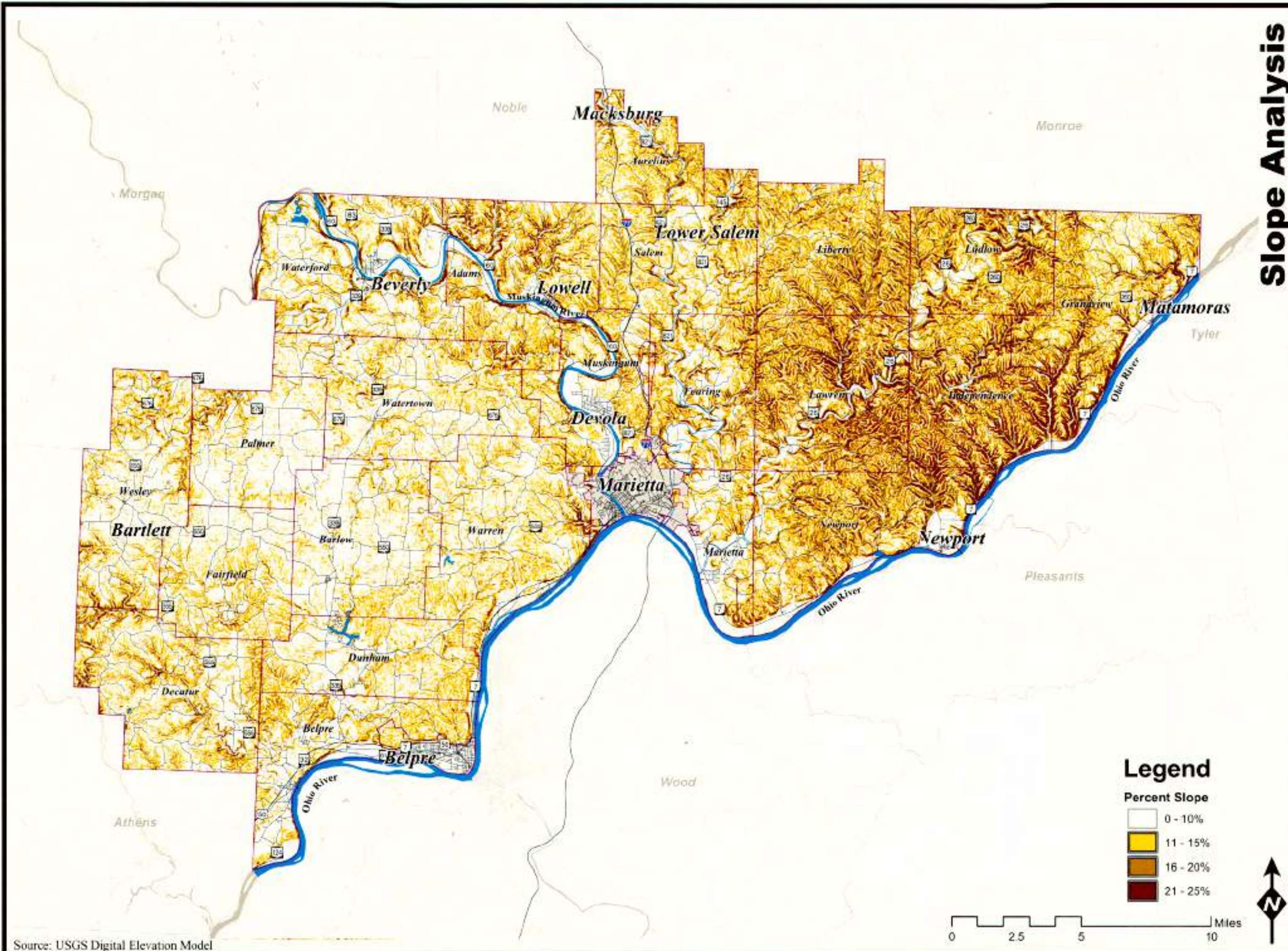
PM-10 Standards

The Notes provide reference levels of annual mean and 24-hour PM-10 concentrations to compare with the values reported for the MSA and for each monitoring station.

The National Ambient Air Quality Standards are the concentration levels established by U.S. EPA in 1987. EPA is now considering revisions to the standards to reflect the recent scientific evidence showing associations with premature death and illness at much lower concentrations.

The California Ambient Air Quality Standards are set at levels one-third the EPA standards.

The NRDC recommended standards represent the PM-10 levels that NRDC is advocating for the revised National Ambient Air Quality Standards. NRDC is also advocating that EPA establish new standards for fine particles. The PM-2.5 standards advocated by NRDC are $10 \mu\text{g}/\text{m}^3$ annual mean concentration, and $20 \mu\text{g}/\text{m}^3$ 24-hour average. These recommendations are based on levels at which adverse effects are reported in the epidemiological studies.



Source: USGS Digital Elevation Model

Slope Analysis

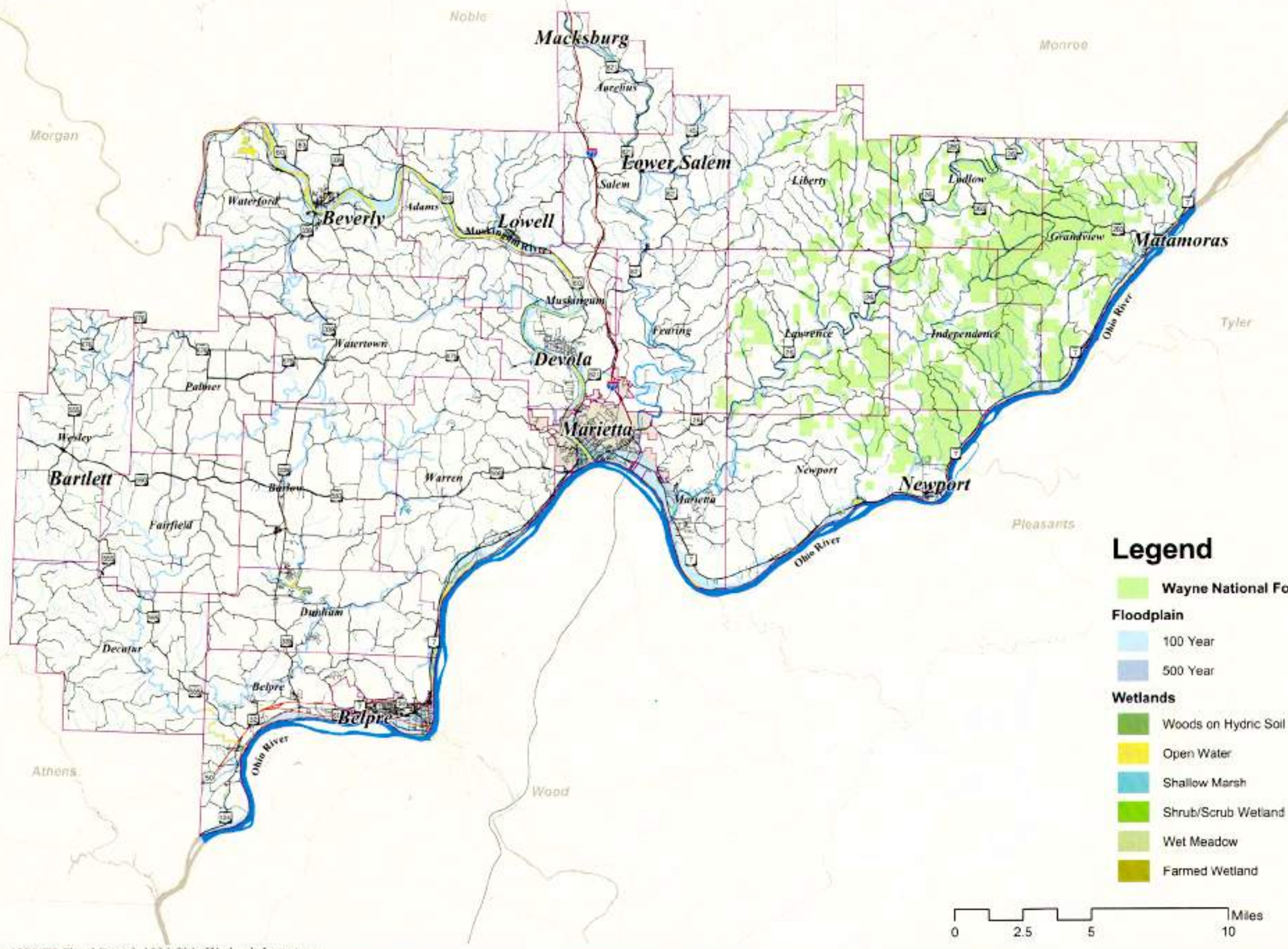
Figure 3.1

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December, 2003

Washington County, Ohio Comprehensive Plan





Source: FEMA - 1996 Q3 Flood Data & 1986 Ohio Wetlands Inventory

Environmental Constraints

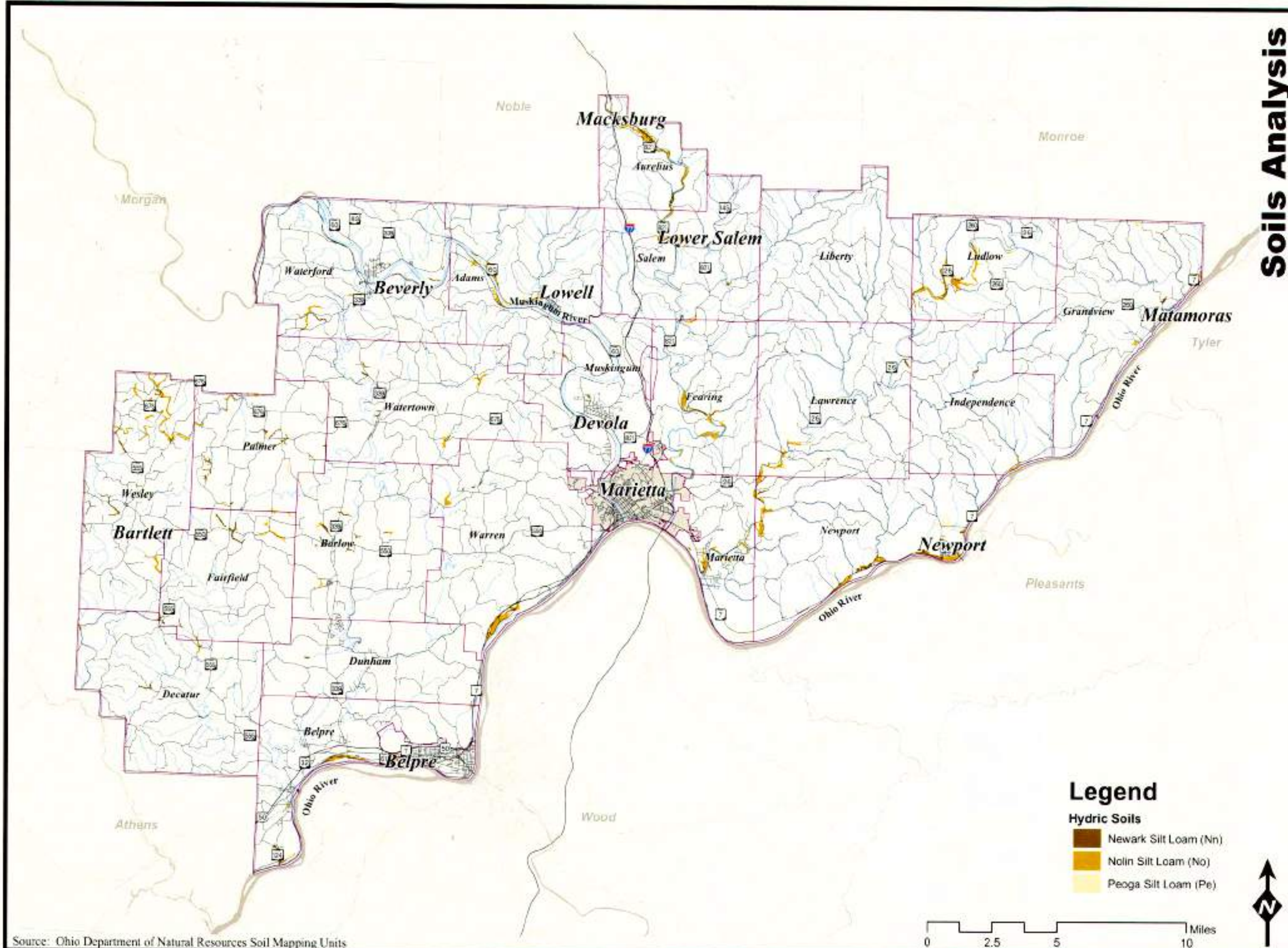
Figure 3.2

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Soils Analysis

Figure 3.3A

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Washington County, Ohio Comprehensive Plan



Source: Ohio Department of Natural Resources Soil Mapping Units



Metropolitan Statistical Area



Washington County, Ohio Comprehensive Plan

Figure 3.4



February, 2004

Existing Land Use

The existing land use map (Figure 3.5) provides a snapshot of Washington County, showing how each parcel of land is currently being used. The map illustrates current development patterns in the County.

The map was created using Geographic Information System and aerial photography information from Washington County. Additional parcel information was obtained from Washington County and field verification. This understanding of the current land composition provides a basis on which to build future development policies.

Existing land uses¹ are mapped under several categories that describe their current condition. The categories are descriptive only and do not necessarily reflect the zoning of the property. The categories used in the process of building the database are as follows:

- **Agricultural:** Agricultural areas maintained as farmland or for the raising of livestock including farmland that may qualify for Current Agricultural Use Value (CAUV) from the State of Ohio².
- **Single Family Residential:** Residential areas that contain a single-family dwelling. It can be either detached or part of a subdivision development.
- **Multi-Family Residential:** Multi-family areas refer to two and three family dwellings and apartments.
- **Commercial/Office:** Commercial areas are those characterized by typical retail stores, personal services, and business-related development such as lodge halls and amusement parks, office uses, and any large or small scale complexes that typically operate as sources of employment, professional, and administrative functions.
- **Parks:** Parks areas refer to those specifically structured for active and/or passive recreational uses. Recreation includes both public uses, such as parks, and private uses such as golf courses.
- **Woodland:** Undisturbed woodland areas such as the Wayne National Forest are a major recreational use within Washington County.
- **Industry:** Manufacturing areas include manufacturing uses that operate in the production or assembly of goods from raw or previously manufactured components and exhibit no external off site impacts. Industrial

¹ These land use designations are not intended to represent property boundaries, tax status or current zoning districts. They reflect only the observed land use conditions as of August 2002.

² Current Agricultural Use Value (CAUV) is a differential real estate tax assessment program which affords owners of farmland the opportunity to have their parcels taxed according to their value in agriculture, rather than full market value. It is the result of a referendum passed by Ohio voters in November, 1973. The Ohio General Assembly subsequently passed Senate Bill 423 in April, 1974, establishing CAUV Program by law.

To qualify for use value assessment, a landowner must devote the parcel "exclusively to agricultural use," as stated in Section 5713.30 of the Ohio Revised Code (ORC). By definition, this means "tracts, lots, or parcels of land totaling not less than 10 acres that...were devoted exclusively to commercial animal or poultry husbandry, aquaculture, apiculture, the production for a commercial use of field crops, tobacco, fruits, vegetables, nursery stock, ornamental trees, sod, or flowers, or the growth of timber for a noncommercial purpose, if the land on which the timber is grown is contiguous to land that is already eligible for CAUV. An owner of farmland may also qualify for CAUV if, "such land has been lying idle or fallow for up to one year and no action has occurred to such land that is either inconsistent with its return to agricultural production or converts the land devoted exclusively to agricultural use..." [ORC 5713.30(A)(4)] The CAUV program has enrollees in each of Ohio's 88 counties.

areas represent any area occupied by businesses whose primary operation involves warehousing, manufacturing, assembling, distributing, packaging or processing goods

- **Institutional:** Institutional areas refer to any public or semi-public facilities, such as schools, churches, hospitals, libraries, and governmental complexes. Institutional uses are mostly accessible to the public.
- **Vacant:** Vacant areas represent land that is not observed as being occupied by any other land use type listed above.
- **Undetermined:** Undetermined uses represent land that is not observed as any type of use but is not being occupied by any other land use type listed above.

Zoning in Washington County is confined to the Cities of Marietta and Belpre and the eastern portion of Muskingum Township. Land uses were identified and categorized according to standards that are used throughout the State. Zoning is an important tool in implementing any land use plan because it establishes the legal mechanisms on how private property is used. The breakdown of the existing land use characteristics for Washington County is shown in Table 3.3. Woodland is the largest land use category comprising 71.8% of the County's total acreage.

The second and third largest categories are Agriculture (24.2%) and Single-Family Residential (2.8%) respectively. The majority of farmland in the area is in the form of pasture land.

Recreation, Commercial/Office, Industry, Institutional, Undetermined, and Vacant land uses equal less than one percent each, of the total acres within Washington County. Multi-Family Residential is the smallest land use category in the County and equals zero percent of the total acreage. Commercial represents only .2% of the total land area in the County.

Table 3.3
Breakdown of the Existing Land Use Characteristics

Existing Land Use	Acres	%
Single-Family Residential	11,282	2.8%
Multi-Family Residential	28	0.0%
Recreation	579	0.1%
Commercial/Office	704	0.2%
Industry	2,173	0.5%
Institutional	395	0.1%
Agriculture	96,122	24.2%
Undetermined	498	0.1%
Vacant	957	0.2%
Woodland	285,296	71.8%
Total	398,034	100.0%

Agriculture Profile

The agricultural uses of Washington County are field crops, pastures, and specialty crops. Nearly one fifth of the land area in Washington County is used for pastures. According to the Ohio Department of Agriculture, Washington County has experienced a decreasing number of farms from 1980 -2002. In 1980 there were 1,070 farms with only 990 active farms in 2002. The average size of the farm remained the same at an average of 145 acres from 1980 to 2002. However the total land area for farming was reduced from 167,000 acres in 1990 to 144,000 acres in 2002. This number is decreasing incrementally by 2,000 acres every year. Dairy and Milk farms and cattle and calf farms account for half of the cash receipts for farms in Washington County. Over 50% of the farm operators are between 45 and 64 years of age, the average age is 55.1 years.

Growth Density Patterns

To better understand and evaluate the growth patterns and densities in Washington County, we used the address density map prepared by the Washington County Tax office to portray the address of both commercial and residential development throughout the County to date. The new addressing system was coordinated through Washington County as a result of an update in the Emergency 911 response to rural addresses throughout Washington County. The program was initiated two years ago. The address density mapping includes both commercial and residential addresses in Washington County. The map is a representation of all addresses that exist in the County to date in the rural areas including all townships. The County is in the process of coordinating the addresses from the incorporated areas into the new mapping system. Figure 3.6 shows the density patterns occurring throughout the County through November 2002.

The densest areas are located in proximity to Marietta and the major thoroughfares: I-77 and State Route 7. The townships that contain the highest density of addresses include the following: Waterford, Adams, Salem, Belpre, Dunham, Barlow, Warren, Muskingum, Marietta, Newport, and Grandview. Existing within these townships is a number of villages, for example: Beverly, Lowell, Lower Salem, and Matamoras.

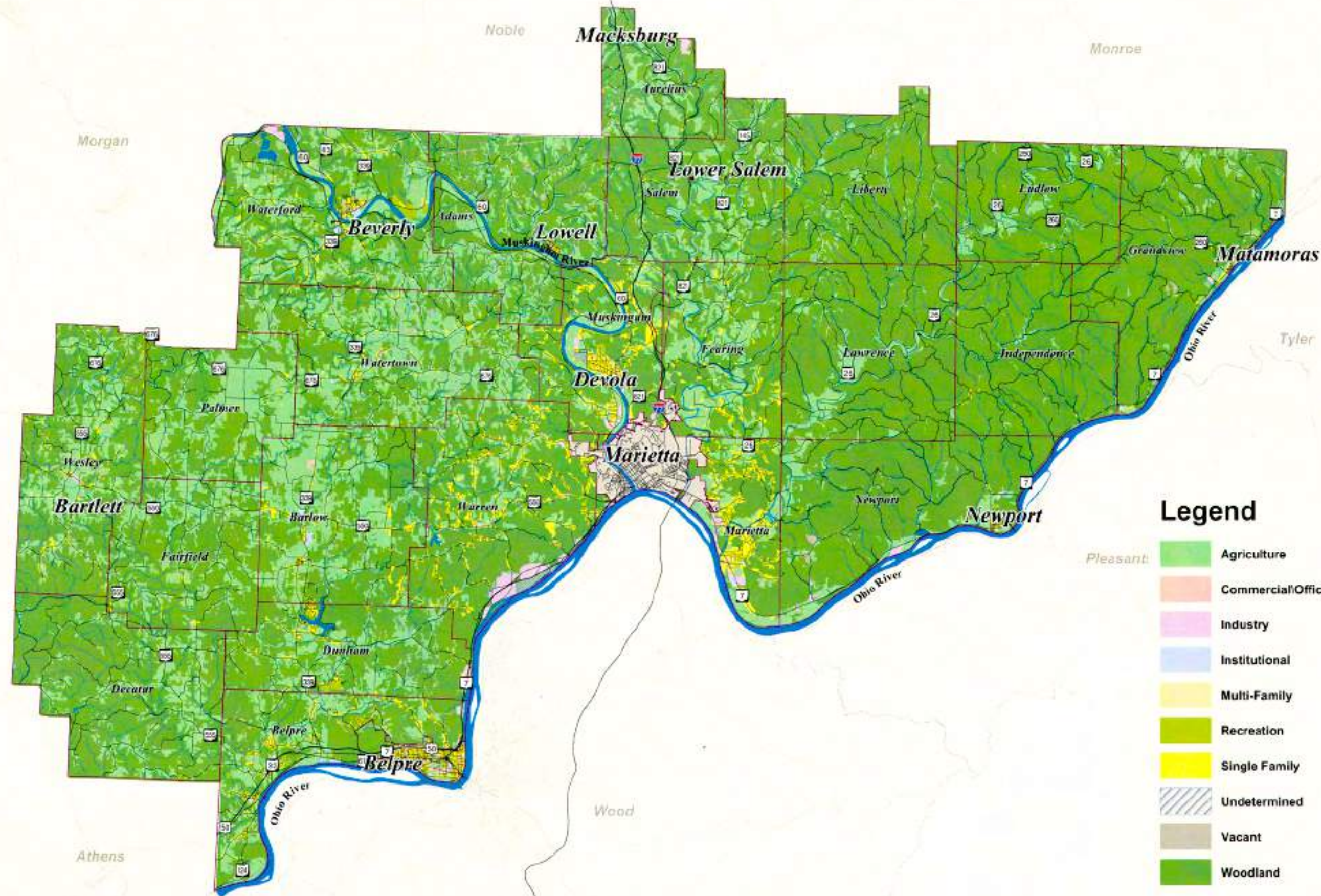
Historical Land Uses

A historical land use map from 1980 is included in Figure 3.7. It was prepared using the same land use categories in the existing land use map. Comparing the land use map from 1980 to the current land use map, the following depict the differences in the growth of land use patterns throughout the County:

- Decrease in agricultural land uses;
- Increase in single family residential uses;
- Increase in commercial development; and
- Decrease in industrial uses.



The land use areas were not calculated for the 1980 land use map. The comparisons are drawn from general visual observations.



Existing Land Use

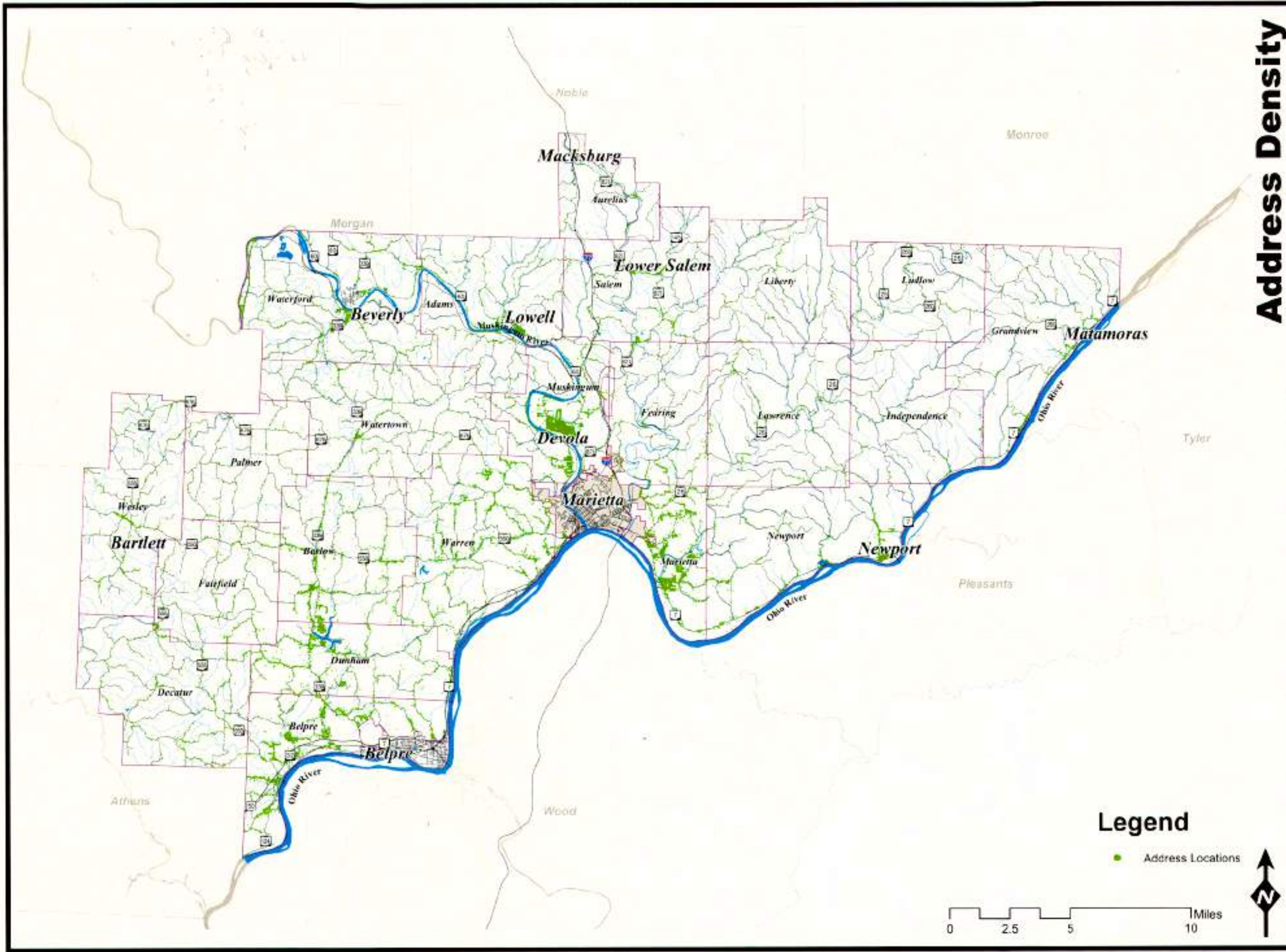
Washington County, Ohio Comprehensive Plan

Figure 3.5

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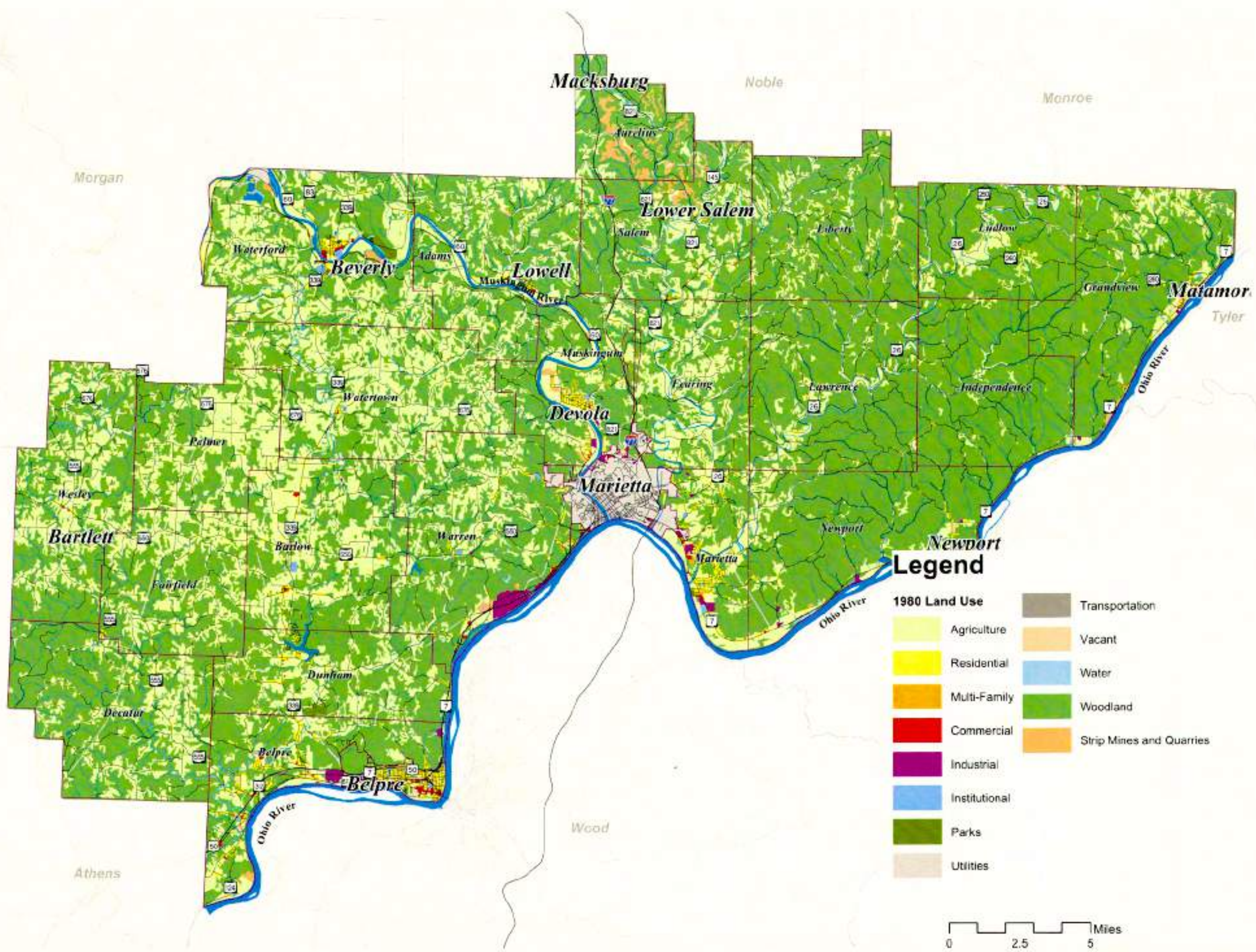
Washington County, Ohio Comprehensive Plan

Figure 3.6

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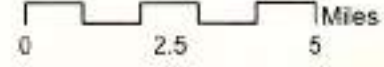
December, 2003





Legend

1980 Land Use	
	Agriculture
	Residential
	Multi-Family
	Commercial
	Industrial
	Institutional
	Parks
	Utilities
	Transportation
	Vacant
	Water
	Woodland
	Strip Mines and Quarries



Historical Land Use



**Washington County, Ohio
Comprehensive Plan**

Figure 3.7

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December, 2003

Population Analysis

The number of persons in Washington County and their general characteristics are important to many parts of the comprehensive planning process. Data and analysis concerning the size, composition and distributions of the present population and a projection of future population for the County provide a foundation for evaluating future requirements for housing, schools, recreational activities and other community facilities. Data in this section is primarily derived from the 1990 and 2000 U.S. Census.

For the purposes of a long-range Comprehensive Plan, the 2000 Census is presumed to present a reasonably accurate depiction of current conditions in United States cities, counties and states.

An important component of the Washington County Comprehensive Plan is projecting future local population. The number of people living in Washington County today and the change over time will determine demand for additional land for development, housing, and public services.

This section examines population data from the 1990 Census and the 2000 Census. It also evaluates three different population projection methods in order to estimate the County's population in 2020. This section also looks at the trend of population shifts in townships for Ohio as a whole as compared to Washington County.

Information contained in this report includes:

- 2000 Census information (population, race, gender, age, education, income, housing);
- 1990 Census information (population, race, gender, age);
- A comparison of Washington County to the State of Ohio (general population information, gender, age, race);
- Trends in Washington County (demographic, economic);
- Population projections for Washington County (initial population);
- A comparison of projections for Washington County;
- The economic structure of Washington County; and
- Unemployment rates for Washington County compared to the State of Ohio.

Data sources used for this report include:

- U.S. Census Bureau 2000, 1990;
- The Ohio State University Extension;
- Department of Human and Community Resource Development at The Ohio State University;
- Ohio Agricultural Research and Development Center; and
- Woods and Poole Economics, Inc.

Table 3.4
2000 Census Information for Washington County

Population Information (General):	Washington Co.	State of Ohio
Population 2000	63,251	11,353,140
Population, percent change, 1990 - 2000	1.6 %	4.7 %

Population Information (Age):	Washington Co.	State of Ohio
Persons under 5 years old	5.8 %	6.6 %
Persons under 18 years old	23.5 %	25.4 %
Persons 65 years old and over	15 %	13.3 %

Population Information (Race):	Washington Co.	State of Ohio
White persons	97.3 %	85.0 %
Black or African American persons	0.9 %	11.5 %
American Indian and Alaska Native persons	0.2 %	0.2 %
Asian persons	0.4 %	1.2 %
Other	0.1 %	0.8 %

Population Information (Gender):	Washington Co.	State of Ohio
Female persons	51.4 %	51.4 %
Male persons	48.6 %	48.6 %

1990 Educational Information (General):	Washington Co.	State of Ohio
High school graduates, persons 25 and over	77.9%	75.8%
College graduates, persons 25 and over	13.3%	17.0%

Housing Information:	Washington Co.	State of Ohio
Housing Units	27,760	4,783,051
Homeownership rate	76.3 %	69.1 %
Households	25,137	4,445,773
Persons per household	2.45	2.49
Households with persons under 18	33.3 %	34.5 %

Income Information (1997 estimate):	Washington Co.	State of Ohio
Median household money income	\$33,426	\$36,029
Persons below poverty	12.3 %	11.0 %
Children below poverty	17.4 %	16.0 %

Table 3.4 (Continued)

Business Information:	Washington Co.	State of Ohio
Private nonfarm establishments (1999)	1,552	270,766
Private nonfarm employment (1999)	22,025	4,867,368
Retail sales (1997) (\$1000)	1,900,923	241,902,924
Federal funds and grants (2000) (\$1000)	275,753	57,354,920
Local government employment (1997)(full-time)	2,223	421,092

Geography Information:	Washington Co.	State of Ohio
Land area (square miles)	635	40,948
Persons per square mile	99.6	277.3

Table 3.5
1990 Census Information for Washington County

General Information:	Washington County
Total population	62,254
Total male population	30,004
Total female population	32,250
Persons 18 and under	15,968
Persons 65 and over	8,502
Persons living in households	60,708
Persons per household	2.57
Total White population	61,129
Total Black population	774
Total American Indian, Eskimo, or Aleut	111
Total Asian or Pacific Islander population	185
Other race	55

Chart 3.1
Demographic Trends in Washington County

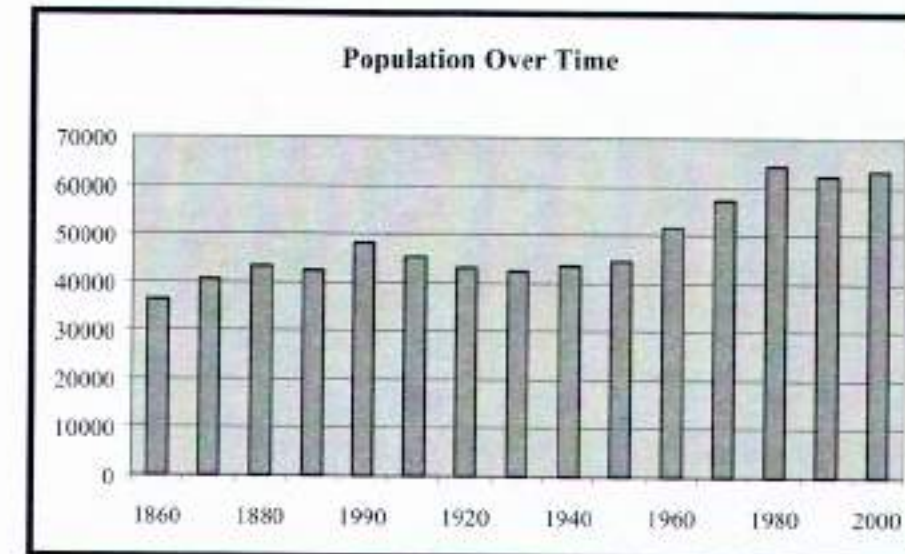


Table 3.6
Demographic Trends in Washington County

Year	Population for Washington Co.	% Change in Washington Co.	% Change for State of Ohio
1960	51,689	17 %	18 %
1970	57,160	11 %	9 %
1980	64,266	13 %	2 %
1990	62,254	-3 %	1 %
2000	63,251	1.6 %	4 %

Source: U.S. Census

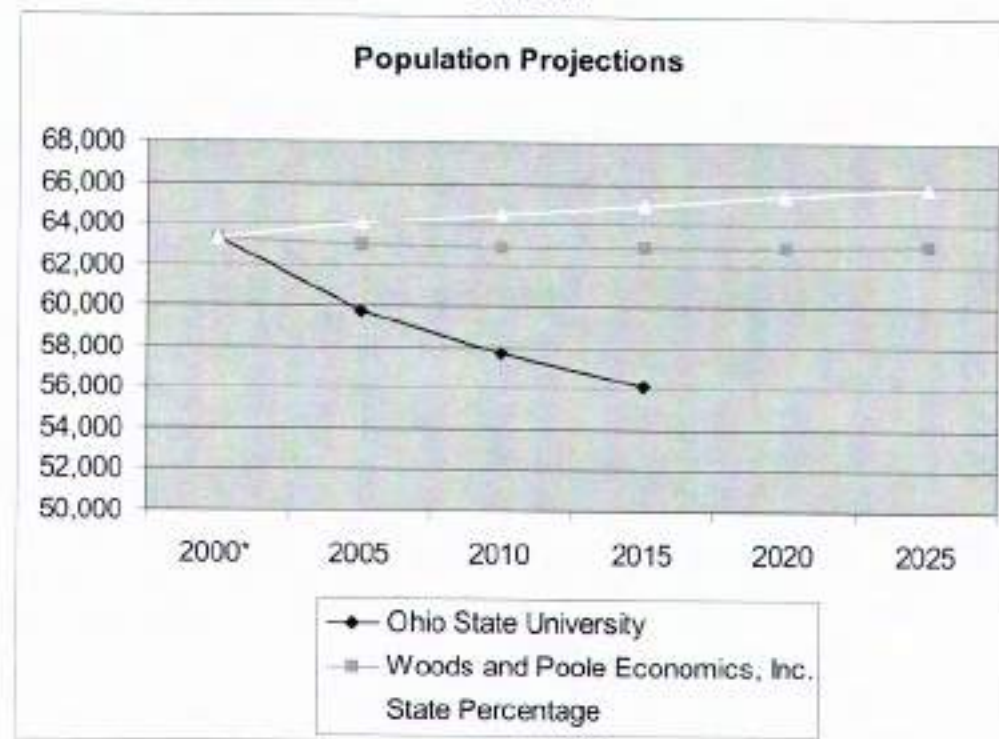
Population Projections

Projected Population Change, 2000 to 2025

Population projections provide a key element of the information required for comprehensive planning by allowing planners to anticipate the amount of additional population that may be expected to occur in Washington County during future years. For the sake of this Plan, population projections have been drawn from the Ohio Department of Development, Office of Strategic Research. The following tables identify the projected future population of Washington County. Chart 3.2 provides the same projections for Washington County using all three studies.

The following chart and table compare the three population projections. The OSU and the Woods and Poole Economics, Inc. projections have been adjusted to account for the actual 2000 U. S. Census population count for Washington County.

Chart 3.2



- The Ohio State University Department of Human and Community Resource Development (OSU) prepare County population projections as part of general County profiles. As illustrated above, OSU predicts a significant decrease in population in Washington County over the next fifteen years, from 63,251 people to 56,100.

Table 3.7
Population Projections (Ohio State University)

Year	Projections for Washington Co.	% Change in Washington Co.	% Change in Ohio
1990	62,254	-	-
1995	62,400	0.25 %	2.4 %
2000	60,700	-0.5 %	1.6 %
2005	59,700	-0.5 %	2.0 %
2010	57,700	-0.5 %	1.9 %
2015	56,100	-0.5 %	2.7 %

- Woods and Poole Economics, Inc. prepares detailed population and demographic reports for counties across the United States. Their projection for Washington County indicates effectively a flat population curve, with neither a significant gain nor decline. According to Woods and Poole Economics, Inc., the population in 2025 will be 62,950—a slight decrease from the 2000 Census count.

Table 3.8
Population Projections (Woods & Poole Economics, Inc.)

Year	Population	Employment	Households	Persons Per Household
1970	57,330	23,740	17,730	3.13
1980	64,280	27,010	22,410	2.80
1990	62,240	29,870	23,700	2.56
1998	63,310	33,730	24,420	2.53
2000	63,040	34,480	24,360	2.52
2001	63,040	34,780	24,420	2.52
2002	63,020	35,060	24,480	2.51
2005	62,990	35,790	24,630	2.49
2010	62,890	37,100	24,800	2.46
2015	62,870	38,480	24,860	2.45
2020	62,880	39,950	24,770	2.45
2025	62,950	41,490	24,570	2.47

- The U.S. Census Bureau prepares population projections for each state. Using this data and assuming that Washington County maintains its present percentage of Ohio's total population (0.56%), the population will increase as the state's total population grows. Using this method, Washington County will have a population of 65,766 in 2025.

Table 3.9
Population Projections (State Percentage)

Year	Ohio	Washington Co.	Washington Co. Share
1970	10,652,017	57,160	0.54%
1980	10,797,630	64,266	0.60%
1990	10,847,115	62,254	0.57%
2000	11,353,140	63,251	0.56%
2005	11,428,000	63,977	0.56%
2010	11,505,000	64,428	0.56%
2015	11,588,000	64,893	0.56%
2020	11,671,000	65,358	0.56%
2025	11,744,000	65,766	0.56%

It is important to note that the OSU, Woods, and Poole Economics, Inc. projections were prepared before U.S. Census 2000 information was available. Therefore, the projections do not account for the slight increase between the years 1990 and 2000. However, the data indicates that, if the 2000 population increase is accounted for, Washington County's population is likely to continue its increase.

Table 3.10
Washington County Population Projections

	2000*	2005	2010	2015	2020	2025
Ohio State University	63,251	59,700	57,700	56,100		
Woods and Poole Economics, Inc.	63,251	62,990	62,890	62,870	62,880	62,950
State Percentage	63,251	63,997	64,428	64,893	65,358	65,766

* For the purposes of the comparison chart and graph, these projections were adjusted to the actual U.S. Census count for Washington County of 63,251 people.

Population Growth

Population in Washington County increased from 1990 to the year 2000 by 1.6%. The male gender increased 2.5% (30,000 to 30,750) and the female gender increased .4% (32,250 to 32,501). The overall number of persons under the age of eighteen decreased by 6.7% (15,968 to 14,891) and the number of persons over the age of 65 increased 11.3% (8,502 to 9,463). There was an increase in the number of households in Washington County by 6.4% from 1990 to 2000. On a positive note, the per capita income increased by 12.6% from 1990 to the year 2000.

It is important to note that Washington County's development activities over the next 20 years will impact the population trends. The County's desire to increase population, especially younger households, means the County should focus its development efforts on retaining and encouraging young households to move into the County.

Population Density

Figure 3.8 illustrates Washington County's population density in 2000 geographically. As this map demonstrates, Washington County's population densities range from low (0.00 persons per acre) to densely populated (6.28-68.65 persons per acre), with the lowest population density occurring in the rural areas of the County, namely the west and central portion and in the eastern portion where the Wayne National Forest is located. The higher populations occur in the incorporated areas - in Marietta, Devola, and Belpre. The majority of the County is populated in a very low density pattern with the majority of the populated land area having densities between .01 and .10 persons per acre. It is more difficult for areas with lower densities to support active parks, pedestrian activity and infrastructure improvements than more densely populated areas.

Population Sprawl

Indicators of sprawl are low population density, decentralized population, loss of functional open space, leapfrog development, and commercial strip development. Washington County has experienced all of these situations in its development and with a majority of its population living in the townships.

- More than 34% of Ohio's total population lived in Townships in 2000. This is an increase from 28% in 1960. This is a 6% increase over the 40 year period.
- Washington County is higher than this with 61% of its population living in Townships in 2000. This is an increase from 50% in 1960. This is an 11% increase over a 40 year period.

Given this trend and the interest of preventing sprawl, Washington County should make an effort to control the type and location of development.



Beverly, Ohio

Chart 3.3
Distribution of Ohio's Population by Place: 2000

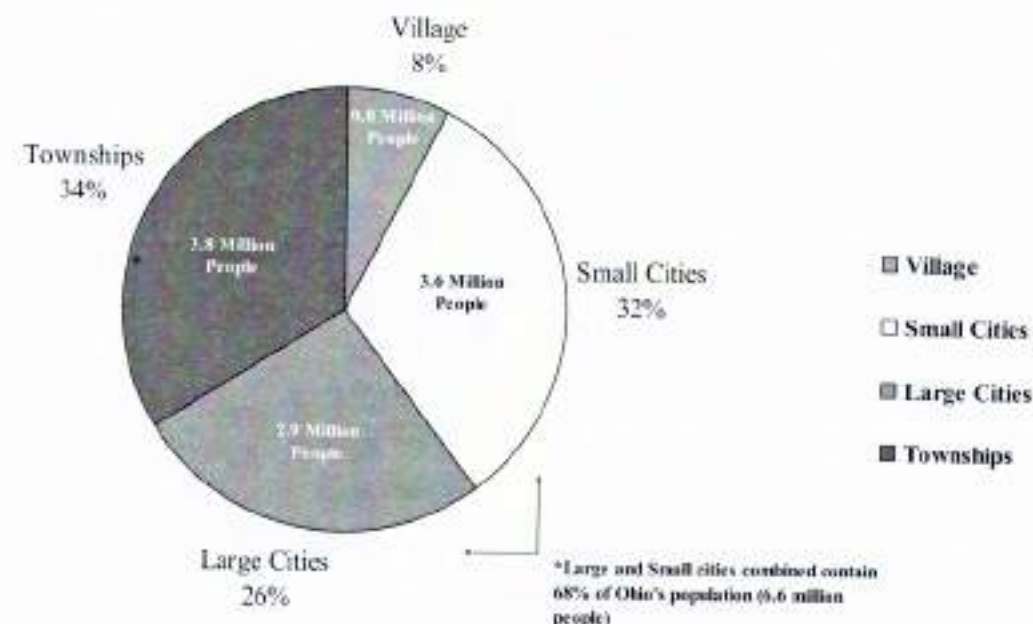


Chart 3.4 represents the change in population concentration in the State of Ohio from 1960-2000.

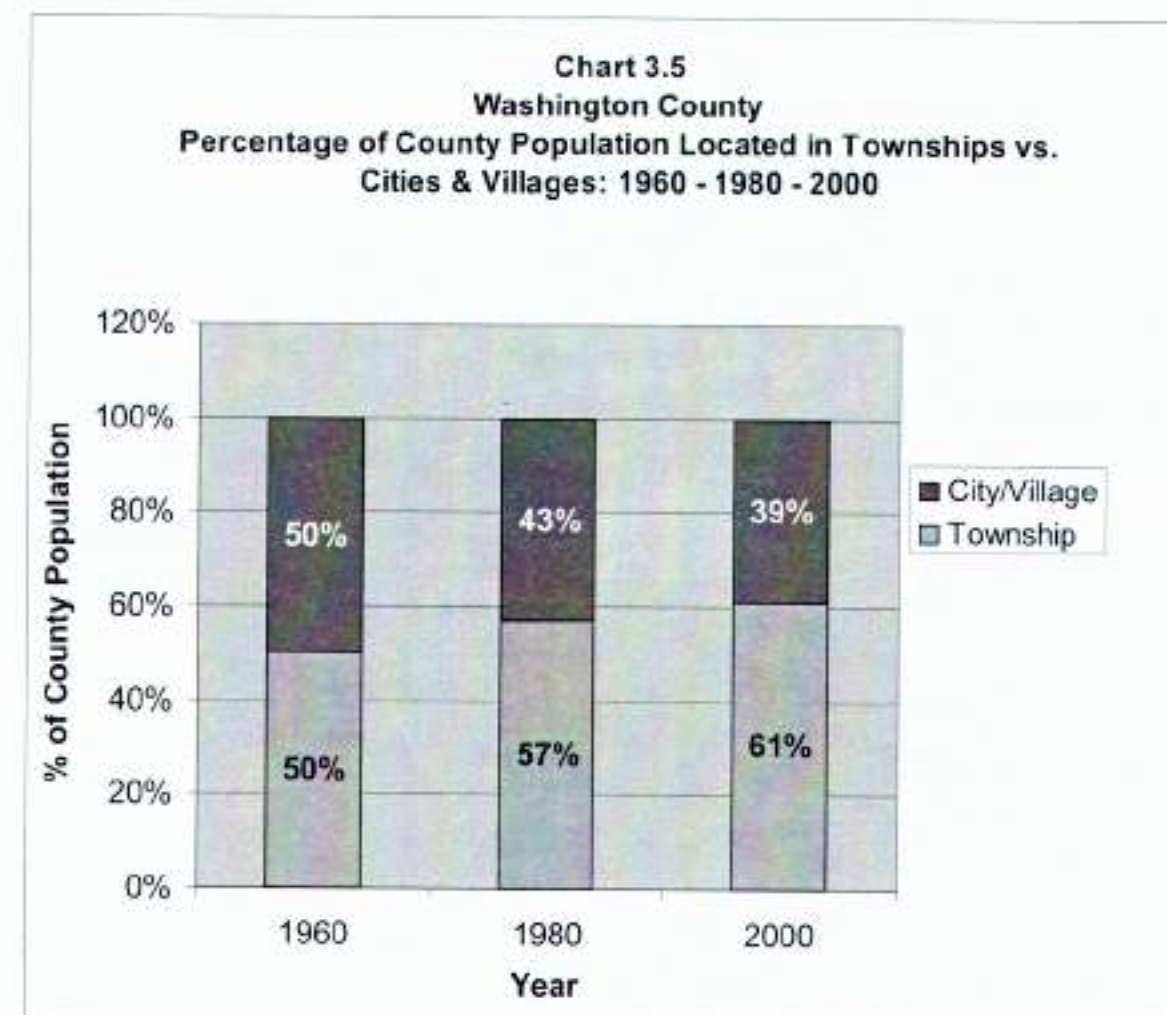
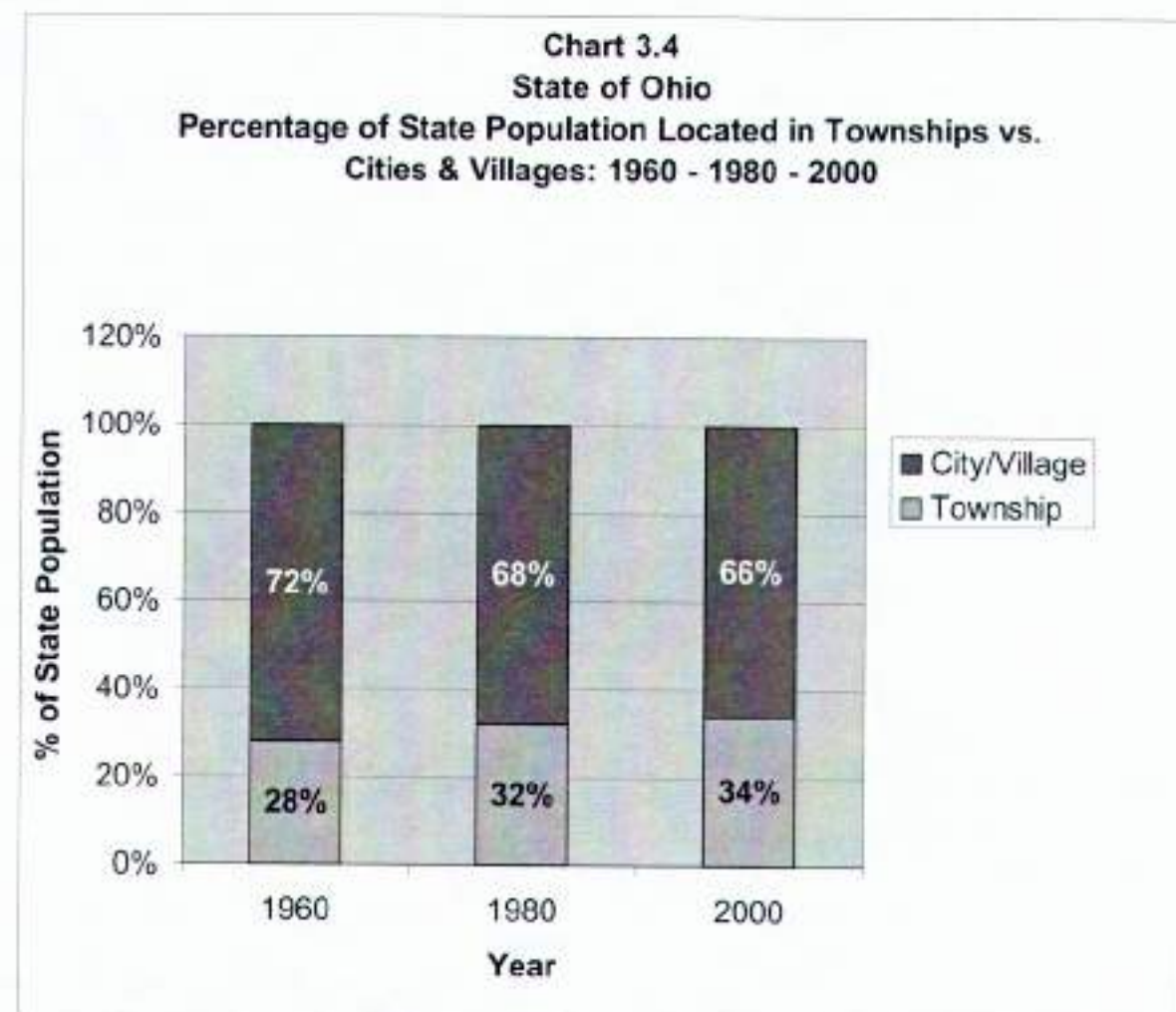


Chart 3.5 illustrates the population in Washington County in percentages as it is concentrated in Township areas, versus Cities and Villages for the State as a whole. In 1960, 28% of the State of Ohio population resided in Townships and 72% resided in Cities and Villages. In 1980 this trend changed slightly. Township population increased to 32% and City and Village population was reduced to 68%. In the year 2000, the Township population grew to 34% and the city and village population was reduced to 66%. In forty years, the population shifted in Ohio by 6% from living in Townships and the populations in Cities and Villages was reduced by 6%.

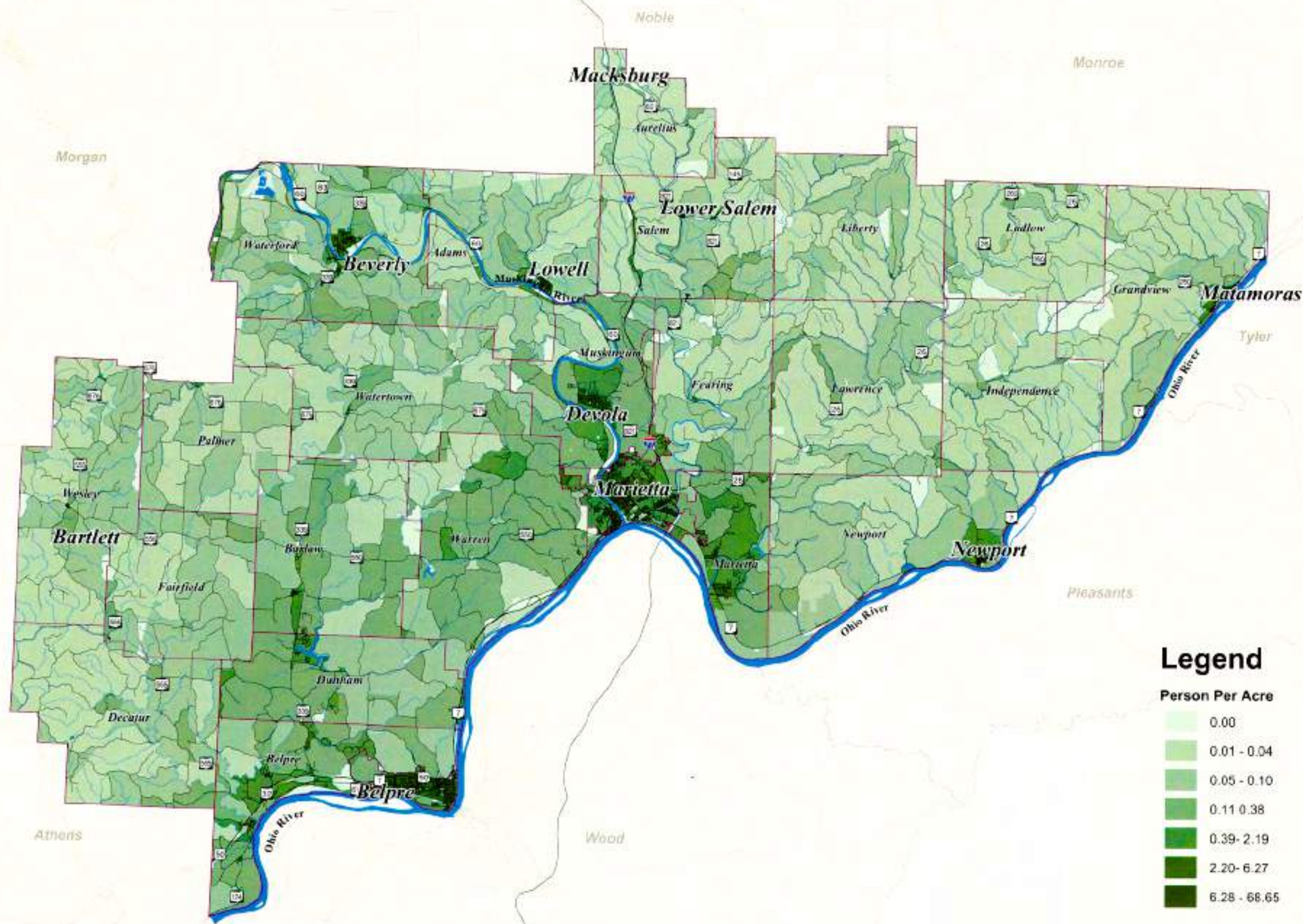
To compare this to Washington County, in 1960 the Township population represented 50% of the total County population. In 1980 this increased to 57% and further increased to 61% by the year 2000.

Table 3.11 presents the population for each Township in Washington County and gives the square miles or land area for each township.

Table 3.11
Land Area & Population Density 1960 to 2000

Township:	Land Area 2000		People per Square Mile			
	Sq. Miles	1960	1970	1980	1990	2000
Adams Township	30.9	28.5	33.6	38.0	36.4	38.9
Aurelius Township	13.9	24.5	18.9	17.5	16.3	17.2
Barlow Township	31.8	43.8	48.7	61.9	61.9	76.0
Belpre Township	24.0	77.0	105.7	177.3	171.8	174.7
Decatur Township	35.1	22.0	21.7	28.0	31.7	33.6
Dunham Township	23.4	44.4	63.0	87.3	95.0	107.1
Fairfield Township	24.6	23.1	24.5	31.5	35.5	41.1
Fearing Township	23.7	32.6	35.7	38.5	34.8	38.4
Grandview Township	34.8	30.7	31.4	27.1	27.7	25.2
Independence Township	28.5	19.2	18.2	16.1	12.6	13.6
Lawrence Township	35.2	23.1	22.4	25.0	25.1	27.2
Liberty Township	29.5	21.4	17.9	18.3	19.5	21.1
Ludlow Township	22.5	19.7	18.3	18.6	15.6	14.7
Marietta New Township	15.2	183.9	210.5	283.2	291.0	307.4
Muskingum Township	21.4	131.1	170.7	208.3	222.6	216.2
Newport Township	35.6	48.1	51.9	61.4	58.3	61.1
Palmer Township	22.4	17.8	18.6	24.3	26.7	27.9
Salem Township	27.8	32.6	32.3	35.1	36.7	36.7
Warren Township	37.6	50.5	65.6	95.9	103.0	107.6
Waterford Township	36.9	47.1	56.4	64.7	61.2	65.7
Watertown Township	36.5	32.7	35.5	40.2	41.0	42.8
Wesley Township	31.2	22.3	20.9	28.1	25.6	29.3
All Townships:	622.5	41.0	46.9	58.8	59.4	62.5
All Places:	12.7	2,980.5	3,210.5	3,190.3	2,118.2	1,917.6
County Total:	635.2	81.4	90.0	101.2	98.0	99.6

Table 3.11 illustrates the Land Area and Population Density from 1960 to 2000 for the Townships in Washington County, Ohio.



Source: U.S. Census Bureau - 2000 Census

0 2.5 5 10 Miles



Demographics - Population Density

Washington County, Ohio Comprehensive Plan



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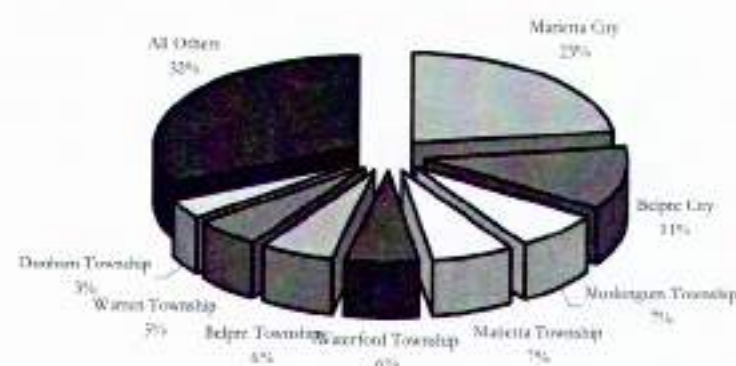
Figure 3.8

December, 2003

Housing Characteristics

According to the 2000 Census there were a total of 27,760 housing units in Washington County. Of these, 19,167 or 69% were owner occupied and 5,970 or 22% were renter occupied. The remaining 2,623 or 9% of the total housing stock was vacant. The highest concentration of housing units, 6,609 were in the City of Marietta (see Chart 3.6), followed by 3,283 in the City of Belpre, 2,016 in Muskingum Township, 2,003 in Marietta Township, 1,710 in Waterford Township, 1,702 in Belpre Township, 1,564 in Warren Township, and 1,001 in Dunham Township.

Chart 3.6
Breakdown of Washington County Housing Stock, by Place



Source: U.S. Census 2000

The total number of housing units in Washington County has continued to increase on an average of 8% each decade since 1980 (see Table 3.12), although the actual occupancy rate has decreased. In 1980 the housing occupancy rate was 94%, and in 2000 the rate dropped to 91%. The percentage of owner occupied housing units has been consistent at around 75%.

Table 3.12
Housing Occupancy Characteristics

HOUSING OCCUPANCY PAST 20 YEARS							
Year	Total # of Units	Occupancy Rate	Occupied # of Units	Owner Occupancy Rate	Owner Occupied	Renter Occupied	Vacant
1980	23,752	94%	22,358	75%	16,821	5,537	1,394
1990	25,752	92%	23,636	75%	17,614	6,022	2,116
2000	27,760	91%	25,137	76%	19,167	5,970	2,623

Source: Ohio Profiles Online

In 1999 18% of those that owned their home³ paid 35% or more of their household income in monthly owner costs (see Table 3.13). This is less than the state's 23% who paid 35% or more of their household income. Monthly owner costs include monthly mortgage amount(s) and monthly expenses for taxes, insurance, utilities and, when appropriate, condominium fees.

³ Specified owner-occupied housing units do not include mobile homes, houses with a business or medical office, houses on 10 or more acres and housing units in multiunit buildings.

Table 3.13
Selected Monthly Owner Costs as a Percentage of Household Income in 1999

	Washington County	%	Ohio	%
Total:	13,487		2,613,123	
Housing units with a mortgage:	7,919	59%	1,811,744	69%
Less than 10 percent	813	10%	138,119	8%
10 to 14 percent	1,786	23%	323,704	18%
15 to 19 percent	1,689	21%	401,993	22%
20 to 24 percent	1,260	16%	319,129	18%
25 to 29 percent	831	10%	206,327	11%
30 to 34 percent	451	6%	124,052	7%
35 to 39 percent	293	4%	75,444	4%
40 to 49 percent	279	4%	82,658	5%
50 percent or more	486	6%	133,746	7%
Not computed	31	0.4%	6,592	0.4%
Housing units without a mortgage:	5,568	41%	801,379	31%
Less than 10 percent	3,206	58%	375,080	47%
10 to 14 percent	1,066	19%	171,075	21%
15 to 19 percent	448	8%	91,118	11%
20 to 24 percent	289	5%	51,483	6%
25 to 29 percent	153	3%	30,301	4%
30 to 34 percent	63	1%	18,914	2%
35 to 39 percent	60	1%	12,153	2%
40 to 49 percent	47	1%	14,161	2%
50 percent or more	164	3%	26,091	3%
Not computed	72	1%	10,403	1%

Source: U.S. Census 2000

Twenty-six percent (26%) of renters paid 35% or more of their household income in gross rent (see Table 3.14)⁴, which is comparable to the state's 27%. Gross rent includes the contracted rent amount and an estimate of the average monthly utility expenses. Even more dramatic is the fact that 14% of the households in Washington County paid 50% or more of their income in gross rent in 1999.

Table 3.14
Gross Rent as a Percent of Household Income in 1999

	Washington County	%	Ohio	%
Total:	5,682		1,352,648	
Less than 10 percent	451	8%	96,617	7%
10 to 14 percent	851	15%	180,446	13%
15 to 19 percent	739	13%	207,391	15%
20 to 24 percent	666	12%	173,309	13%
25 to 29 percent	497	9%	136,816	10%
30 to 34 percent	363	6%	92,808	7%
35 to 39 percent	227	4%	63,903	5%
40 to 49 percent	476	8%	84,013	6%
50 percent or more	800	14%	222,838	16%
Not computed	612	11%	94,507	7%

Source: U.S. Census 2000

⁴ Specified renter-occupied housing units do not include 1-family houses on 10 or more acres.

The majority of the housing units (72%) were built prior to 1980 (see Table 3.15) with the 1970's being the peak decade for housing unit construction. Since the 1970's, unit construction began to decline until the past few years, which has seen a slight increase in housing units.

Table 3.15
Year Housing Structure Built

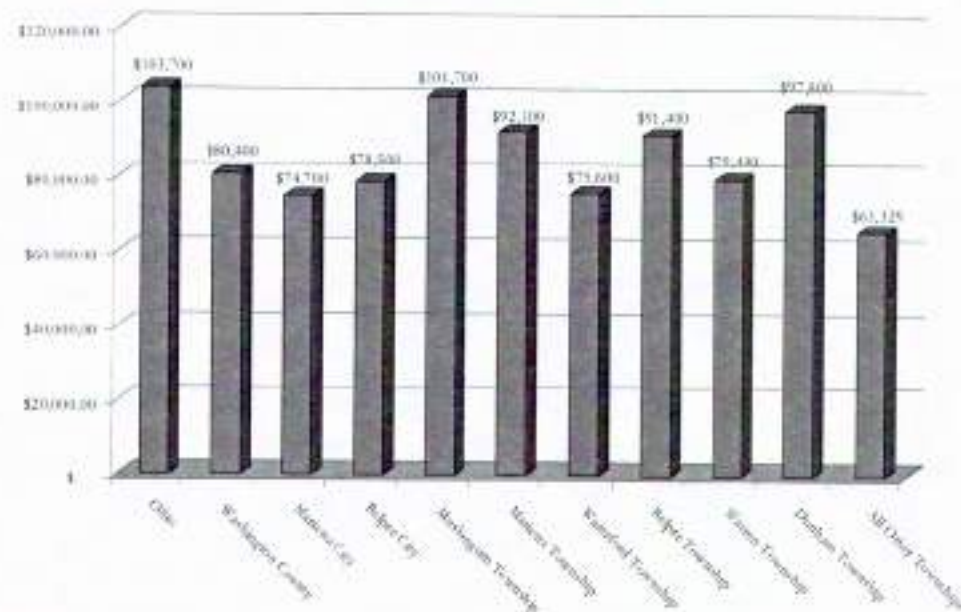
	Washington County, Ohio	Percent
Total:	27,760	
Built 1999 to March 2000	441	2%
Built 1995 to 1998	1,731	6%
Built 1990 to 1994	1,596	6%
Built 1980 to 1989	3,875	14%
Built 1970 to 1979	5,255	19%
Built 1960 to 1969	3,401	12%
Built 1950 to 1959	3,228	12%
Built 1940 to 1949	1,549	6%
Built 1939 or earlier	6,684	24%

Source: U.S. Census 2000

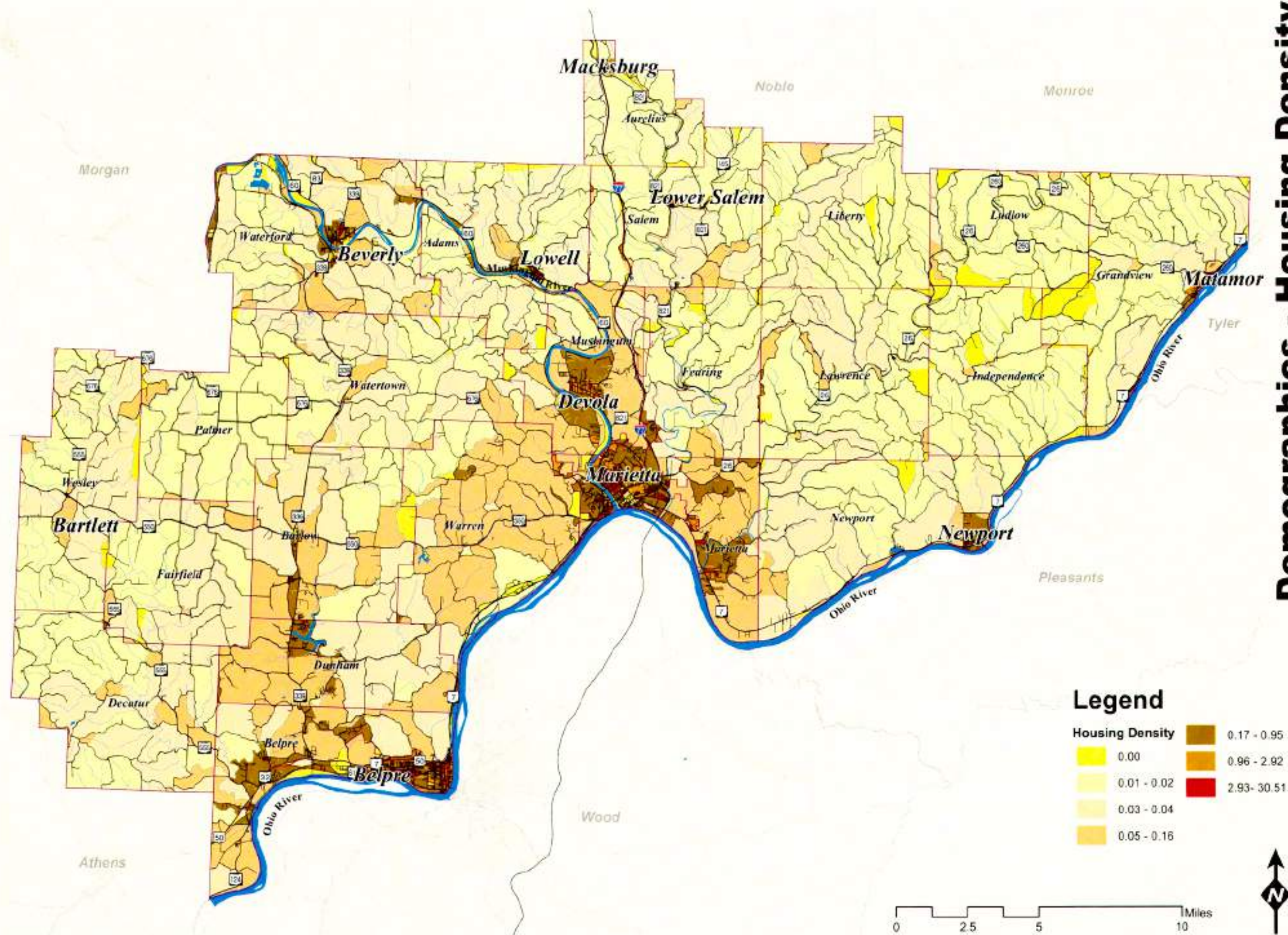
According to the 2000 Census, the median home value for homes in Washington County was \$80,400 which is below the state median of \$103,700 (see Chart 3.7). Homes in Muskingum, Dunham, Marietta, and Belpre Townships have the highest median values in the County ranging from \$91,400 to \$101,700.

Figure 3.8 (Housing Density) illustrates housing units per acre.

Chart 3.7
Median Home Values



Source: U.S. Census 2000



Source: US Census Bureau - 2000 Census

Demographics - Housing Density

Washington County, Ohio Comprehensive Plan

Figure 3.9

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December, 2003



Infrastructure Characteristics

The existence of public utility systems has a major impact on where, when, and how development occurs. Infrastructure improvements and extensions occur in three phases. The first is often the extension of a rural water system that supplies drinking water but does not supply adequate water for fire suppression. The second is the extension of water lines adequate for fire fighting. The third is the extension of a public sewer system. Figure 3.10 identifies the existing utility systems by district or area covered.

Wastewater Treatment Facilities



Muskingum River

There are 22 wastewater treatment plants located throughout Washington County that are classified as "public or "semi" public discharging to streams and rivers in the County. Eleven are privately owned and operated, and 11 are publicly owned and operated. Of the publicly owned facilities are those owned and operated by the City of Marietta, the City of Belpre, the Village of Beverly, the Village of Lowell, the Village of Matamoras, and the Newport Water and Sewer District. Five wastewater treatment plants are owned and operated by Washington County including the facilities at Devola, Riverview Estates, Oxbow, Stacey Meadow Crest Subdivision and the Deerfield Estates. Wastewater treatment facilities are located throughout Washington County and are either County controlled facilities or are run by private companies. The County controlled facilities are denoted by the yellow asterisks.

The majority (eight) of the Failing System Areas are located in the central portion of the County (see Figure 3.11). The western portion of Washington County contains five Failing System Areas and there is only one in the east.

Failure is defined as the inability of a septic system to accept and adequately treat wastewater, leading to environmental contamination and health hazards. Signs of septic failure include system back-ups, soft mushy spots, patches of lush grass or pooling of wastewater in the homeowner's backyard, high bacterial counts in well-water and excessive weed growth/algal blooms in nearby lakes and ponds. Premature septic failure (i.e., failure at some point before a system's design life of 20-30 years) can be caused by a variety of factors, including root damage to the leach field, saturation of soil by storm water, improper siting and poor original design and/or installation. The most common reason for early septic system failure, however, is improper maintenance. When a system is poorly maintained and not pumped out on a regular basis, sludge (solid material) builds up inside the septic tank, and then flows into the leach field, clogging it beyond repair.

Sewer and Water Facilities

There are eleven sewer and water districts within Washington County (see Table 3.16). The Cities of Marietta and Belpre have their own districts which also serve the area just outside the cities limits. The largest district geographically is Highland Ridge Water Association. It includes all of Salem, and Liberty townships and parts of Lawrence, Fearing, and Muskingum. The two smallest districts are Putnam Community Water Association and Sandhill Sewer districts, and they are located within Muskingum and Marietta Townships respectively. The largest commercial district is Marietta City in Reno, and the largest residential district is Little Hocking. The largest district geographically is Highland Ridge.

Table 3.16
Water Service Districts

Name of District	Area Served	Number of Residential Taps
City of Belpre	City of Belpre, pt. Belpre and Dunham Twp	2,790
Highland Ridge Water	Salem, Fearing, Muskingum Twps	418
Little Hocking Water Association		3,480
Lowell Water	Western Washington County, pt. of Athens County	323
City of Marietta Water	City of Marietta, Oakgrove Community, sell to Reno, Sandhill, on Rt. 7 to Kardex	5,867
Marsh Run Hill Water Association Inc	Deer walk Circle and Township Rd.	51
Matamoras Water	Matamoras Village,	549
Newport Water	Newport Twp, Newport, Ohio	384
Putnam Community Water Corporation	Devola Area	857
Reno Water District	Southeast	1,100
Sandhill Water	Reno area	129
Tri-County Rural District	Waterford, Adams and Watertown Twps	450
Warren Community Water and Sewer	Warren Twp, Pt of Dunham, Barlow, Watertown and Muskingum Twps	1,510
Waterford Water	Waterford Twp	235
Beverly Water	Village of Beverly	564
Pure Water Corporation	Southern Noble, Northern Washington County	460

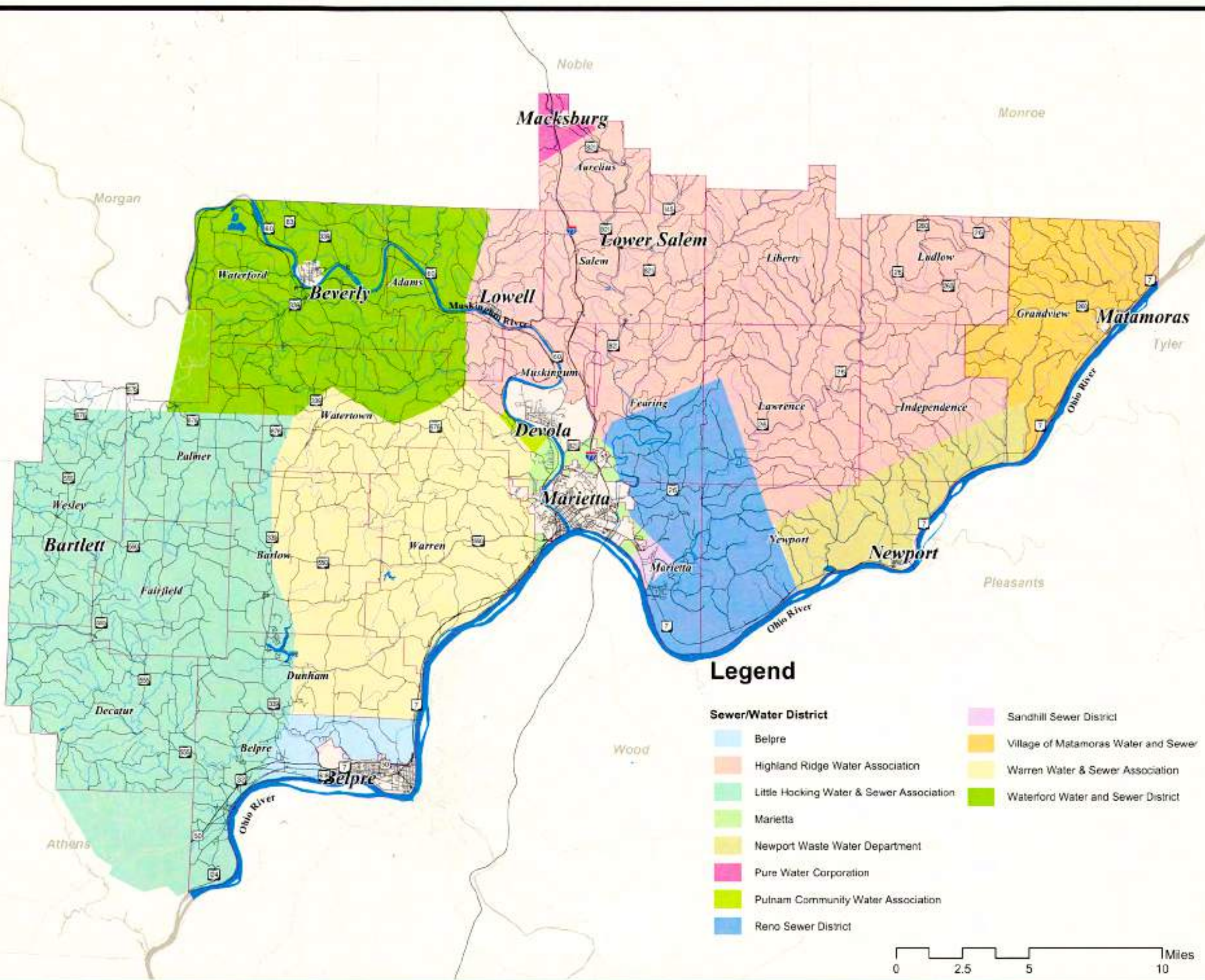
Little Hocking Water Association includes all of Decatur and Fairfield Townships, and much of Wesley, and Palmer. Small sections of Belpre, Dunham, Barlow, and Watertown townships are also included in this district. Tri-County Rural Water and Sewer District includes much of Waterford Township and part of Adams and Watertown townships. All of Warren Township and parts of Dunham, Barlow, Watertown, and Muskingum townships are included in the Warren Water & Sewer Association district. The Reno Water and Sewer district extends into the following four Townships: Fearing, Lawrence, Marietta, and Newport. The final district, Newport Water and Sewer District is located in Newport, Independence, and Grandview Townships.

Because of a lack of digital mapping information by sewer service district and water district, it was not an option to provide mapping of the sewer service and water service district lines (See Table 3.17). However, through conversation with the County Engineer and County Planning Director, the following information was received regarding sewer service for Washington County.

Table 3.17
Sewer Service

Name of District	Areas Served	Residential Taps
Newport Waste Water Department	Village of Newport	393
Reno Sewer District	SE Washington County	120
Sandhill Sewer District	Reno Area	129
Tri-County Rural Sewer District	Adams, Waterford, Watertown Twp.	N/A
Waterford Sewer	Pt. of Waterford Twp	235
Washington County Sewer Association	Muskingum, Marietta, Dunham, and Belpre Twps	552
White Oak Sewer Association	Barlow Twp	15

There have been discussions to coordinate sewage systems improvements in the non-incorporated areas served by the Cities of Belpre and Marietta with a sewer district that would serve Belpre Township, the City of Marietta, Marietta Township, Muskingum Township and Little Hocking. Consolidating these areas into one sewer district would allow the County to plan for and respond better to the existing residential growth that occurs and to better prepare the future growth. Many of the existing residents in these areas are served by septic systems. Septic systems do not provide for subdivision development or any planned patterns of growth.



Regional Water & Sewer Boundaries

Figure 3.10

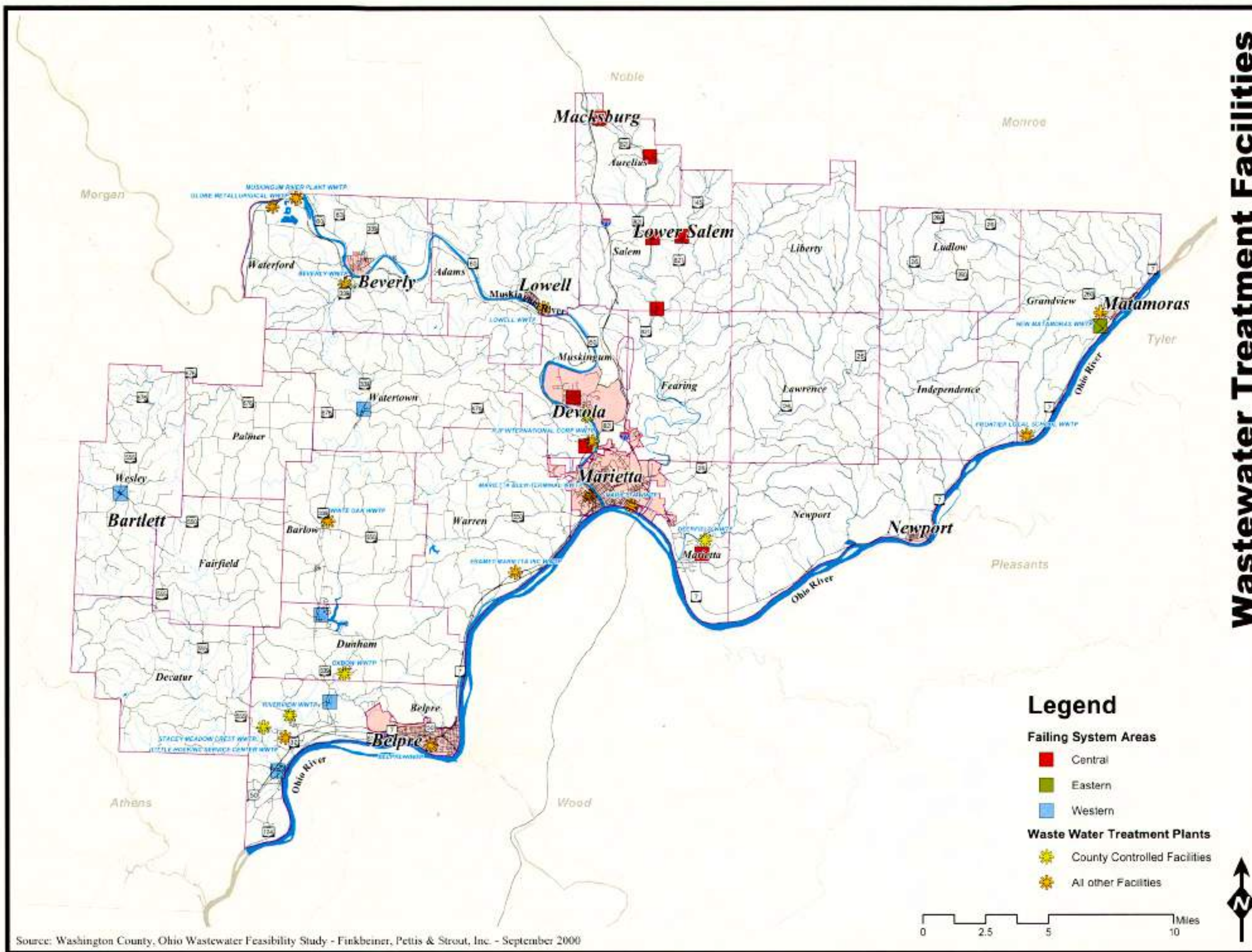
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May, 2004

Washington County, Ohio

Comprehensive Plan





Wastewater Treatment Facilities

Washington County, Ohio Comprehensive Plan

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Figure 3.11

December, 2003

Chapter 4: Existing Transportation System

Originally, transportation in Washington County centered on river travel. Marietta was founded at the confluence of the Ohio and Muskingum Rivers because of its ability to receive large commodities to support the industrial base of the Ohio Valley. Travel on the Ohio River was not without its problems with freezing in the winter and shallow water in the summer. Just before the beginning of the 20th Century, roads connected most major cities, but most were dirt roads that were either dusty or muddy and not a popular choice for travel.

Railroads were next in the movement of people and goods through the County. Railroads were unaffected by weather and were faster and more reliable. While the railroad served Marietta well, most of the rest of the County was not served early on because of the great effort it takes to build rail infrastructure.

Today, a network of streets and highways mainly serves Washington County. The construction of I-77 ties Washington County to both West Virginia to the south and the Northern Ohio/Cleveland area to the north. Also in place as a north/south corridor is State Route 7, which runs along the Ohio River throughout the County. Other major north/south corridors within the County include:

- SR 339 which connects Beverly and Barlow to Porterfield, just west of Belpre,
- SR 60 which follows the Muskingum River to Marietta from Beverly and points north,
- SR 821 which connects Macksburg to Lower Salem and then to Marietta, and
- SR 26 which connects the northeastern part of the County to Marietta.

Major east/west corridors include:

- A small part of US 50 (Corridor D) that will connect Parkersburg, WV with Cincinnati, Ohio via a bridge across the Ohio River, west of Belpre;
- SR 550 that connects Marietta to Barlow and Bartlett, and
- SR 7, which even though it functions as a north/south corridor through Ohio, serves as an east/west corridor in Washington County connecting Matamoras to Newport, Marietta, Belpre, and Little Hocking.

Other local roads service the County, but are not primary roadways within the transportation network. They connect the various communities and townships within the County.

Roadways that should see significant growth within the County include SR 7 to the northeast of Marietta, US 50 once the new bridge is completed across the Ohio River and SR 339 between Belpre and Barlow. Traffic volumes will likely see a steady increase in all but US 50, where traffic should grow significantly once the bridge is complete.

Current Roadway Classification

The National Highway Functional Classification System (NHFCS) originated in the 1973 Federal-Aid Highway Act in order to classify how different roadways functioned within the roadway system. Roads are either classified as urban or rural. Once classified as urban or rural, they are listed in a hierarchical manner depending on how they serve the roadway network. Higher classified roadway segments require higher engineering standards for that roadway segment. Included in the criteria are pavement widths, shoulder widths, sight distances and radius of horizontal and vertical curvatures.

The Functional Classification designations for Washington County roadway system include:

- Interstate;
- Major Arterial;
- Minor Arterial;
- Major Collector;
- Minor Collector; and
- Local Roads.

A map detailing the different classifications is listed on Figure 4.1.

Existing Highways

The highway network is the primary means of transport around Washington County. It provides essential links between land uses and other means of travel. The primary regional links for the area include Interstate 77, shown on Figure 4.1, which runs north and south between Cleveland Ohio and Columbia South Carolina, and US Route 50 (Corridor D) which runs east and west through Cincinnati, Ohio and Clarksburg West Virginia. Figure 4.1 depicts the existing major roadway network.

Traffic Volumes

There is a significant amount of traffic that moves through Washington County, primarily utilizing I-77 and State Route 7/US 50. A significant portion of the traffic on I-77 is through traffic while State Route 7 serves both local and through trips. State Route 60, which follows the Muskingum River through the County, also carries a substantial amount of traffic. Traffic volumes can be seen graphically on Figure 4.2.

Congested areas within the County include State Route 7 to the north and south of Marietta and in the Belpre area. Other areas see some spot congestion, mainly around intersections throughout the County. Most of the roadways with high traffic volumes are within the transportation-planning oversight of the local Metropolitan Planning Organization (MPO) – Wood, Wirt, Washington Interstate Planning Commission (WWW). The WWW is currently in the process of updating their long range transportation plan that incorporates parts of Washington County, including Belpre, Dunham, Warren, Muskingum, Fearing, Marietta and Newport Townships.

Public Transit

The Community Action Bus Lines (CABL) provides Washington County transit service. The system will change in Federal Transit Administration (FTA) funding classification from rural to urban in 2004. Because CABL serves an area less than 100,000 in population, ODOT provides some supporting funding for their operations. Currently, CABL operates three fixed routes, one paratransit route and one County route. CABL's annual budget is in the neighborhood of \$400,000.

Even though transit planning will be part of WWW's Long Range Transportation Plan, the major recommendation from previous studies suggests that CABL should provide an easy connection from Belpre to the Mid-Ohio Valley Transit Authority (MOVTA) system in Parkersburg, West Virginia. MOVTA operates a FTA Section 5307 (urban) System serving primarily Parkersburg and Vienna, West Virginia. This transportation route would provide an important link between not only the two States, but also the two local transit providers. The main detriment to initiating this service is funding.

Some public transportation needs are also provided by non-profit systems that utilize FTA's Section 5310 funds for the purchase of vans and buses for the elderly and handicapped. Applications for these funds are made through the MPO. The WWW-IPC is the federally designate Metropolitan Planning Organization (MPO) for the Parkersburg- Marietta Metropolitan area. The WWW-IPC works in coordination with the state departments of transportation in Ohio and West Virginia and other local governments in the region to plan and coordinate the development of transportation projects in the region.

Air Travel

Washington County currently has no commercial airport within the County. The MOVRA, Mid-Ohio Valley Regional Airport, just north of Parkersburg, WV, currently serves the County. The Wood County Airport Authority operates the airport and provides limited commercial service through US Airways Express. The airport also hosts an Army Aviation support facility.

Intermodal, Rail and River Ports



There are several industrial rail lines that run from Beverly in the northwest corner of Washington County through Marietta to Parkersburg, WV. Of these existing facilities, CSX Transportation operates the principal functioning rail lines, moving the majority of goods and materials both locally and regionally. Intermodal connections between these rail lines and waterway ports are made possible at terminals located primarily between Parkersburg and Marietta and west of Belpre all along the Ohio River.

The importance of Ohio River Transportation cannot be over stated. The shipping and receiving of goods and materials through river ports helps to keep large shipments off the roadways, adding truck traffic and its ensuing wear and tear on the roadway network. Many of the manufacturing companies along the Ohio and Muskingum Rivers maintain river terminals for their own proprietary use. The Ohio River and the Muskingum River have been largely responsible for the region's historical growth and still provide opportunities for transportation services. The Ohio and its tributaries provide a link to both national and international ports. Industrial barges, commercial vessels, private craft, all rely on these waterways to conduct business. There is a concentration of ports in and between Marietta and Parkersburg, WV with approximately 20 industrial

facilities identified within this corridor. The majority of outlying ports in Washington County are east of Marietta and west of Belpre along the Ohio River.

A large private port provides barge service both locally and regionally with their facility between Marietta and Belpre. The barge service is able to transport large quantities of goods and materials that would otherwise have to rely on either the roadway network or railroad. A similar facility provides port services at Porterfield.

Another benefit to river ports and facilities is the ability to provide tourism and recreational opportunities such as the Sternwheel Regatta.

Corridor D

The Corridor D project is an important local example of a new highway project that is currently under construction. The US Route 50 Corridor D project is a major east-west controlled access freeway to connect Parkersburg West Virginia and Washington County provide a new bridge crossing of the Ohio River. Currently, the construction of Corridor D is underway. The project is scheduled for completion in 2007. The Long Range Multimodal Transportation Plan 2003 update considers Corridor D to be completed and begins the process of looking at and identifying transportation improvements and priorities needed to continue the development of the urbanized area's transportation system beyond Corridor D. The Corridor D/US 50 from Interstate -77 to US 50 in Belpre will consist of four and six lane freeway with a new bridge crossing of the Ohio River at Blennerhassett Island near Belpre.

Background

In 1965, Corridor D (U.S. Route 50) was one of 23 high-speed transportation corridors proposed by the Appalachian Regional Commission (ARC). The objective for the development of Corridor D was to provide access to major urban centers along the East Coast from points throughout the Midwest, while providing opportunities for economic development in Northwest West Virginia and Southeast Ohio.

Currently, construction of Corridor D has been completed along U.S. Route 50 from Clarksburg, West Virginia, to the Interstate 77 / Route 50 Interchange just east of Parkersburg, West Virginia. After crossing the Ohio River into Belpre, Ohio, Route 50 once again becomes a four lane undivided highway. Studies have been conducted to examine the completion of the corridor on new and existing locations from the US 50 / I-77 Interchange to US 50 in Belpre. It was determined that the construction of Corridor D would help alleviate congested roadways throughout the study area with a new four lane highway with partially controlled access. Major portions of existing routes from Belpre, to Parkersburg and points east are considered inadequate to meet the area's future transportation needs.

A number of local government entities have voiced their support for the completion of the Corridor D expansion. In 1995, the Metropolitan Planning Organization, and locally elected officials from Wood and Washington Counties signed a proclamation in support of the project. Many local officials believe the construction Corridor D is critical to the long-term growth of the greater Wood/Washington County area.

Objective & Benefits

The primary objective of the Corridor D project is to stimulate economic development in and around the greater Parkersburg / Belpre area. The increased access and mobility will help the area achieve its full development potential by attracting new investment and corporate interest.

Located along the Ohio River, one of the busiest commercial waterways in the nation, the Parkersburg / Belpre area will provide an attractive new investment site to new or expanding business. The area's close proximity to major markets such as Columbus, Ohio, and Pittsburgh, Pennsylvania, will also help attract both industrial and commercial development. According to recent studies, one of the greatest deterrents to growth in the study area was a lack of sufficient east-west highway infrastructure.

The project will also help alleviate increased traffic congestion along Route 50 by providing an alternate route for commuters and travelers. Controlled access to the new highway will provide motorists with greater access to existing and proposed development opportunities.

Studies have concluded that as a result of the incomplete Corridor D system, local traffic is conflicting with regional travelers that have destinations well beyond the Parkersburg / Belpre area. In fact, studies predict that by 2013, without the completion of Corridor D, the current roadway system will be unable to provide adequate service in the greater Parkersburg / Belpre area.

In addition to relieving heavy traffic volume, the new corridor will provide a much safer alternative for motorists. Current roadways in the area are characterized by restricted sight distance, diminished intersection operating characteristics, horizontal alignment based upon old standards, and significant on-street parking and other obstructions to traffic flow.

The ultimate goal for the construction of Corridor D is to build a facility that best addresses the area's greatest needs. The completion of the Corridor D project will provide residents and travelers with a safer and more efficient alternative to the current roadway system, while enhancing the area's economic development efforts. The proposed project is determined to be the least environmentally damaging, practicable alternative that fulfills the project's purpose and need.

New and Planned Highway Improvements

The WWW-IPC and ODOT have identified various highway improvements. These improvements should be coordinated with any residential, commercial or industrial development and potential development control regulations.

- US 50/Memorial Toll Bridge Intersection in Belpre-realignment of the eastbound approach to the toll bridge from US 50 to provide a more direct connection with the toll bridge.
- US 50/Braun Intersection –signalization.
- I-77 widening to 6-lane from the West Virginia overpass to US 50.
- Ohio SR 7 add through lanes and coordinate traffic signals from Acme street to CR 344.
- Rehabilitation of the Washington Street Bridge.
- Development of a Muskingum River bypass north of Marietta.

- SR 7 to CR 344 adding lanes. SR 7 lane additions have been approved in 2004 by Ohio TRAC from I-77 east to the 28 mile marker near Dimex Corporation.

These projects offer improvements that will benefit the overall capacity of the highway system and their impacts will be considered prior to identifying future needs.

Areas of Congestion Cited within Washington County by WWW-IPC

- Newport Township CR 20 extending into Marietta.
- US-50 Main Street in Belpre – The portion of US-50 in Belpre between the Parkersburg-Belpre Bridge and the Memorial Toll Bridge is listed as having excessive traffic and delay in ODOT's list of Congested areas.
- US-50/OH SR 7 in Belpre – This segment of US-50 in Belpre from Braun Road westward to Clement Avenue is projected to be deficient in 2025, carrying 20,000 vpd, a 24% increase over the 16,100 vpd in 2000.
- Putnam Bridge in Marietta – The portion of Putnam Street extending between Front and Second Street in downtown Marietta and including the Muskingum River bridge crossing is anticipated to increase in traffic volume from 18,000 vpd to 20,500 vpd in the Year 2025.
- OH SR 60 Muskingum Drive in Marietta – The portion of OH SR 60 north of Washington Street in Marietta and extending north to Devola is anticipated to increase. North of OH SR 821 to Devola. Traffic is predicted to see future year traffic volumes increase by 35% to between 16,000 and 17,000 vpd in the Year 2025. As a result, traffic congestion is expected to grow along this route. The majority of the traffic flow is destined between Barlow and US 50/Corridor D and growth in on 339 traffic is attributed to predicted population increases in this region of the County.

Safety Issue Areas

Key locations where accident and safety concerns have been identified within the WWW include the following areas in Washington County:

- Ohio SR 7 west of Marietta is characterized by a narrow two-lane road section, steep grades, limited sight distances at several intersections, a rail road crossing and a sharp approach to the Muskingum River Bridge;
- Ohio SR 339 north of Belpre was previously cited as a future area of congestion due to high traffic growth. Accident data also suggest that safety concerns exist along the corridor;
- Belpre Intersections –Main and Parkersburg Belpre Bridge;
- US 50 and Farson Street;
- Washington Boulevard and Lee Street; and
- Washington Boulevard and Middle Street.



Functional Classification

Washington County, Ohio Comprehensive Plan



Figure 4.1

**Edwards
AND Kelcey**

December, 2003



Traffic Volumes

Washington County, Ohio Comprehensive Plan

Figure 4.2

**Edwards
and
Kelcey**

December, 2003



Community Resources

Wayne National Forest

A large portion of Washington County is made up of the Wayne National Forest. In its entirety, it encompasses approximately 39,000 acres of land area in the County and is the only National Forest in Ohio. It represents a significant portion of the total acreage of the eastern portion of Washington County and accounts for much of the parks and recreation amenities of the County including wildlife, scenic beauty, scenic views, camping, and trails. It also provides a significant environmental, economic, and tourism opportunity to the County.

Land Statistics

The Wayne National Forest is a Proclamation Boundary, established by Congress in 1934. A Proclamation Boundary allows a National Forest to acquire land from willing sellers as funds are available. This helps to focus land acquisition and ownership of the national forest to lands most in need of restoration. The Wayne National Forest owns 232,900 acres as of January 1, 2002, which is 28% of the established proclamation boundary of 834,000 acres. Payment is made to counties in lieu of taxes.

The Wayne National Forest is divided into three units: the Athens, Marietta, and Ironton Units. The Marietta Unit, which falls within Washington County is 38,590 acres. The proclamation boundary allows for a total of 126,883 acres within Washington County making ownership for the National Forest, in the County, 30.4% of the total land area.

Wayne National Forest – Forest Plan

The Wayne National Forest is managed under the Land and Resource Management Plan (Forest Plan) adopted in 1988. The Plan which provides overall direction for the resources of the forest, is supposed to cover a 10 year period. The Plan is also to be revised every 15 years. A new plan is currently underway with the Draft Environmental Impact Statement due in December 2004. The Final Plan is due in October 2005. This is a crucial time for Washington County to make sure they provide input into the plan to complement the objectives of the Comprehensive Plan.

Recreation Feasibility Study for the Wayne National Forest

The executive summary for the Study was submitted September 5, 2003 to the USDA forest service. The study is organized into three major sections addressing: the current outdoor recreational opportunity landscape of the area surrounding the Wayne National Forest, the current demand for outdoor recreation in the area; and the way Wayne National Forest fits into the outdoor recreation landscape of the area.

Many amenities are available at the Wayne National Forest. They include: picnicking, hiking trails, bridle trails, mountain bike trails, trails, camping sites, hunting sites, fishing sites, observation sites, swimming areas, canoe areas, beach areas, boating amenities and water acres. Support services are needed to accompany these amenities. The two primary types of support systems are lodging and food establishments. It seems as if there is plenty to offer, however improvements can be made in order to attract more visitors and create revenue within Washington County. The Recreation Feasibility Study recommends ten strategies for improvement in order to please nature lovers, recreation-commercial enthusiasts, and recreation consumers.

- Recommendation 1: Develop, coordinate, and maintain stronger relationships with planning communities, outdoor recreation associations, and state agencies. This could lead to more direct involvement with

communities, more communication for general public relations, increased personal contact, and communications, more work with travel and tourism organizations and regular meetings with officials.

- Recommendation 2: Develop immediate outdoor recreation association partnerships for trail system development. This demonstrates an active intent for further action.
- Recommendation 3: Develop, facilitate and sponsor programs to attract visitors and support community economic development. Programming is a way for the Wayne National Forest to create partnerships and help generate economic revenue. Sponsoring, co-sponsoring, facilitating and promoting special events for targeted outdoor recreation users is also a way to enhance public relations, provide educational opportunities, network with local communities and improve local services.
- Recommendation 4: Assist and be more visible with development of a comprehensive and more effective promotion of the Planning Area. This activity is the marketing component for the tourism system. Visitor guides and a calendar of events will be produced for awareness and promotion. Communication, promotion, cooperation and more involvement with community leadership will aid in the efficiency of the activity.
- Recommendation 5: Develop recreational opportunities that have the highest attraction potential and greatest comparative advantage. By offering activities with high potential for group involvement, more participants are likely to be present. High level participation activities include hiking, picnicking, swimming and historical and cultural sites.
- Recommendation 6: Enhance existing outdoor recreation infrastructure.
- Recommendation 7: Link recreation development to communities within Washington County to enhance economic health opportunity. Increase the demand for outdoor recreation by increasing visitation.
- Recommendation 8: Expand and establish locations for visitor and user information to be distributed. Increased public contact should encourage visitors to use more opportunities on Wayne National Forest property. This type of involvement will result in better public relations.
- Recommendation 9: Utilize a monitoring program and share information with stakeholders.
- Recommendation 10: Economic impact should be tracked as the comprehensive measure of outdoor recreation and tourism development.

Waterways

Waterways are an important part of Washington County. Washington County has an abundance of waterways including the Ohio River, the Muskingum River, the Little Muskingum River, Wolf Creek, Duck Creek and Little Hocking in the Western portion of the County. Duck Creek is in the eastern portion of the County within the Wayne National Forest and the Little Muskingum River. All waterways flow into the Ohio River. The site now known as Marietta was selected by The Ohio Company to be the first settlement in the Northwest Territory in 1788 because of its location along the Ohio River at the mouth of the Muskingum.

Fifteen years later, when Ohio became the 17th state in the Union, the City had begun to flourish as the gateway to the west because it was the route of passage for many settlers crossing into the State. The Ohio River was a major waterway heading west for people with goods for trade and for those looking to settle in a new land. By necessity, some of the original settlers were boat builders, who began work constructing various modes of aquatic transportation. And, for a time, shipbuilding was important to the City. "Ohio and its People," a book by George W. Knepper, tells the story of an ocean-going vessel that ended up in Italy after its construction in Marietta. Shipbuilding was an important business along the river in the first years of Statehood.

In 1811, the steamboat came on the scene, speeding delivery of goods and passengers and creating new challenges for builders.



Marietta has the advantage of having the location of the confluence of the Ohio and Muskingum Rivers, two of the largest and most historic waterways in the Midwest. The community owes a lot of its history, its beauty and its economy to these two rivers. It was at the confluence of the Ohio and Muskingum where Native American Indians built a series of earthworks, many of which still stand today. It was at the confluence of the two rivers where a steamboat industry, boat-building mercantile industry were born and helped Marietta thrive. These two rivers and all the natural waterways, streams and rivers help Washington County remain a beautiful and scenic community attracting thousands of tourists every year.

Parks and Recreation

According to a survey of Local Township and Municipal governments, Washington County, excluding Marietta and Belpre, contains fourteen public parks ranging in size from 0.2 acres to 25 acres (See Figure 4.3). In August of 2002, surveys were sent to each of the Townships in the County regarding park and recreational facilities. Those Townships that responded, reported that their parks contain a multitude of recreational equipment and general facilities ranging from picnic shelters to soccer, baseball and football fields. Many also contain playgrounds, tennis and basketball courts. Townships also rated their parks based on the amount of people that use their parks. All parks were rated as being used adequately or being under-utilized by area residents, however it is important to realize that these ratings were simply the perception of survey respondents. Within the County, there are also five golf courses and numerous private camping areas many school playgrounds are also available for public recreation.

Washington County also has the good fortune to be the location for three State parks, the Wayne National Forest, and three natural preserves. These lands should not be discounted, because they protect thousands of acres of preserved land and provide limitless passive recreational opportunities. The state facilities include Veto Lake State Wildlife Area, Shroud Run State Park and the Muskingum River State Parks. In addition, Acadia Cliffs, Boord State Preserve, Broughton Nature and Wildlife area and Ladd National Bridge help to preserve the ecological heritage of the County through preservation and the allowance of only limited recreation.

The National Recreation and Park Association recommends certain acreage of park land per 1,000 population. Usually, community parks are broken down into various categories and then rated based on their size, service area and on community population. According to the minimum NRPA ratio of 5 acres per 1,000 population, seven of the Townships that returned data from the park survey that was conducted were deficient. Three of these Townships had no parks at all.

Although park land is very important, this is a common trend among rural counties, because of large amounts of undeveloped land, and large lot sizes in developed areas. However, with the surge in growth seen in the areas around Belpre and the City of Marietta, it is paramount that the Townships recognize the need for

parkland as development occurs. Townships or the County should recognize that land values in these areas could rise dramatically in the near future, thus further increasing the cost of providing recreational opportunities.

The following is a brief listing of some of the unique and significant cultural amenities in and around Washington County, Ohio including those in Marietta and Belpre. A listing of some of the significant parks and recreational facilities located in Washington County are also listed below:

Broughton Nature and Wildlife Education Area Marietta, Ohio

An unspoiled reserve hosts the site for wild animals and aquatic life. This reserve features a bluebird hiking trail, two ponds, a natural stream and waterfall, and a cross country course in acres of undisturbed land.

Incredible Community Playground – Marietta, Ohio

This playground is designed from the dreams of the community's children and features climbing equipment, mazes, and swings.

Lakeside Golf Course – Beverly, Ohio

This 18-hole golf course features a new cart paths, watering system, and greens at this 40 year old course. There is an adjacent course as well as public courses in Dunham Township and the City of Marietta.

Little Muskingum Canoe Livery – Wingett Run, Ohio

Canoe trips on the Little Muskingum River in the heart of the Marietta Unit of the Wayne National Forest. It features camping, picnicking, hiking trails, North Country Trail, fishing and hunting along its banks. The Little Muskingum is a safe family river with uncrowded scenic beauty and history. The four covered bridges in its 35 miles of canoeable waters can also be visited.

Little Muskingum Fall Foliage Tour Ohio SR 26 – New Matamoras, Ohio

There is a fall foliage tour in western Washington County. A 35 mile tour along Ohio State Route 26 takes in covered bridges, old churches, and roadside markets in eastern Washington County.

Marietta Arboretum – Marietta, Ohio

A public park dedicated to native and specimen tree species. The trees are arranged in groves. Marietta Harbor and Boat Ramp Marietta, Ohio

A City recreational park and boat ramp offers baseball fields, skate park facilities and docking facilities for a river journey and a new aquatic center.

Muskingum River Parkway – Marietta, Ohio

This is a cluster of America's last hand operated locking system on the Muskingum River. The lock tenders move boats along the River. A list of locks is described and shown below on the chart with the covered bridges.

Wayne National Forest - Washington County, Ohio

The entire Wayne National Forest has more than 39,000 acres in Washington County of lush forest and is home to camping, hiking trails and wildlife. It features over 63,075 acres of natural forest, 73.9 miles of foot trails, 5 beautiful primitive camping areas: Lamping Homestead, Lane Farm, Hune Bridge, Haught Run, and Ring Mill.

Figure 4.3 (Parks and Recreation) illustrates the distribution of parks and Wayne National Forest within Washington County.

There are other natural areas including the Stone Piers and the Natural bridge.

Approximately forty-five (45) recreational facilities exist within Washington County. These recreational facilities range in type from local school playgrounds, community parks, fairgrounds, to swimming pools. The City of Belpre and the Village of Metamoras have the most facilities with four each. Seven Townships within Washington County have only one facility, which for each is generally a community scale park. All of the municipalities have at least one recreational facility.

Below is a listing of parks in Washington County by location.

Belpre Township

Belpre Township Park
Little Hocking Elementary

City of Belpre

Depot Park
Howe's Grove Park
River Access Park
Civitan Park

Decatur Township

Decatur Development Corporation Park

Fairfield Township

Cutler Community Park
Cutler School Playground

Wesley Township

Bartlett School Playground

Watertown Township

Watertown Community Park
Camp Herride 4-H Park

Palmer Township

Palmer Township Park

Waterford Township

Waterford Fairgrounds Park
Waterford School Playground

Village of Beverly

Dodge Park
Fort Frye Schools

Barlow Township

Barlow Fairgrounds Park
Warren Local Schools Playgrounds

Warren Township

Warren Township Park
Barlow-Vincent School Playground

Adams Township

Lowell Community Park
Lowell Elementary School Playground

Aurelius Township

Marksburg Community Park

Salem Township

Salem Ballfield Park
Lower Salem Community Park
Salem - Liberty Elementary School Playground

Fearing Township

Fearing Community Park

Muskingum Township

Oak Grove Community Center
Putnam Elementary School Playground
Broughton Nature and Wildlife Area

Ludlow Township

Ludlow Community Association Park
Little Muskingum Development Corporation

Lawrence Township

Lawrence School Playground

Marietta Township

(Former) Reno Elementary School Playground

Grandview Township

Cemetery Park (Proposed)

Village of Matamoras

Ferguson Park
Grandview Park
Matamoras Elementary School Playground
Municipal Swimming Pool and Park

Newport Township

Ballfield Park
Newport Elementary School Playground
Newport Community Center

State Nature Preserves

Boord State Nature Preserves
Arcadia Cliffs State Nature Preserves
LADD Natural Bridge

Below is a listing of parks in the City of Marietta.

City of Marietta

Jackson Park
Sacra Via Park
Muskingum Parks
Indian Acres Family Aquatic Center
Buckeye Park
Bridgeway Park
Camp Tupper
Flanders Field
Hadley Softball Complex
Jaycee Park
Lookout Park
Marietta Harbor
Ohio Riverfront Park
Sixth and Hart Street Park
Washington Street Playground

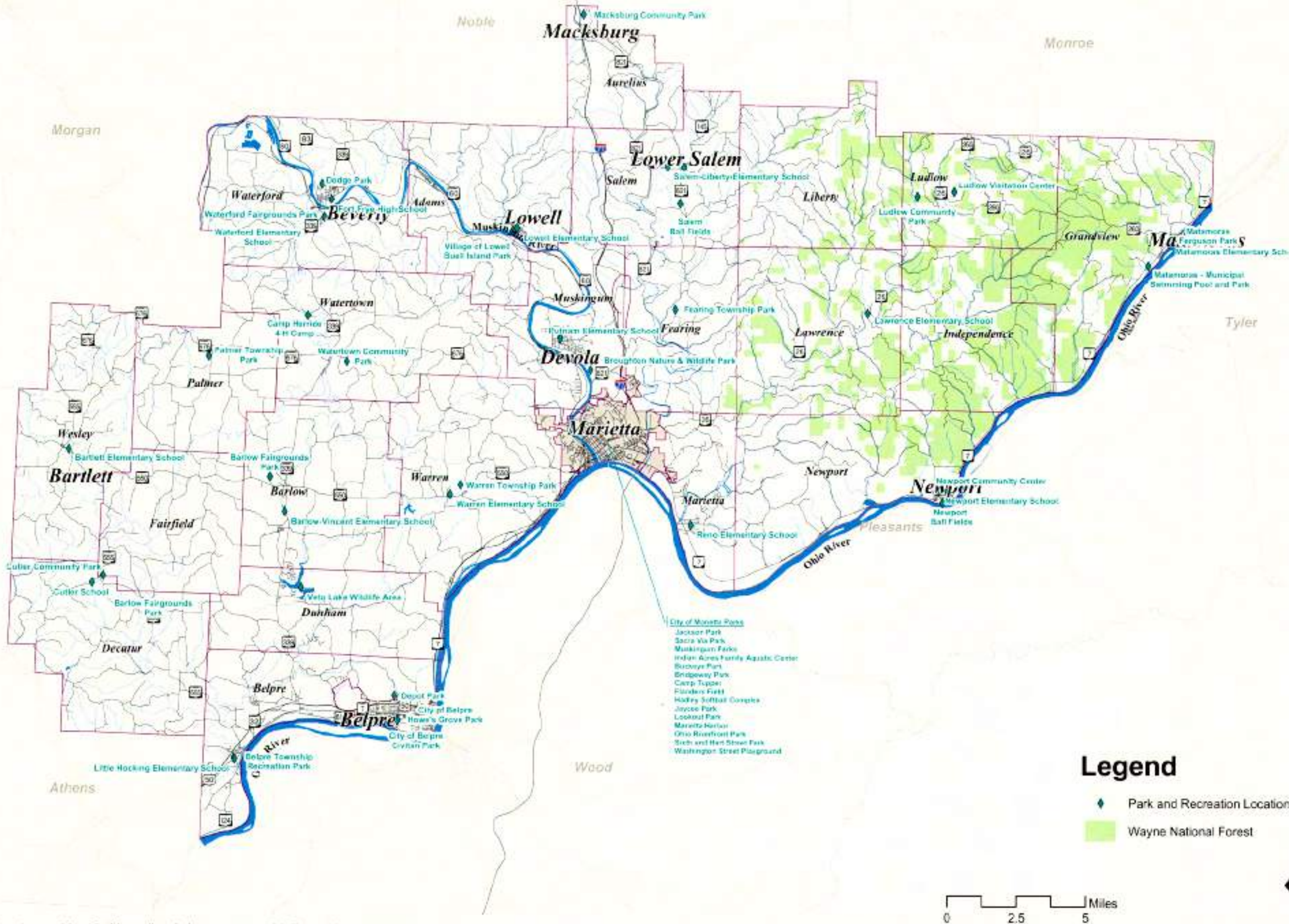
2003 Statewide Comprehensive Outdoor Recreation Plan (SCORP)

The 2003 Ohio SCORP is a five-year comprehensive plan that is required federally under the Land and Water Conservation Fund (LWCF) Act of 1965. It is an outdoor recreation needs assessment that focuses on how various independent agencies will meet the needs within social, economical, and natural constraints. The state agency responsible for the development of the Ohio SCORP is The Division of Real Estate and Land Management within the Ohio Department of Natural Resources (ODNR).

Ohio SCORP is not a site specific set of guidelines, nor does it cover all of the issues facing the Ohio recreation system. It is also not recommended to be an independent source of information. "Local and regional planning, research, and cooperation are strongly recommended to complement information contained in the SCORP in efforts to satisfy the outdoor recreation needs of Ohio citizens.

Washington County is among the higher ranked counties in the 2003 Ohio SCORP. The Wayne National Forest, Shawnee State Forest, and other large public lands greatly increase the outdoor recreation acreage for the counties that contain them or portions of them. Ohio counties are ranked in the 2003 Ohio SCORP by five various measures: Total county acreage, outdoor recreation acres, % of total acres for outdoor recreation, 2000 population, and outdoor recreation acres per 1,000 residents. Washington County ranked fifth (5), seventh (7), fifteenth (15), thirty-ninth (39), and sixteenth (16) respectively. Washington County falls within the highest ranking of 20,001 acres or greater per 1,000 residents as well as 501 acres or greater of total outdoor recreation acreage.

Based on the 2003 Ohio SCORP, Washington County is ranked highly on the number of acres of outdoor recreation facilities, however other factors that affect the use of a recreation area that the 2003 Ohio SCORP does not measure are: the accessibility, availability, and program services. Therefore, it is recommended that you encourage the development of a Park and Recreation plan that follows the general guidelines of the 2003 Ohio SCORP.



Parks and Recreation

Washington County, Ohio Comprehensive Plan

Figure 4.3

**Edwards
and Kelcey**

February, 2004



Source: Locations as identified in mail and phone surveys with Township Administrators.

Cultural Amenities

Washington County's cultural amenities, in addition to its parks and recreational facilities, will play a key role in the future desirability of the County as a residential and business location. Washington County has a variety of park and recreation resources, as identified above. Sixteen Underground Railroad sites have been identified and six of those sites can be visited. Washington County also has large Fair Ground areas located in Marietta, Barlow and Waterford, numerous festivals, covered bridges, and recurring festivities throughout the year. These existing cultural amenities provide unique economic and tourism opportunities for the County to expand and draw upon.

Belpre Historical Society and Museum and Farmer's Castle Educational Center - Belpre, Ohio

This center features an assortment of local memorabilia, historic home furnishing and a restored carriage. The Farmers' Castle Museum is home to the Belpre Historical Society. The original Farmer's Castle Fort housed many of Belpre's original settlers from 1791 - 1794 during the Indian Wars, including Bathsheba Rouse, the first female school teacher in the Ohio and Northwest Territory. Other firsts include a public library and a floating mill. On display is a circa-1840 C-Spring Boot Carriage, built by the Brewster Carriage Company of Brewster, New York. There is also a pre-1900 pump Organ, and a model of the Ferry Boat "Nina Paden" that ran between Belpre and Parkersburg, WV before a bridge was built, a model of the Mill Branch Covered Bridge, a Grandfather clock ca. 1815, old Farming tools, many artifacts of early Belpre, a seat from the 1904 Belpre B&O Railroad station, history and photographs of the early families of Belpre, and Belpre High School Year Books from the 1930's to 1998.

The Henry Fearing House - Marietta's Historic Harmar Village



The Fearing House provides a view of life in Marietta during the 19th century. Built in 1847 for Henry Fearing, the house is an example of Federal style architecture. Italianate influence is evident on the exterior of the 1870 addition. Furnished in a range of nineteenth century styles, the home represents the lifestyles of Marietta's middle-class during the Victorian era.

Blennerhassett Island Historical State Park and Museum - Parkersburg, WV



Harman and Margaret Blennerhassett came to North American in 1796 and to the island two years later. When they completed their home in 1800, it was considered the most beautiful private residence west of the Alleghenies. It is accessible by a sternwheeler from Point Park in Parkersburg, West Virginia and is located adjacent to Belpre, Ohio.

Betsey Mills Club - Marietta, Ohio

The historic birthplace of former vice president Charles Dawes, it is a community center featuring indoor pool, daycare and preschool. Its history goes back to 1898, when Betsey Gates Mills was hostess weekly at their home to a group of underprivileged girls. She converted this former family home to a "Monday Club". Upon her death, Mr. Mills planned in her memory a complex to benefit girls and women of the town and created a community center for the community.

Campus Martius Museum - Marietta, Ohio



The museum is the Ohio Historical Society's gateway into the settlement of Ohio and the movement of people into and within the state. It includes the history of Marietta, and artifacts.

Children's Toy and Doll Museum - Marietta, Ohio

A doll museum representing dolls from the late 19th and 20th centuries. Located in historic Harmar. The Museum provides a glimpse into the past of what entertained and educated children in the late 19th and early 20th centuries. The Museum features:

- Unique dollhouses, stores, and offices furnished to their respective periods.
- Antique metal banks that were both entertaining and taught thriftiness.
- A reproduction carousel horse that represents a gentler time of County fairs, cotton candy, lemon fizzes and ice cream on summer nights.
- Collections of Teddy Bears, Dolls, Games, and Old Toys.

The Castle - Marietta, Ohio



The Castle is an outstanding example of Gothic Revival architecture. It features exhibits of art and artifacts important to the region. With its octagonal tower, trifoliate attic window, and stone capped spires, The Castle is one of the best executed examples of Gothic Revival style architecture in Ohio. Interior architectural details include a scagliola fireplace mantle and floor to ceiling shutters on the parlor's bay window. The house is furnished with items of historical significance to the area, as well as those typical of the Victorian Era.

Lee Middleton Original Dolls - Belpre, Ohio

The nation's largest doll factory where artisans create lifelike baby dolls.

Marietta Soda Museum - Marietta, Ohio

This museum hosts the history of soda and an old fashioned soda fountain.



Railroad Display and Caboose Mini-Museum - Belpre, Ohio

This museum recalls railroading history from the local areas and beyond. A 1920 Pullman passenger car is on display. See photos and artifacts of early railroading days, some local and other areas. Also on display and under rebuilding is a 1910 Pullman built "Palace Car" built in Chicago for the Denver & Rio Grande railroad, but delivered to the Western Pacific Railroad. This car was in continuous use until 1984.

Strait Run School - Lowell, Ohio



A ca. 1860 one room schoolhouse located on Buell Island Park in Lowell, Ohio. The schoolhouse is furnished with several original school desks and original books from the 1850's. Visit this educational place because there is still much knowledge to be had within these walls.

Matamoras Area Historical Society Museum - New Matamoras, Ohio

This is a museum featuring historical artifacts and history of New Matamoras, Ohio.

Oliver Tucker Museum/Log House - Beverly, Ohio

The house (museum) was built in 1835 by John Dodge, Esq., benefactor and founder of Beverly, Ohio. The log house was removed from a farm in the area. Both the museum and house contain many artifacts of the area and time including: antique furniture and clothing, photos and documents, including The Mary Tucker Townsend Room, Antique furniture and clothing, pictures and documents, and other items of the early settlers of the Lower Muskingum Valley area, Dr. Hill's medical office, and The Adair Room.

Henderson Hall - Williamstown, West Virginia



Only minutes from Washington County, West Virginia's Living Legacy of The Victorian Era, Henderson Hall was constructed in the decade prior to the Civil War when the popular architectural style of the Italianate Villa was at its height. Originally built as the centerpiece of the 2000 acre Henderson plantation overlooking the Ohio River approximately two miles below Williamstown, West Virginia, the house today presents a massive silhouette in the impressive pastoral setting of Henderson Hall Historical District. As a part of western Virginia before 1862, the Henderson's owned slaves on their plantation. A starting point of the Underground Railroad Tour in Marietta,

Henderson Hall has many stories of slave escapes, letters written by an escaped slave asking to come back only to escape again with nine other slaves from the plantation.

Underground Railroad

There are five Underground Railroad sites in the Marietta and the Washington County Ohio Area. There is an extensive underground railroad network of southeastern Ohio, and driving tours are available of the former plantations and places of importance to the Abolitionist. The Underground Railroad sites are identified below and on the map.

1. **Henderson Hall**, a former slave owning plantation that is preserved to its near original condition near Williamstown, WV.
2. **Blennerhassett Island Plantation**, rebuilt to its original condition includes a history of the Aaron Burr Conspiracy and the story of a slave called Micah "Cajoe" Phillips, who started the Underground Railroad station in Waterford, Ohio located in the Ohio River near Belpre.
3. **The Historic Harmar District** of Marietta where the first African American was born in the United States Northwest Territory, the home where abolitionist David Putnam Jr. was born in 1808, and a view of the confluence of the Ohio and Muskingum Rivers used by fugitive slaves from western Virginia
4. **Constitution Station** located between Marietta and Belpre, Ohio is the site of the Underground Railroad founded by Ephriam Cutler in 1806
5. **The Jonathan Stone House** in Belpre, Ohio and on the National Register of Historic Places, built in 1798 along Ohio's first highway was an Underground Railroad station from 1810 to 1861
6. **The Sawyer-Curtis House** also on the National Register of Historic Places, built in 1798 and used from 1820 by Horace Curtis as a major Underground Railroad station.



7. **Cutter-Rural** site located adjacent to SR 555 in Wesley Township.

Washington County Covered Bridges

There is a self guided tour that features nine covered bridges of the past. Figure 4.4 shows places of interest in Washington County including Locks on the Muskingum River and various Museums:



Figure 4.4
Washington County Places of Interest

Figure 4.4 also shows the locations of the covered bridges, Washington County Points of Interest, and Locks on the Muskingum River.

Covered Bridges	Washington County Points of Interest	Locks on the Muskingum River
(1) Harra Bridge 1871 Township Rd. 172 off 339 North of Watertown	(6) Mill Branch Bridge 1832 550 & 339 at Barlow Fairgrounds	(10) Railroad Display & Caboose Museum Belpre, Ohio
(2) Bell Bridge 1888 Township Rd. 39 off 339 North of Barlow	(7) Hills Bridge 1881 Rt. 26 east of Marietta 6.2 miles right at Hills United Methodist sign	(11) Belpre Farmers Castle Museum, Belpre, Ohio
(3) Shinn Bridge 1886 C. Rd. 206 to Township R. 91 and 447	(8) Hune Bridge 1877 Township Rd. 34 off Rt. 26, south of Lawrence	(12) Lowell One Room School House, Lowell, Ohio
(4) Henry Bridge 1892 Township Rd. 61 off 550 East of Bartlett	(9) Rinard Bridge 1874 Co. Rd. 406 off Rt. 26 north of Wingett Run	(13) Oliver Tucker Museum & Log House, Beverly, Oh
(5) Root Bridge 1888 Co. Rd. 6 off 555 east Of Cutler		(14) Historic Stockport Mill Stockport, Ohio (not in Washington County)
		(15) Matamoras Historical Society Museum New Matamoras, Ohio
		Lock #2 Devols Dam off Rt. 60, Devola, Ohio
		Lock #3 Rt. 60, Lowell, Ohio
		Lock #4 Rt. 60, Beverly, Ohio
		Lock #5 Luke Chute, Waterford, Ohio

Festivals and Celebrations

Many festival and celebrations are held throughout the year in Washington County, Ohio. While every event or festival is not included, we have listed a sampling of the significant festivals and sites in Washington County that create an attractive destination for the community and visitors. These fairs and festivals provide the County with a plethora of activities to participate in and for the community to build upon.

Sternwheel Festival – Held annually in Marietta, Ohio, the Sternwheel festival is celebrated the weekend after Labor Day, sternwheelers arrive in Marietta, home of the American Sternwheel Association and home to two sternwheelers on the National Register of Historic Places. Sternwheeler rides are offered by several private companies for group tours and cruises with historic narration throughout the year.

Washington County Fair – Held on the Washington County Fairgrounds annually, it is an old fashioned County fair complete with grandstand events. It also features camping facilities and hosts other events

Lewis and Clark Expedition – One of a kind demonstration and entertainment held in Belpre and Marietta reliving the expedition of Meriweather Lewis and William Clark in the historic river cities.

Matamoras Homecoming – Annual Event in Ferguson Park in Matamoras.

Marietta Riverfront Roar – Super league power boat racing festival on the Ohio River Levee.

Red, White and Blues Festival – Held annually in Marietta. It features blues acts, dancing and food in an outdoor venue. It is held in the lot of the historic LaFayette Hotel and the confluence of the Muskingum Rivers and Ohio.

Belpre Area Invitational Homecoming – This annual festival features parades, car shows arts and crafts, carnival and entertainment. It is held at the Civilian Park in Belpre, Ohio.

Historic Architectural Walking Tours – Architectural walking tours are held and one can see the unique and prominent architectural buildings in Marietta Ohio.

Valley Gem Excursions – Are held daily throughout the boating season.

Village of Lowell – Spring and Oktoberfest festivals.

Buell Island in the Muskingum River – Festivals.

Barlow Fair – Autumn festival conducted at the Barlow Fairgrounds.

Waterford Fair – Summer agricultural fair held at the Waterford Fairgrounds.



Medical Services

The hospitals in Washington County include the Marietta Memorial hospital, and Selby General Hospital. The Marietta Memorial Hospital has 204 beds and Selby general has 80 beds. Both hospitals are located in Marietta, Ohio. There are 50 physicians, 23 dentists and 12 optometrists located in Marietta Ohio. Belpre has numerous doctors who share patients in West Virginia and Ohio, four dentists, and five optometrists. There are currently five skilled care nursing homes in Washington County. Emergency Medical Services and volunteer fire departments are known to provide medical services and transportation to patients living in the rural areas of Washington County.

Marietta Memorial Hospital provides a complete array of medical and surgical services; a comfortable birthing center; full psychiatric and chemical dependency services; inpatient rehabilitation, including specialized cardiac services; state-of-the-art outpatient cancer treatment at the Strecker Cancer Center; wellness programs focusing on nutrition, seniors and others; home nursing and hospice services; customized health care options for business and industry; and more. Other aspects of Memorial Health System include:

- Harmar Place, a 70-bed facility providing long-term care and rehabilitation;
- Glenwood, a 121-unit retirement community offering independent and assisted living options;
- Marietta Health Care Physicians Inc., a network of physicians providing primary and psychiatric care throughout the region;
- Marietta Memorial Health Foundation, providing financial support for outreach and charity care;

Selby General Hospital has physicians on its medical staff who work in both West Virginia and Ohio and an employee force of 240. The family medicine physicians continue to deliver primary care in five Ohio counties and three West Virginia counties. The hospital has the area's only free-standing women's health center, *In Care of Women*, and an inpatient geriatric psychiatric unit.

Marietta has a Bethesda Dialysis Clinic, a Community Action Family health Service clinic and a Quick Care Clinic. Lower Salem, Lowell, Beverly, and Macksburg have no hospitals, clinics or doctors. Matamoras has visiting physicians. The nearest hospital is located in Marietta.

It appears there is a lack of medical services and physicians to serve the rural population of Washington County. While there is adequate service for the suburban/urban areas of Washington County, the more rural areas are underserved. The vacuum is filled by quality emergency medical services provided through a cooperative effort of the County 9-1-1 office and locally supported emergency service providers.

Schools

Education Status

Another important factor is the long-term viability of the Washington County economy is the educational attainment of the County's labor force. Insuring that public and/or private investments made for job creation match the skills of the labor force can lead to a more attractive relationship between a potential employer and the County. The Washington County School and Education System contains a total of six school districts, 27 public schools, with an enrollment of approximately 10,400 students. There are 652 teachers and the student to teacher ratio is 15:1. The average expenditures per student are \$6,603. The graduation rate is 94.1%.

There are two parochial/private schools in Marietta that enroll approximately 350 students.



Caldwell School District

Aurelius Township located in the northern portion of the County is served by the Caldwell Exempted Village School District in Noble County.

Marietta School District

Marietta School District includes Harmar Elementary, Phillips Elementary, Putnam Elementary, Washington Elementary, Marietta Middle School and Marietta High School Serving Marietta and the surrounding communities of Reno, Oak Grove and Devola. Declining enrollments, school closings, redistricting, and the possibility of building new elementary facilities in the Marietta City Schools District have prompted school officials to make major changes to the school system. The district closed two elementary schools and plans to sell other school buildings that have been unused by the system for several years. The district has 3,401 students.

Warren Local School District



The Warren Local School District is the fastest growing school district in the County serving southwestern Washington County and the communities of Barlow, Bartlett, Cutler and Little Hocking. In Barlow at the intersection of SR 339 and SR 550, features more growth and residential development than any part of the County. Barlow's rural complexion is changing. Warren High School has increased its student population three-fold since it was built in 1960. Within the last two years several large residential developments have been built. This causes an increase in students. In Barlow, there is a new pharmacy, bank, physician and dentist offices, assisted living center, library, funeral home and wellness center.

The school district has six schools, Warren High School, Little Hocking Elementary School, Barlow-Vincent Elementary School, Bartlett Elementary School, Cutler Elementary School, and Warren Elementary School. The district has 2,663 students.

Belpre School District serves the community of Belpre, includes Belpre High School, Belpre Middle School, Stone Elementary School, and Belpre Elementary School. The district has 1,250 students.

Fort Frye School District serves the northwestern portion of the County including the communities of Beverly, Lowell, Coal Run, Lower Salem and Whipple. It includes the Fort Frye High School, Beverly Elementary School, Lowell Elementary School, and Salem-Liberty Elementary School. Center Elementary school while part of the Fort Frye System is in Morgan County. The district has 1,223 students.

Frontier Local School District serves the eastern portion of the County serving the communities of Newport, Matamoras and Dart, and includes Frontier High School, Lawrence Elementary School, Matamoras Elementary School and Newport Elementary School. The district has 950 students. New schools constructed and facilities renovated in 2003.



Wolf Creek Local School District is located in northwestern Washington County and encompasses approximately 124 square miles. The district was formed in 1928 when three small districts in Palmer, Watertown, and Waterford Townships were consolidated. It serves the Waterford, Watertown and Palmer areas. Major school renovations in 2003.

The area is largely rural with the largest community being the unincorporated village of Waterford. This community has a population of 500 residents. Many people in the district work in agriculture. The district has 672 students.

Table 4.1
School Enrollment

Population 3 years and over enrolled in school	Number	%
Nursery school, preschool	987	6.3
Kindergarten	829	5.3
Elementary school (grades 1-8)	6,839	43.9
High school (grades 9-12)	3,601	23.1
College or graduate school	3,317	21.4
Total	15,573	100.0
EDUCATIONAL ATTAINMENT		
Population 25 years and over	Number	%
Less than 9th grade	1,655	3.9
9th to 12th grade, no diploma	4,980	11.6
High school graduate (includes equivalency)	18,405	43.0
Some college, no degree	8,256	19.3
Associate degree	3,041	7.1
Bachelor's degree	4,015	9.4
Graduate or professional degree	2,418	5.7
Total	42,770	100.0
Percent high school graduate or higher		84.5
Percent bachelor's degree or higher		15.0

Washington County offers higher education to its residents. It has Marietta College, Washington State Community College and the Marietta Bible College. Washington County also has a vocational school, the Washington County Career Center. Marietta offers associates and bachelors degrees, it enrolls 1361 students full-time per academic year; its student to teacher ratio is 12 to 1, the ratio of males to females is 1 to 1, 92% of its faculty possess a Ph.D. or other degree, and its geographic diversity attracts students from 42 states, and 12 countries.



**School districts in
Washington County**

Washington State Community College's enrollment is on average 2,050. It is a comprehensive community college offering associate degrees in arts and sciences for transfer and business, health, industrial, public service and engineering technologies.

Chapter 5- Economic Analysis

Introduction

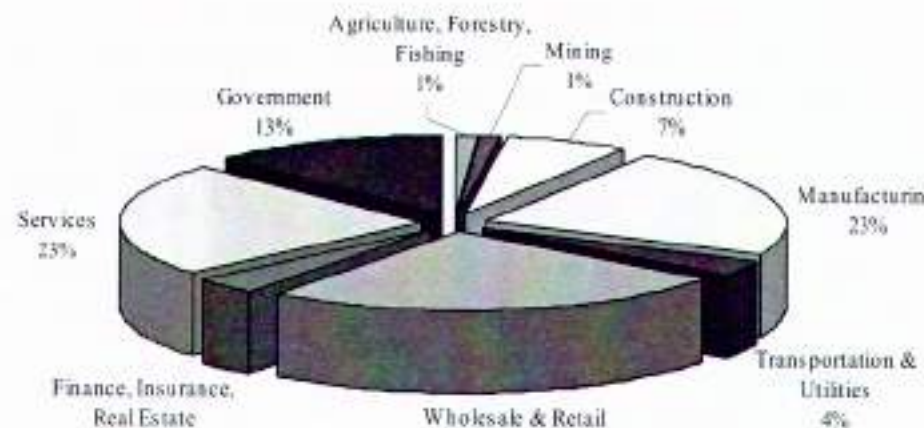
Washington County has an unusually strong and diverse economy compared to many of its neighboring counties. This strength, however, generally lags behind that of the State of Ohio and the nation. The following analysis examines several aspects of the County's economy: its economic structure, its employment and income characteristics, and its recent trends in areas that are generally expected to indicate a growing economy. Washington County is ideally located at the center of a 500-mile area that contains the majority of the U.S. population. Beginning in the year 2004, Washington County offers industry, commerce and residents the very latest in broadband, high-speed communications technology.

Business Opportunities

Business Growth and Potential

Two of the nation's most important highway systems run through Washington County: north-south I-77, and a soon to be completed east-west Appalachian Corridor Highway. The landscape is also dominated by two important waterways: the Ohio River, a main transportation route for the nation's commerce, and the Muskingum River, renowned for its scenic beauty and tourism opportunities.

Chart 5.1
Employment by Industry, 2000



Economic Structure

Economic structure refers to the overall distribution of businesses according to a standard classification system (see Chart 5.1). Analysis of economic structure provides a means of determining the relative prominence of different economic sectors within a local economy, and makes it possible to track changes in the basic economic environment over time. Economic structure is generally measured in terms of total employment and is classified in terms of the North American Industrial Classification System (NAICS).

Table 5.1 summarizes the general economic structure of Washington County in the year 2000 and 2001 by Employment and Wages and is grouped by Industrial Sector.

Table 5.1
Employment and Wages by Sector

NAICS Industrial Sector	Average Annual Employment		Total Wages (in thousands of dollars)	
	2000	2001	2000	2001
Total Covered under Ohio UC Law	24,515	24,420	\$646,641	\$664,126
Private Sector	21,391	21,245	\$560,907	\$575,721
Agriculture, forestry, fishing & hunting	144	128	\$2,360	\$1,893
Mining	260	310	\$6,723	\$8,823
Utilities*	-1	92	\$0	\$4,392
Construction	1,641	1,580	\$45,429	\$46,583
Manufacturing	5,362	5,124	\$213,228	\$214,092
Wholesale trade	865	894	\$24,438	\$25,501
Retail trade	3,284	3,170	\$57,974	\$57,320
Transportation and warehousing	627	610	\$17,381	\$16,426
Information	211	184	\$5,796	\$5,132
Finance and insurance	643	684	\$18,031	\$20,318
Real estate and rental and leasing	195	198	\$3,638	\$3,423
Professional and technical services	725	809	\$21,452	\$25,354
Management of companies & enterprises	117	87	\$3,789	\$2,453
Administrative and waste services	564	520	\$9,901	\$9,485
Educational services*	-1	409	\$0	\$10,724
Health care and social assistance	3,203	3,393	\$82,593	\$90,215
Arts, entertainment, and recreation	152	139	\$1,668	\$1,696
Accommodation and food services	2,105	2,116	\$20,567	\$20,725
Other services, except public administration	809	802	\$11,726	\$11,166
State and Local Government	3,124	3,174	\$85,734	\$88,405
State government	312	308	\$13,250	\$12,746
Local government	2,812	2,866	\$72,484	\$75,659
Federal Government	269	239	\$9,834	\$8,858

*(-1 or \$0 indicates suppression for confidentiality)

The following data analyzes the years 1993 to 1998. Although these numbers may not accurately represent existing conditions as of this writing due to the national and local downswing in economic indicators following 1999, this data set does provide a valuable means of analyzing the basic structure of the economies of Washington County and the region in which it is located. It will be noted that percentages given below for the year 1998 are almost identical to those given above for the year 2000.

Table 5.2
Employment by Industrial Sector-Washington County

Sectors	1993	Percent	1998	Percent	Net change 1993-1998	Percentage net change 1993-1998	Average Percentage of total employment 1993-1998
All Sectors	22,216	100.00%	24,170	100.00%	1,954	8.08%	100.00%
Agriculture, Forestry, Fishing	174	0.78%	223	0.92%	49	21.97%	0.87%
Mining	236	1.06%	218	0.90%	-18	-8.26%	1.02%
Construction	1,499	6.75%	1,725	7.14%	226	13.10%	7.14%
Manufacturing	5,127	23.08%	5,474	22.65%	347	6.34%	22.63%
Transportation and Utilities	989	4.45%	917	3.79%	-72	-7.85%	4.24%
Wholesale and Retail	5,528	24.88%	6,158	25.48%	630	10.23%	25.47%
FIRE	806	3.63%	826	3.42%	20	2.42%	3.48%
Service	4,870	21.92%	5,494	22.73%	624	11.36%	22.11%
Government	2,988	13.45%	3,135	12.97%	147	4.69%	13.16%

Source: County Business Patterns, 1993 – 1998.

Table 5.2 indicates Washington County experienced an employment growth rate of approximately 8% between 1993 and 1998. Three sectors constituted nearly 75% of Washington County's employment between 1993 and 1998: Manufacturing, Wholesale and Retail, and Service. The Service sector tends to function as something of a catch-all, and can include everything from high technology consulting to building maintenance. The Manufacturing sector constitutes nearly one-fourth of local employment and shows a small but significant positive trend during this period. Wholesale/Retail and Service also show strong positive trends. This data appears to indicate a further consolidation of employment in these three categories.

Table 5.3
Employment by Industrial Sector Region

Sector	1993	%	1998	%	Net change 1993-1998	Percentage net change 1993-1998	Average Percentage of total employment 1993-1998
All Sectors	67,382	100.0%	73,690	100.0%	6,308	8.56%	100.00%
Agriculture, Forestry, Fishing	n	-	n	-	-	-	-
Mining	n	-	n	-	-	-	-
Construction	3,062	4.5%	3,936	5.3%	874	22.21%	5.00%
Manufacturing	14,087	20.9%	14,614	19.8%	527	3.61%	20.09%
Transportation and Utilities	2,806	4.2%	2,533	3.4%	-273	-10.78%	3.85%
Wholesale and Retail	14,922	22.1%	16,473	22.4%	1,551	9.42%	22.53%
FIRE	2,209	3.3%	2,325	3.2%	116	4.99%	3.21%
Service	11,872	17.6%	13,521	18.3%	1,649	12.20%	18.10%
Government	15,751	23.4%	17,364	23.6%	1,613	9.29%	23.35%

As Table 5.3 indicates, Washington County has a higher percentage of its employment base in manufacturing, wholesale and retail, and service sector industries than the surrounding Ohio counties. The region does have a significantly higher total percentage of employment in the government sectors, which results to a great extent from the presence of Ohio University and related agencies in Athens County. As a result, it appears that Washington County's economic structure is relatively strong, particularly in comparison to most nearby Ohio counties. Several factors are likely to have influenced Washington County's economic structure, including interstate access, availability of land with minimal topographic restraints, and the availability of a relatively large employee base.

The major employers in Washington County in 2000 were Marietta Memorial Hospital with 900 employees, Eramet Metals Company (608), Washington County Government (570), Thermoforma Scientific Incorporated (499), Kraton Polymers (450), RJF International Inc. (375), Marietta College (314), Kardex Systems Inc. (300), American Electric Power (280), and Pioneer Pipe Inc. (259).⁵

Employment, Wages and Non-Wage Income

According to the 2000 Census 28,607 residents of Washington County, 16 years or older, were employed. This total represents approximately 45% of the total County population of 63,010. Unemployment in Washington County during the past decade has remained consistently below that of many adjoining Ohio counties, as well as the State of Ohio. (see Chart 5.2). Chart 5.3 shows that the average annual unemployment rates for Washington County for the years 1993 – 2002 are as follows:

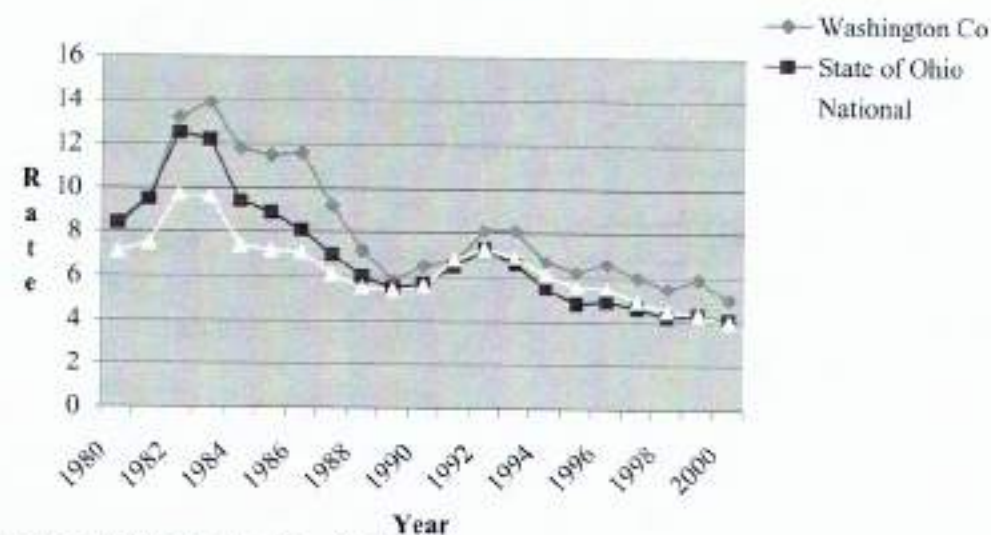
⁵ Source: Buckeye Hills – Hocking Valley Regional Development District.

Chart 5.2
Unemployment Rate Change
Past Seven Years



Source: ORAA –Office of Research, Assessment and Accountability.

Chart 5.3
Unemployment Rate



Source: Ohio State University Washington County Profile

The 2002 unemployment rate is slightly lower than Ohio's average and one-half percent lower than the national average in 2002. As compared to the surrounding counties over the same period, Washington County has consistently had the lowest unemployment rate in the Ohio portion of the region with the exception of Athens County.

An evaluation of weekly earnings characteristics by industrial sector provides more insight into the income being generated by the employed citizens of Washington County (see Table 5.4). For the sake of the following analysis, sectors with weekly earnings growth or average weekly earnings indexed at 1.25 or higher (25% higher than the average for all sectors) are assumed to represent areas of particularly strong growth or particularly high wages. Similarly, sectors with weekly earnings growth or average weekly earnings indexed at .75 or less (25% less than the average for all sectors) are assumed to represent areas of particularly weak growth or particularly low wages.

Table 5.4
Washington County Average Weekly Earnings by Industrial Sector, Indexed

Sectors	1993	1998	Net change 1993-1998	Sector change indexed to total sectors change	Average 1993 - 1998	Sector average indexed to total sectors average
All Sectors	\$424.60	\$505.60	\$81.00	1.00	\$459.63	1.00
Agriculture, Forestry, Fishing	\$230.52	\$313.82	\$83.30	1.03	\$257.41	0.56
Mining	\$372.48	\$431.49	\$59.01	0.73	\$406.43	0.89
Construction	\$474.14	\$539.25	\$65.11	0.80	\$518.69	1.13
Manufacturing	\$637.67	\$748.39	\$110.72	1.37	\$686.51	1.49
Transportation and Utilities	\$517.07	\$550.44	\$33.37	0.41	\$539.52	1.17
Wholesale and Retail	\$258.20	\$313.48	\$55.28	0.68	\$280.19	0.61
FIRE	\$400.09	\$482.97	\$82.88	1.02	\$435.84	0.95
Service	\$372.04	\$486.20	\$114.16	1.41	\$419.23	0.91
Government	\$418.98	\$486.19	\$67.21	0.83	\$444.09	0.97

Table 5.5
Southwest Ohio Counties' Average Weekly Earnings by Industrial Sector, Indexed

Sectors	1993	1998	Net change 1993-1998	Sector change indexed to total sectors change	Average 1993 - 1998	Sector average indexed to total sectors average
All Sectors	\$420.48	\$497.15	\$76.67	1.00	\$457.31	1.00
Agriculture, Forestry, Fishing	n	n	-	-	-	-
Mining	n	n	-	-	-	-
Construction	\$484.95	\$517.00	\$32.05	0.40	\$499.08	1.09
Manufacturing	\$503.71	\$605.09	\$101.38	1.25	\$560.04	1.22
Transportation and Utilities	\$498.81	\$601.26	\$102.45	1.26	\$551.71	1.21
Wholesale and Retail	\$246.45	\$276.22	\$29.77	0.37	\$257.59	0.56
FIRE	\$344.36	\$421.13	\$76.77	0.95	\$373.62	0.82
Service	\$266.55	\$325.59	\$59.04	0.73	\$293.52	0.64
Government	\$401.26	\$482.35	\$81.09	1.00	\$437.06	0.96

In terms of wage growth, both Washington County and the region (See Table 5.5) experienced strong growth in weekly earnings in the Manufacturing sectors. Washington County also experienced strong growth in the Service sector, and the region experienced strong growth in the Transportation and Utilities sectors. Interestingly, Washington County's weakest sectors in terms of weekly earnings growth were Transportation and Utilities and Wholesale/Retail sales. The region also saw extremely weak growth in Wholesale/Retail sales, as well as in the Construction and Service sectors.

In terms of average weekly earnings, Washington County only had one sector, the Manufacturing sector, that demonstrated unusually high average weekly earnings. Across the region, no sectors met the 1.25 threshold, although both Manufacturing and Transportation and Utilities had average earnings close to that mark. Weak sectors for Washington County in terms of average weekly earnings included Agriculture, Forestry and Fishing and Wholesale/Retail sales. For the region, weak sectors included Wholesale/Retail and Service.

It is worth noting, however, that the above information does not disclose two significant trends. First, Washington County's average weekly earnings have remained consistently below the State average. In the year 2000, for example, Washington County's average weekly earnings were about \$120 less than the State average (Demographics, Labor Force and Industry Trends, Region 11, Ohio Department of Job and Family Services, June 2002). This data is not adjusted to reflect the relative costs of living in different regions of the state.

Second, more detailed analysis of the Service sector indicates that most of the growth in this sector during the 1990s stems from health care services and business services. Although growth in business services is likely to indicate a strengthening of the overall economic structure, growth in health services may indicate some long-term weakness in the local economy as a result of the aging of the local population. If Washington County is becoming a regional center of health care, then the growth in this sector may indicate an export service – that is, one that is drawing money into the Washington County economy from outside the County. However, if growth in this sector is primarily serving Washington County residents, that may indicate that the necessities of caring for an aging population may be having an adverse impact on the availability of funds for purchases or investments in economic growth activities. Given the information available about Washington County demographics, there is some concern that the second scenario may be closer to the truth. National trends in relation to government support for health care, particularly through Medicare and Medicaid, may also indicate potential threats to this sector of the local economy.

Finally, an analysis of income and wage characteristics should also include transfer payments, which generally consist of payments to individuals that are not exchanged for services. Retirement income, Social Security payments and other forms of disability insurance payouts constitute the majority of transfer payments in most communities. Washington County appears to have a higher than average dependence on transfer payments: the 2000 Census indicates that, although Washington County ranks near the bottom of Ohio's 88 counties in terms of population, it ranks 26th in terms of the total amount of transfer payments received during that year. Viewed in the light of the demographic trends discussed previously, it appears likely that Washington County's dependence on transfer payments is increasing (Office of Strategic Research, Ohio Department of Development, 2002).

Economic Growth Indicators

The following categories summarize a variety of commonly-used economic growth indicators. These indicators are generally understood to point to a local economy's potential for growth, most notably growth in sectors that are growing in a robust manner at the national level. These indicators are also intended to highlight key strategic areas that have been shown to influence a local economy's ability to capitalize on changing economic conditions and adapt itself to new economic opportunities.

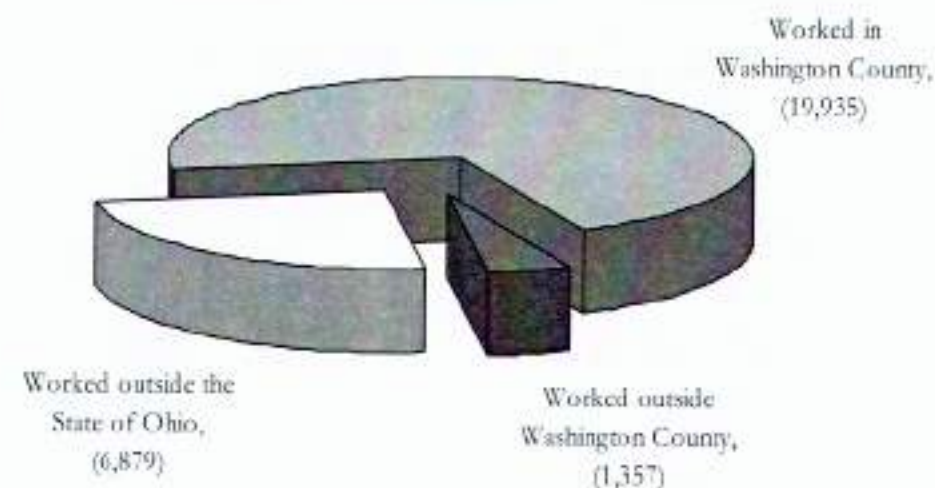
Patents Granted

The number of patents granted to residents of a particular County by the U.S. Patent Service is interpreted as generally indicating the degree to which businesses in that County are involved in developing new products and technologies. During the period 1990-1999, Washington County residents were granted, on average, nine patents per year. While that is more than many of the most rural counties, it is significantly lower than most of the State's urban areas. Average numbers of patents granted per year to Ohio counties during this period varies widely, ranging from less than one to over 400. (*Comprehensive Economic Development Strategy*, Buckeye Hills-Hocking Valley Regional Development District, 2001).

Commute to Work

According to the 2000 Census, 28,607 residents of Washington County, 16 years or older, were employed. Out of the 98% of the labor force in Washington County that travels, 71% worked in the County, 5% worked outside of Washington County, but in Ohio, and the other 24% worked outside of the State of Ohio. Chart 5.4 shows the Commute to Work distribution.

Chart 5.4
Washington County
Commute to Work Breakdown



Source: U.S. Census 2000

Business Start-ups and Active Business

Components of Economic Indicators and change include the business starts and active businesses within an area. Data on business terminations (and consequently net formations) are no longer available or presented by the Ohio Department of Development due to methodological difficulties. Table 5.6 counts the total number of for-profit businesses with at least one employee active in July or August of each year. Table 5.7 represents the number of new business starts in Washington County and Ohio from the years 1993-2002. Washington County had an average of 139 new business start ups per year. 1995 affected 194 business start-ups. This represented the most number of new business starts during the period. The year 2000 had the lowest with only 101 new start-ups. The total number of active businesses for Washington County was 1,485 in 2002 and 1463 in 1993. In 1995 the County hit a high number of active businesses of 1,532. The average number of business for the ten year period is 1485 active businesses.

Table 5.6
Number of Business Starts in Ohio and Washington County 1993-2002

Year	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Rate
Ohio	28,547	29,349	28,576	28,122	27,916	26,908	26,763	26,522	30,451	28,149	121.0
Washington County	157	161	194	142	150	128	107	101	140	115	93.9

Table 5.7
Total Number of Active Businesses for Washington County: July/August 1993 - 2002

Year	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Washington County	1,463	1,510	1,532	1,541	1,506	1,484	1,451	1,433	1,447	1,485

Source: Ohio Bureau of Workers' Compensation, ED 102, 121, 181, and 952 files [machine-readable data files] / prepared by the Bureau, Columbus, Ohio. The Bureau, 1995-2003.

Transportation

One reason industry has grown in Washington County is the region's excellent transportation access. The Ohio River provides a transportation option for manufacturers and there are several river terminals in Belpre and Marietta. The Ohio River Network provides access to markets from Pittsburgh to St. Louis. The County offers rail service to both its river cities and to inland industrial areas such as Beverly.

The River communities such as Belpre, Matamoras, Newport, Porterfield and Reno, as well as Beverly and Marietta, are areas poised for growth due in large part to the infrastructure available for industrial development.

Travel and Tourism

Travel and tourism has been consistently identified as one of the fastest-growing sectors of the national economy during the 1990s and 2000s, becoming the United States' second-largest employment sector by 2000. In 1999, the most recent date for which data is available, Washington County had the highest rates of employment, total taxes, and wages directly derived from travel and tourist services within its region. Direct sales to travellers increased two percentage points between 1998 and 1999, and travel and tourism-related businesses supported 5,800 jobs in Washington County. However, Washington County also earned less in terms of local tax income than did Athens and Hocking counties. Washington County had the highest number of total hotel rooms in the region and the highest occupancy rate, but the shortest average length of stay among the counties. This data may indicate that Washington County is benefitting from a large number of transient visitors, but that there may be more opportunity to capture visitors to regional destinations, including the City of Marietta, who may be expected to stay longer.

Washington County does appear to be benefiting from a small but growing cultural heritage tourism sector centered largely on the City of Marietta. Cultural heritage tourism is generally defined as "traveling to experience the places and activities that authentically represent the stories and people of the past and present." (National Trust for Historic Preservation, 2003). Marietta is particularly well suited to heritage tourism by virtue of its historic roles in the State of Ohio's development and its extensive historic built environment. Washington County is a member of the Ohio Arts Council's Hill Country Heritage Area. This grassroots-led organization represents a significant source of technical assistance and regional coordination, and can provide small seed grants for specific local initiatives.

Major Employers

Washington County has a strong existing industrial base. It ranges from the chemical and plastics industries (Marietta is the home to the world's largest thermo-plastics elastomer facility) to more traditional industries such as metal fabrication and woodworking. One of the County's economic development targets is attracting companies to grow with and support its burgeoning polymer sector. Major industries include manufacturers such as Eramet, Chevron Chemicals, and Flexmag.

Major Industries and Companies

Eramet Marietta
Kraton Polymers
Marietta City Board of Education
Marietta College
Marietta Memorial Hospital
RJF International Inc.
Thermo Forma
Wal-Mart Stores
Warren Local Board of Education
Washington County Government

Business Support Organizations

Washington County Economic Development Office
Belpre Area Chamber of Commerce
FLEDA Frontier Local Economic Development Association
Muskingum Valley Chamber of Commerce
Beverly-Waterford Chamber of commerce

Power Plants

Washington County is home to four power plants. Two new plants have been added to the Beverly/Waterford area. Descriptions of the plants follow:

The Washington Energy Facility is a 620 megawatt, natural gas-fired, combined-cycle merchant power plant located approximately 70 miles southeast of Columbus, in Washington County, Ohio near Beverly. Located in the East Central Area Reliability Council (ECAR) region, the Washington facility meets the growing need for new energy supply attributed to high demand growth and unit retirement estimates. The facility is owned and managed by Duke Energy's Houston-based wholesale energy company, Duke Energy North America.

The Washington facility consists of two natural gas-fired combustion turbines and one steam turbine. Each combustion turbine is a GE-7FA class unit. Texas Eastern Transmission Company (TETCO), a Duke Energy subsidiary, supplies natural gas to the facility.

American Electric Power (AEP), Muskingum River Plant located in Waterford Township, is one of 16 coal-fired generating plants that serve the American Electric Power Grid. The Muskingum River Plant maintains five generating units that have a combined generating capacity of 1,425,000 kilowatts. The plant burns approximately 3.5 million tons of coal each year. Units one, two, three and four began operating in the 1950s. Unit five, which embodies more advanced techniques of power generation, began operating in 1968.



Public Service Enterprise Group (PSEG) is a publicly traded (NYSE:PEG), growing energy and energy services company headquartered in Newark, NJ. Its main subsidiaries are: PSEG Power LLC, Public Service Electric and Gas Company (PSE&G) and PSEG Energy Holdings. As electric and gas markets are deregulated by state and national governments, PSEG is committed to identifying and seizing opportunities in energy services and related fields, while maintaining its high level of gas and electric service to its traditional residential and business customers.

American Municipal Power-Ohio supplies wholesale power to 80 community owned distribution utilities in Ohio, as well as several in Michigan, Pennsylvania, and West Virginia. The power generation company, which is owned by its member municipalities, was formed in 1971. American Municipal Power-Ohio (AMP-Ohio) is a nonprofit association. The organization supplies wholesale power and provides technical and other services to its members. AMP-Ohio owns and operates the Richard H. Gorsuch Generating Station, a 213-megawatt, coal-fired facility in Marietta, Ohio.

Economic Analysis Conclusions

Washington County has a relatively strong and stable economic structure that is built to a great extent upon traditional manufacturing and service industries. In general, Washington County has had consistently healthy economic conditions in relation to surrounding Ohio counties, but some of its employment and growth indicators have tended to be lower than the remainder of the State of Ohio.

In terms of economic growth trends, Washington County has experienced a reasonable level of growth over the past decade, but a closer analysis of this growth may indicate some areas where further analysis may be warranted. As noted previously, strong growth in the health service sector may indicate a growing portion of the base economy, if the majority of health services are being purchased by consumers outside of Washington County, or it may indicate that an increasing amount of local economic activity is being channeled into a non-base sector, which does not support the County's overall economic growth. Given the trends in population and transfer payments noted previously, there is some evidence that the second scenario may be the case. This sector should receive additional attention in future planning projects to identify its actual economic role in the County.

Chapter 6: Land Use Development

Land Use Trends

According to information gathered by the OSU Exurban Exchange Project, Washington County has seen some significant change in land use. The information gathered analyzes land use for all non-federally owned land located in unincorporated areas in Washington County. From 1982 to 1997 urban land increased by 17.1%, forest land increased by 28.6% and farm land decreased by 33%. Urban land includes low intensity and high intensity residential uses, commercial/industrial/transportation uses, and urban/recreational green space (includes parks, golf courses, lawns, etc.). Forest land includes deciduous, evergreen and mixed forests. Farmland includes crop land, pasture where crop land includes row crops, pasture includes grasslands/herbaceous, and pasture hay uses.

Table 6.1
County Land Acreage
Total Acres (in 1,000's)

Year	Total Acres Estimated	Total Urban Land	Total Forest Land	Total Farm Land*	Total Crop Land	Total Pasture
1982	409.7	28.0	162.3	174.3	64.8	109.5
1987	409.7	28.9	184.7	150.9	61.4	89.5
1992	409.7	30.2	196.2	135.2	56.9	78.3
1997	409.7	32.8	208.7	116.7	54.3	62.4

*Total Farm Land equals sum of all crop land and all pasture land

Table 6.3
County Land Cover Change 1982 to 1997, from the National Resource Inventory, Washington County, Ohio

Land Cover	1982 to 1987		1987 to 1992		1992 to 1997		1982 to 1997	
	Absolute Change*	Percent Change	Absolute Change*	Percent Change	Absolute Change*	Percent Change	Absolute Change*	Percent Change
Urban Land	0.9	3.2%	1.3	4.5%	2.6	8.6%	4.8	17.1%
Forest Land	22.4	13.8%	11.5	6.2%	12.5	6.4%	46.4	28.6%
Total Farmland**	-23.4	-13.4%	-15.7	-10.4%	-18.6	-13.7%	-57.6	-33.0%
Crop Land	-3.4	-5.2%	-4.5	-7.3%	-2.6	-4.6%	-10.5	-16.2%
Pasture Land	-20	-18.3%	-11.2	-12.5%	-15.9	-20.3%	-47.1	-43.0%

*Absolute Change measured in thousands of acres

**Total Farm Land equals sum of all crop land and all pasture land

Tables 6.2 and 6.3 provide more information concerning land use change in Washington County from 1982 to 1997.

Table 6.2
County Land Cover 1982 to 1997, from the National Resource Inventory, Washington County, Ohio (acres)

Total Acres (in 1,000's)						
Year	Total Acres Estimated	Total Urban Land	Total Forest Land	Total Farm Land*	Total Crop Land	Total Pasture
1982	409.7	28.0	162.3	174.3	64.8	109.5
1987	409.7	28.9	184.7	150.9	61.4	89.5
1992	409.7	30.2	196.2	135.2	56.9	78.3
1997	409.7	32.8	208.7	116.7	54.3	62.4

*Total Farm Land equals sum of all crop land and all pasture land

Chapter 7: Plan Goals and Objectives

The essence of good community planning involves creating a livable community with a sustainable quality of life. Learning about what the community desires and what it wants to be in the future is the essence of establishing Vision and Goals. The Washington County Comprehensive Plan is based upon an extensive public participation program that resulted in the definition of the Plan's Vision and Goals.

Public Involvement

Public participation throughout the planning process was a critical element for strategizing the County's future. The public must be heard in order for a Comprehensive Plan for Washington County to accurately represent the needs and desires of citizens who will live in the County over the next twenty years. Because of this, an extensive public involvement process took place throughout the Plan's development.

The first step in the public involvement process was the formation of a Steering Committee that met on a regular basis, providing the Consultant and County staff guidance and opinions on where Washington County should be in 20 years. The Committee was comprised of representatives from the Planning Commission, County Commissioners, business interests, citizen organizations, and special interest groups throughout the community. The Committee contributed valuable information concerning the County's past, the travel patterns and congestion throughout the County and potential development areas. The Steering Committee also served as a type of "sounding board" for the Consultant to introduce new ideas and recommendations responsive to the County's needs.

Another public involvement element was the stakeholder interview process. Stakeholders included citizens and public officials who possess valuable knowledge of the County and have insight on historical and current issues that have helped to formulate the Plan. It is important to understand the perception of residents living in Washington County and have local insight that people living outside the County would not possess. Individuals were interviewed during the various stages of the planning process and a summary of the interviews are found in this report.

Information was also gathered from two public meetings that were held during the planning process. The first meeting was held at the Washington County Courthouse (Feb. 19, 2002) to determine what the citizens of Washington County wanted to include in the Plan. A second public meeting, held midway through the Plan process, was held at the Davis Avenue Extension Office (April 16, 2002).

A listing of all the public involvement materials is listed in a separate Appendix.

SWOT Analysis

A Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis was conducted early in the Plan process to provide a basic understanding of the broad issues facing Washington County. Participants at the session worked in groups to identify Washington County's Strengths, Weaknesses, Opportunities, and Threats and were then asked to evaluate each response based on their perceived importance.

SWOT analyses are an effective tool when studying the feasibility of community growth because the analysis requires that planners and community members think about all of the positive aspects of growth as well as the negative impacts and barriers to growth. From the community workshop, the planners, County officials and

residents came up with a list of the Strengths, Weaknesses, Opportunities, and Threats of future growth in their community.

The following list summarizes the issues identified through the SWOT analysis and Citizen Survey.

Strengths

- History - draw for tourism;
- Natural Areas/Resources:
 - Wayne National Forest,
 - Rivers, Navigable and Scenic, and
 - Little Muskingum one of cleanest rivers in Ohio;
- Unemployment Rate lower than surrounding counties;
- Economic Diversity, especially small business, agriculture;
- People: good work ethic, honest;
- Strong Labor/Management Relationships;
- Low Crime Rate;
- Entrepreneurial Spirit (for example, doll manufacturers, magnet manufacturer);
- Good Highway System (except air-affordability);
- Spirit of Cooperation between Cities and County and between Counties (especially Wood Co. WV) and between other agencies (social service, school, etc.);
- Ohio River for industry, recreation and tourism; and
- Corridor D expansion.

To summarize the Strengths of Washington County, it can be noted that the participating groups nominated the top four strengths in Washington County as:

1. Tourism and Area Heritage;
2. Quality of Life (Rural and Scenic Qualities);
3. Intergovernmental Cooperation; and
4. Economic Opportunities (Appalachian Corridor D, strong labor management relationships).

Weaknesses

- Fear of Change
- Location - SE Ohio/Appalachia
- Away from Populated Area
- Lack of Capital Improvement Plan
- Capturing Tax Revenue - equitable redistribution
- Income Levels in the County limit access to funding
- Limited Focus on developing natural resources for economic development opportunities
- Topographical Constraints - hinder development
- Air Pollution - negative perception of volume/level
- Multiple School Districts
- Lack of "Good" Job Opportunities especially for college educated people
- No "Safety Net" when jobs are lost especially when higher paying jobs are involved
- Air Service is limited and expensive
- Size: 5th largest County in Ohio

Washington County's most noted weaknesses include its lack of good job opportunities, topographical constraints, lack of a capital improvement plan for infrastructure and the underdeveloped perception or Appalachian backwardness of the County. The leading results indicate that weaknesses in Washington County are:

1. Economic development resources/strong tax revenue base;
2. Lack of coordinated infrastructure-sewer and water;
3. Lack of job opportunities-college graduate migration; and
4. County is underdeveloped.

Opportunities

- New Gas Run Electric Power Plants
- Corridor D Expansion
- Tourism Expansion
- National Economic Improvement
- Public Facility Construction – employment
- Expansion of Medical Industry - doctors moving in/hospital expansion
- New School Buildings in the eastern area

Threats

Threats can be defined as factors which we have little or no control over. These are usually obstacles that hinder or prevent good development or implementation of opportunities. The leading threats identified in Washington County are:

- Population Loss - actual and perceived
- Cost of Older Population
- Proposed Regulations regarding malpractice tort reform in Ohio
- Fear of Change - dealing with development pressure
- No Mechanism for Development Control
- Current Township Government structure not handling change well - because of lack of staff, resources, etc., "pecking order"/"low person on the totem pole"
- Education - split districts, not keeping competitive with academics, difficulties hiring and keeping teachers
- FEMA Flood Regulations – hinder development
- Water, floods, drainage concerns
- Gas Prices Increasing - Natural gas/production gas – could hurt industry
- Gas and Electric Deregulation: negatively impact tax base, rates
- Industries being purchased by outside entities

Citizen Survey

In addition to the SWOT processes, a County-wide Citizen Survey was hand distributed by members of the Planning Commission and Steering Committee as well as other volunteers to Washington County residents in 2002 along with a Citizen's Guide. The Guide outlined the basic purpose of a Comprehensive Plan, identified the key components of the Plan, presented the Plan development process, and emphasized the importance of

citizen participation. Citizens were invited to attend public meetings, and complete comment sheets and opinion surveys, as well as contacting County officials.

The following figures summarize the results of the Citizen Survey. A copy of the full survey and the Citizen's Guide may be found in the separate Appendix.

Washington County Survey

Major issues identified via the survey. These notes represent the issues receiving a score of 3.0 or less and a score of 3.9 or more.

Development

- Opposed to the expansion of the Wayne National Forest
- "Neutral" when it comes to reducing the size of the Wayne National Forest
- Farmland should be protected from development
- Rural nature of the County is valued
- Farmland is a strength of the County
- Supportive of "measures that would control the quality, location and type of development in the County"

Transportation

- Did not believe the transportation system was a strength
- Did not agree that local air service was adequate
- Did not agree the local roads were in good repair
- Did not agree the current public transportation system was adequate
- "Neutral" as to whether the current rail system adequately supports local business and industry

Economic Development

- Did not feel the "County should provide incentives to bring in new businesses (including tax abatement incentives)"
- Agreed County should support and encourage small businesses
- Agreed that job creation should be a priority for the County
- Creation of well paying jobs (for educated individuals) was mentioned a number of times in the written comments

Education

- Did not agree that the schools should be consolidated
- Local colleges are seen as an asset to the County

Location Issues

- Did not agree that the location of the County was a weakness
- Did not agree that distance from a major metropolitan area was a weakness

Recreation

- Did not agree that the County needs more soccer fields, football fields
- Neutral as to need for softball/baseball fields

Natural Environment

- Agreed the rivers are a strength
- Agreed that water pollution is a weakness
- Agreed that air pollution is a weakness
- Did not agree that sloping terrain is a weakness

Other

- "Neutral" on whether the health facilities are a strength
- Agree history is a strength
- Agree people are a strength

Table 7.1
General Comments from all Public Input

Economic
<p>Concern for employment opportunities</p> <ul style="list-style-type: none"> Education/Training Facilities available for "retooling" workers for new opportunities Economic Diversity, especially small business, retail, commercial, assisted living, agriculture, industry, grocery Development and redevelopment of central community businesses Development that serves the needs of the area Provision of an economically viable center. <p>Tourism</p> <ul style="list-style-type: none"> History of areas inside County Ohio River riverfront entertainment and cultural developments Creation of parklands and open spaces Doll museum adjacent or near doll factories
Educational
<p>Continuation in the quality of the school system</p> <ul style="list-style-type: none"> Keep the size and volume of the institutions small to service their districts Development and introduction of advanced classes would be a plus Consolidation of the facilities <p>Would like to see a City district and one County district for unincorporated areas</p> <p>Some schools need capital improvements</p> <p>Major stumbling block is lack of funding</p>
Residential
<p>Would like to see some control over the residential development to ensure that quality structures are built in a controlled fashion – suggestion was made to revisit the subdivision regulations</p> <p>Quality rental housing outside of Marietta</p> <p>Inadequate affordable housing</p> <p>Housing along the River</p>
Transportation / Infrastructure
<p>Rt. 7 North – further development is imminent</p> <p>Township roads need improvement</p> <ul style="list-style-type: none"> Want to repave 30 streets and upgrade water lines but funds are needed Possible tax increase for roadway expenditures? Corridor D Bridge will provide opportunity for housing development <p>Water and sewer lines extended for improved services and accommodation of further development throughout the County</p> <p>Air service is poor; cost of service too high</p> <p>May want to review standards, especially in the area of drainage</p>

Table 7.1 Continued

Preservation
<p>Wayne National Forest</p> <ul style="list-style-type: none"> Ideas to consolidate forest lands <p>Rivers, Navigable and Scenic</p> <ul style="list-style-type: none"> Ohio River Little Muskingum (one of cleanest rivers in OH) <p>River recreation possibilities</p> <ul style="list-style-type: none"> Recreation development proposals with river access Tourism/Creation of a County Park District Available land to develop is adequate Undeveloped River Bottoms and Floodplains as conservation easements. Provision of "public access" to Rivers <p>Implementation of Bike Trail proposals in conjunction with existing and future infrastructure and recreation facilities</p> <p>Would like to see more parks, ball fields, and other recreation</p>
General
<p>Concern about the exodus from County due to lack of professional level jobs</p> <p>High amount of poverty</p> <ul style="list-style-type: none"> Working poor – not on welfare Poor housing conditions Inefficient heating/cooling systems, water and sewer systems questionable <p>Some like the smaller schools that are common in the County</p> <p>Some would like to see the school districts consolidated</p> <p>Support for zoning</p> <p>Would like to see some measures taken to ensure that farmland is preserved</p> <p>Pig farms, chicken farms, etc. are undesired</p> <p>Would like to see the outlying Townships included in more of the development</p> <p>Would like to see more support for the senior population</p> <p>Lack of recreational opportunities</p> <p>More could be developed in the Wayne National Forest</p> <p>Need more sports facilities</p> <p>Air transportation can be an issue, especially the cost</p> <p>Wayne National Forest</p> <ul style="list-style-type: none"> Some would like to see it expand so that it is one contiguous area Some feel it hinders development opportunities <p>Concerns about the threat of pollution (air and water)</p> <p>Some believe the community is at its capacity</p> <p>Would like sanitary sewer</p> <p>Would like to see County assist in acquiring loans for entrepreneurial ventures</p> <p>Would like to see County pay attention to the outlying townships, they often get "left out"</p> <p>Senior citizens do not get enough attention</p> <p>Want opportunity to recycle</p> <p>Washington County better positioned for scattered site development than for subdivisions</p> <p>Need more good jobs so the young will stay</p> <p>Bruner Development: Don't like style of development – large lots with single house (5 acres+)</p>

Table 7.1 Continued

General - Continued
<p>County should take over the EMS services in the unincorporated areas</p> <ul style="list-style-type: none"> Most people don't have time to volunteer, especially during normal working hours Need to improve response rates, right now very slow New 9-1-1 system is good but need the people to respond to the calls <p>Limited funding for green space preservation makes it difficult to purchase major tracts of land, especially tracts that are threatened by development</p> <p>Should have Countywide building codes</p> <p>Since currently none of the Commissioners sit on the Committee, they appoint engineers, this is why the majority of the funding is allocated to roads and bridges rather than water and sewer</p> <p>Likes the Washington State Community College program that allows High School students to take classes. Able to graduate from High School with Diploma and Associate Degree</p> <p>Extension of gas electric and cable for improved services and accommodation of further development throughout the County</p> <p>"Conserve rather than Preserve" - Conserve the desirable elements of the County</p> <p>Tourism focus: would like to see developed like Canaan Valley, WV with lodges or cabins</p> <p>Maintain oil and gas production</p> <p>Improve access to County's natural assets rivers</p> <p>Thought of "Preserving the County as it is – will not allow for progress"</p> <p>Rail service is poor/marginal</p> <ul style="list-style-type: none"> Hurts economic development <p>Residential development is limited in Wayne National Forest because the National Forest keeps buying land</p> <p>Area lacks future leaders</p> <ul style="list-style-type: none"> Young educated move from area Need leadership training and community development training Those that are in professional jobs have limited time to serve on volunteer boards and commissions Lack some specialized services, especially medical
Other
<p>People with good work ethics, honesty</p> <ul style="list-style-type: none"> Majority of occupations exist in manufacturing and industrial environments <p>Strong labor/management relationships</p> <p>Entrepreneurial spirit (for example: doll manufacturers, magnet manufacturers)</p> <p>Spirit of cooperation between cities and County and between counties (especially Wood Co, WV) and between other agencies (social service, school, etc.)</p> <p>Two new electric power plants (PSE and Duke)</p> <ul style="list-style-type: none"> Offer few long term jobs (20-25) Over the past 1.5 years have provided high volume of construction jobs <p>Farms primarily family owned, not major corporations</p> <p>Forest industry</p> <ul style="list-style-type: none"> Two big lumber mills Both family operated Get most lumber from WV

Goals and Objectives

Establishing goals and objectives for the Comprehensive Plan was the task of the Steering Committee. These goals and objectives were generated after a series of public involvement activities were held, and the comments and results from the SWOT analysis and survey were analyzed and developed. The public involvement activities included public meetings and interviews with key County residents. Additional information concerning public involvement activities may be found in the Appendix. From the information gathered, the following goals and objectives were generated. The Steering Committee approved the final set of goals and objectives in August 2002.

GOAL: Preserve the existing rural character and quality of life in Washington County.

Objectives

- Explore new and enhance existing methods that guide and manage development in the County.
- Encourage farmland and greenspace conservation.
- Encourage wise use of the County's natural resources.
- Encourage strategic preservation of key historical, cultural and natural features in the County.

GOAL: Increase economic development opportunities throughout Washington County.

Objectives

- Attract high quality, high paying, environmentally friendly industries and jobs.
- Improve support for existing and new locally owned businesses throughout the County.
- Encourage development that provides a diversified tax base.
- Capitalize on Corridor D expansion to leverage economic benefits for the County.
- Explore possibilities for new business development related to the County's River and Interstate access.
- Build on local colleges' academic and cultural resources to expand economic development opportunities for the County.
- Encourage local school districts and colleges to provide academic programs that will support new economic development opportunities.
- Encourage expansion of the tourism industry.

GOAL: Improve and expand recreation facilities to meet the needs of current and future Washington County residents, businesses and visitors.

Objectives

- Assess the current capacity of public park and recreation facilities to determine if current and future demands of all County residents, businesses and visitors will be met.
- Expand recreation opportunities in conjunction with economic development activities.
- Plan for increased utilization of the Rivers as a public recreation source.
- Develop a bike/activity trail along the Ohio River.
- Maintain and improve existing park and recreation facilities to keep pace with demand.
- Combine passive recreation areas with conservation easements in environmentally sensitive areas.
- Capitalize on covered bridges, history and other landscape/cultural elements of the County for recreational opportunities.
- Develop recreational opportunities that build on the assets of the Wayne National Forest.

GOAL: Improve infrastructure to best meet the needs of Washington County residents, businesses and visitors.

Objectives

- Increase telecommunications/internet capacity to keep pace with new growth and development changes in the local economy.
- Expand utilities, when economically and environmentally feasible, to ensure adequate and reliable service.
- Target infrastructure investments to promote economic expansion.
- Link infrastructure investments with development control measures to promote high quality development practices.
- Evaluate community safety services (fire, law enforcement, EMS) in unincorporated areas to ensure high quality service.

GOAL: Improve the transportation system to best meet the needs of Washington County residents, businesses and visitors.

Objectives:

- Improve roads to accommodate current and future traffic volumes.
- Link road improvements with economic development and infrastructure growth strategies.
- Coordinate with surrounding communities to improve air service for the region.
- Assess public transit service system to determine if current and future demands will be met.
- Coordinate with rail companies to ensure any plans for expansion benefit the County's economic development activities.

Chapter 8: Future Land Use Approach

Land Use Trends

Identifying preferred future land uses is a key component of the planning process because it provides a guide for future development and identifies the future land uses that best fit a given location on the basis of its physical characteristics, its context and the community's needs. Land use planning is also a preventative strategy for anticipating inappropriate uses for a specific area which can then provide a basis for zoning and other regulations designed to ensure that future development meets the County's goals.

Land Use Scenario 1

Land Use Scenario 1 is a more conservative approach to land use development and growth in Washington County. Specifically, Figure 8.1 Land Use Scenario 1 depicts the recommended land use changes throughout the County.

Residential: There are several pockets of residential growth recommended for single family development along SR 339, in areas north of SR 7 just east of Marietta and around the Devola area of Muskingum Township.

Highway Commercial: Highway Commercial use areas have been added in Macksburg at the I-77 interchange where highway commercial uses can locate and along I-77 north of Marietta. Note that this area is included in the 100-year flood plain and any commercial development will be constrained by flood plain regulations.

Commercial: Commercial areas have been identified along SR 339 just south of Barlow. These areas are anticipated to continue to grow with community commercial uses. An area along SR 7, heading east of Marietta has also been designated as a Commercial expansion area.

Redeveloped Industrial: A redeveloped industrial area has been identified along SR 7 north of the corridor D area between Marietta and Belpre. This area has been designated to grow with redeveloped industrial uses, which are industrial uses not previously occupying the area.

Land Use Scenario 2

The Selected Scenario (Figure 8.2 – Land Use Scenario 2) incorporates the comments from the June 2003 Steering Committee Meeting to include more residential development along SR 339 and SR 550 corridors and to further expand the commercial and redevelopment industrial areas along SR 7 with the development of Corridor D.

Land Use Scenario 2 is a more aggressive approach to land use development and growth in Washington County. Specifically, Figure 8.2 – Land Use Scenario 2 depicts the recommended land use changes throughout the County.

Residential: There is almost a continuous area of residential growth recommended for single family development along SR 339, from SR 7 north. Other areas of concentrated residential development include Fearing Township, east of Marietta, east of SR 7, and in the northwest portion of the County in Waterford Township. The roadway improvements planned for SR7 east (north) of Marietta will have significant impacts

on land use patterns and growth in Marietta Township and will include residential improvements. There is also a pocket of residential development proposed in Salem Township and Adams Township. These areas of residential growth are anticipated to follow the trend already developing in these areas.

Highway Commercial: Highway Commercial use areas have been added in Macksburg at the I-77 interchange where highway commercial uses can locate and along I-77 north of Marietta. Note that this area is included in the 100-year flood plain and any commercial development will be constrained by flood plain regulations.

Commercial: Commercial areas have been identified along SR 339 just south of Barlow. These areas are anticipated to continue to grow with community commercial uses. An area along SR 7, heading east of Marietta has also been designated as a Commercial expansion area and from SR 7 at Greene Street and towards Matamoras. This commercial expansion area is the result of the impacts of the improvements to SR7 east of Marietta and in Marietta Township.

Redeveloped Industrial: A redeveloped industrial area has been identified along SR 7 north of the corridor D area between Marietta and Belpre. This redeveloped industrial area will extend into Belpre. This area has been designated to grow with redeveloped industrial uses, which are industrial uses not previously occupying the area.

The County should commit to actively pursuing a variety of Land Use Regulations as they relate to development within the County. While a Comprehensive Plan provides a vision and policy direction as to where the County desires to be in the future, a number of tools are available to help implement the Plan. Enforcement should occur on a proactive basis in order to implement the Plan and protect the health, safety and general welfare of the property owners within the County.

Special Planning Areas

Figure 8.3 depicts the Special Planning Areas of the County. They include areas that will require special emphasis in terms of planning regulations, coordination, and development due to the nature of the growth these areas will experience over the next twenty years. The plan has identified seven Special Planning Areas and they are described below.

Corridor D Special Planning Area

The Corridor D Special Planning Area consists of the area fronting the Ohio River in Belpre Township and the City of Belpre. It extends from the SR 124 and follows the Ohio River north east to SR 7 and Briggs Hills Road. The area includes the City of Belpre, Little Hocking and the areas and roadways immediately adjacent to this area. The Corridor D Special Planning Area will need to give consideration and planning to the proposed improvements and growth impacts of the Corridor D bridge extension and the improvements indicated on the list of Traffic Projects planned by WWW-IPC.

Goal: *Coordinate the Transportation Improvements with the Economic Developments programs and incentives. Carefully plan for the type, placement, and location of future residential and commercial growth.*

Objectives

- Establish an appropriate body with authority to provide design review for new and redeveloped parcels within this study area.
- Establish evaluation criteria to assess the impact of proposed infrastructure projects on financial resources of the County, Township and City.
- Link local road improvements with economic development and infrastructure growth strategies.
- Improve local roads to accommodate changes in traffic patterns resulting from the construction of Corridor D.
- Adopt controls that will permit a regulating body to consider fiscal impact on County resources prior to approval of proposed development.
- Establish requirements for residential development.
- Establish the appropriate body or designate the appropriate body with authority to provide design review for the Corridor D area.
- Develop regulations restricting the locations of land uses including extractive facilities and heavy industry. Require adequate screening and buffering between uses.
- Discourage pass-through traffic patterns in residential areas. Coordinate access management efforts with the County and State agencies.
- Identify Scenic areas and areas of conversion along the riverfront. Develop regulations or easements to protect the land.
- Connect the system of pathways and trails to future pathways and trails that connect existing recreational uses.

Residential Special Planning Areas

The Residential Special Planning Area consists of the areas that follow SR 339 from SR 7 north to the Watertown area. The east west area follows SR 550 from Bartlett to Marietta. These intersecting corridor areas were identified as areas that are and will be experiencing residential development and growth. Many of the communities that are located along these State Routes, such as Barlow, which is in the center, Dunham Township, Veto, Belpre Township, Watertown, Bartlett to the west and in Warren Township to the east are growing and are destined to grow as the roadway improvements are made and as infrastructure improvements are extended. To promote cohesive residential growth, the following goals and objectives could be considered and implemented.

Goal: Promote cohesive residential development with controlled densities and location.

Objectives

- Establish requirements for residential development.
- Adopt guidelines, regulations, and/or incentives to encourage the type and density of residential development proposed in the Comprehensive Plan Selected Scenario.

- Establish additional development controls to promote cohesive residential development with controlled densities.
- Establish an appropriate body with authority to provide design review for new and redeveloped parcels within this study area.
- Integrate landscape buffers for new developments. Analyze population projections for potential high school/grade school location
- Require buffering between residential commercial/industrial uses.
- Preserve open space.
- Limiting undesirable uses and encouraging specific uses for development for the community, including, retail, commercial uses, and industrial uses.
- Developing regulatory controls and coordinating with local and state agencies for funding and infrastructure development.
- Developing a County image or identity through the use of streetscape design elements.
- Ensure land area for future schools.
- Ensure sizable sites for future parks.
- Design - prepare architectural, landscape and lighting design standards. Appoint a design review committee to evaluate.

Industrial Special Planning Areas

The Industrial Special Planning Area consists of the area in the northwest portion of the County that contains Waterford and is outside of Beverly and in the south west portion of the County west of SR 7 south of Marietta Township and west of Belpre. This area contains the two new power plants and other industrial uses. This area was identified as an inner industrial area of the County that can continue to grow industrially. The Washington County area's long-term vitality will depend to a great extent on its ability to enhance its business and industrial environment and build its economic base. Not only will the County and surrounding areas need to provide job opportunities to attract residents, but the County must develop increased fiscal income streams that derive from non-residential land uses in order to support the services that the County provides. The goals and objectives of this Special Planning Area will identify broad-based strategies to build the industrial economic base.

Goal: To be a globally competitive area for economic development that is business friendly and advocates and supports entrepreneurs, aggressively recruits target industries to the County; successfully retains and grows existing business and industries with the support of business, labor and government.

Objectives

- Consider statewide funding and work within State enabling legislation.
- Establish Enterprise Zone or CRA and T.I.F. Districts.
- Pursue funding options to finance infrastructure.
- Develop industry in conjunction with roadway improvements.

- Promote the close proximity to I-77 and Corridor D.
- Coordinate economic development with land uses.
- Link transportation and infrastructure improvements with economic development
- Explore the potential for additional industrial parks in the area – coordinate these efforts with Appalachian Ohio, the Ohio Department of Development and the Washington County Development Office and area Chambers of Commerce.
- Encourage commercial and redeveloped industrial development.
- Offer incentives to attract and retain business.

Commercial Service Special Planning Areas

The Commercial Service Special Planning Areas include those with emphasis on General Commercial and include: Commercial, Commercial / Office, Highway / Commercial, and Commercial / Industrial. They consist of various cluster areas along SR 339, along the Ohio River at Newport and South along SR 7, around the Matamoras area along SR 7, and along Interstate 77 at Macksburg. These areas have been identified as areas that will grow in these service sectors based on roadway and infrastructure improvements and growth assumptions. The Washington County area's long-term vitality will depend to a great extent on its ability to enhance its commercial service and commercial industrial environments and build its economic base. The goals and objectives of this Special Planning Area will identify broad-based strategies to build its economic base.

Goal: To develop business recruitment and retention strategies, and provide a strong economic base from which the County can develop.

Objectives

- Focus on developing, attracting or recruiting a mix of uses – offices, professional services, restaurants, hotels-motels, medical services/health care, information, and technology.
- Place priority on creating a high quality physical environment.
- Encourage incorporation of pedestrian-friendly businesses into new developments through development controls and site review processes and through targeting incentives and support mechanisms to businesses that support pedestrians.
- Take a long range view – it will not happen right away.
- Use traditional incentives (i.e., tax exemptions) only to keep up with competitors.
- Use traditional incentives to facilitate new business development.
- Create or reallocate a staff position designed to help existing and potential businesses maximize their use of State and federal programs.
- Develop and facilitate access to non-traditional business incentives: technical support, seed grants, joint publicity, preferential buying policies, etc.
- Develop a clear, articulated policy of targeting all incentives and support only to those businesses that have potential to reinforce the Plan's vision and goals. This policy should be well-defined and defensible.

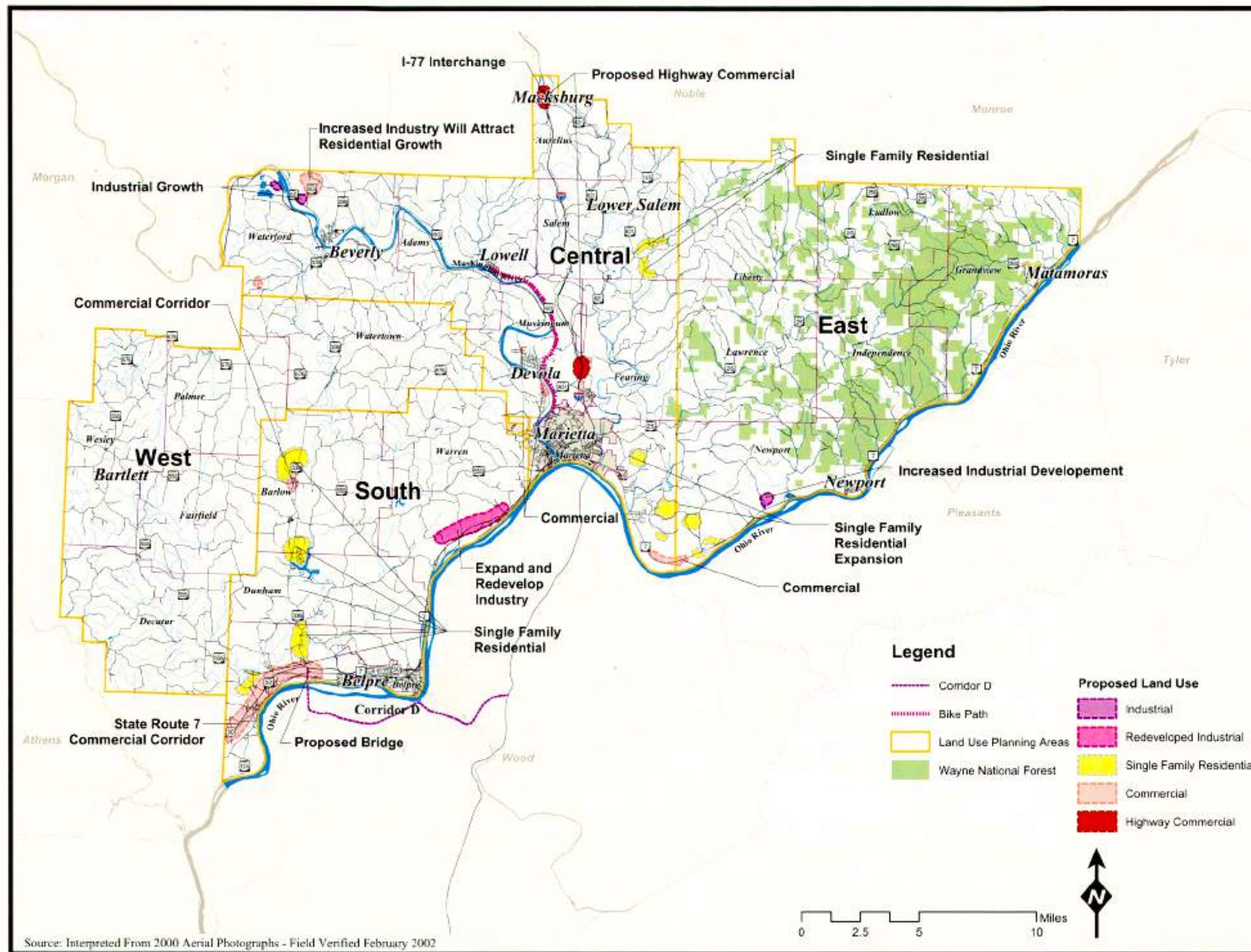
- Identify desired businesses in other locations (Parkersburg, Columbus and Charleston) to approach regarding expansion opportunities.
- Identify a specific set of developers, institutions, and businesses etc. that have the potential to successfully redevelop properties along SR 7 and SR 339. Conduct targeted, ongoing communication campaigns to alert these entities to the benefits and opportunities of SR 7, Corridor D, Riverfront Development and other locations within Washington County.

Land Use Categories

New and additional land use categories have been developed to best reflect the growth plan for Washington County. The land uses are mapped under several categories that describe their future use. The categories are descriptive only and do not necessarily reflect any zoning or development regulations of the property. The categories used in the process of building the database are as follows:

- **Commercial/Office:** Commercial areas are those characterized by retail stores, professional and business offices, personal services, and other business-related development such as: restaurants, lodge halls, amusement parks, and other uses that serve a larger market area than the neighborhood retail. It also includes professional offices for administrative uses.
- **Redeveloped Residential:** Single Family Residential areas that contain a single-family dwelling. It can be either detached or part of a subdivision development. This includes densities below one acre to what is considered Estate Lots in which residential areas containing a single-family are dwelling. These are areas identified that were previously not residential uses.
- **Single Family Residential:** Single Family Residential development.
- **Agricultural:** Agricultural areas maintained as farmland or for the raising of livestock including farmland that may qualify for Current Agricultural Use Value (CAUV) from the State of Ohio.
- **Agricultural Overlay District:** The overlay district maintains farmland and preserves the agricultural features that are beneficial to the agricultural quality of the County.
- **Woodland:** Woodland and Park areas refer to those specifically structured for active and/or passive recreational uses. Recreation includes both public uses, such as parks, and private uses such as golf courses. Wayne National Forest is the major recreational use within Washington County.
- **Industrial:** Industrial areas represent any area occupied by businesses whose primary operation involves warehousing, manufacturing, assembling, distributing, packaging or processing goods
- **Redeveloped Industrial:** These areas represent any area occupied by businesses whose primary operation involves warehousing, manufacturing, assembling, distributing, packaging or processing goods that have expanded or added to an area that was not previously an industrial land use category.

Corridor D: Corridor D is the name given to a series of highway improvements that eventually will reroute traffic on U.S. 50 around downtown Parkersburg. It will connect with U.S. 50 in Ohio west of Belpre.



Land Use Scenario 1

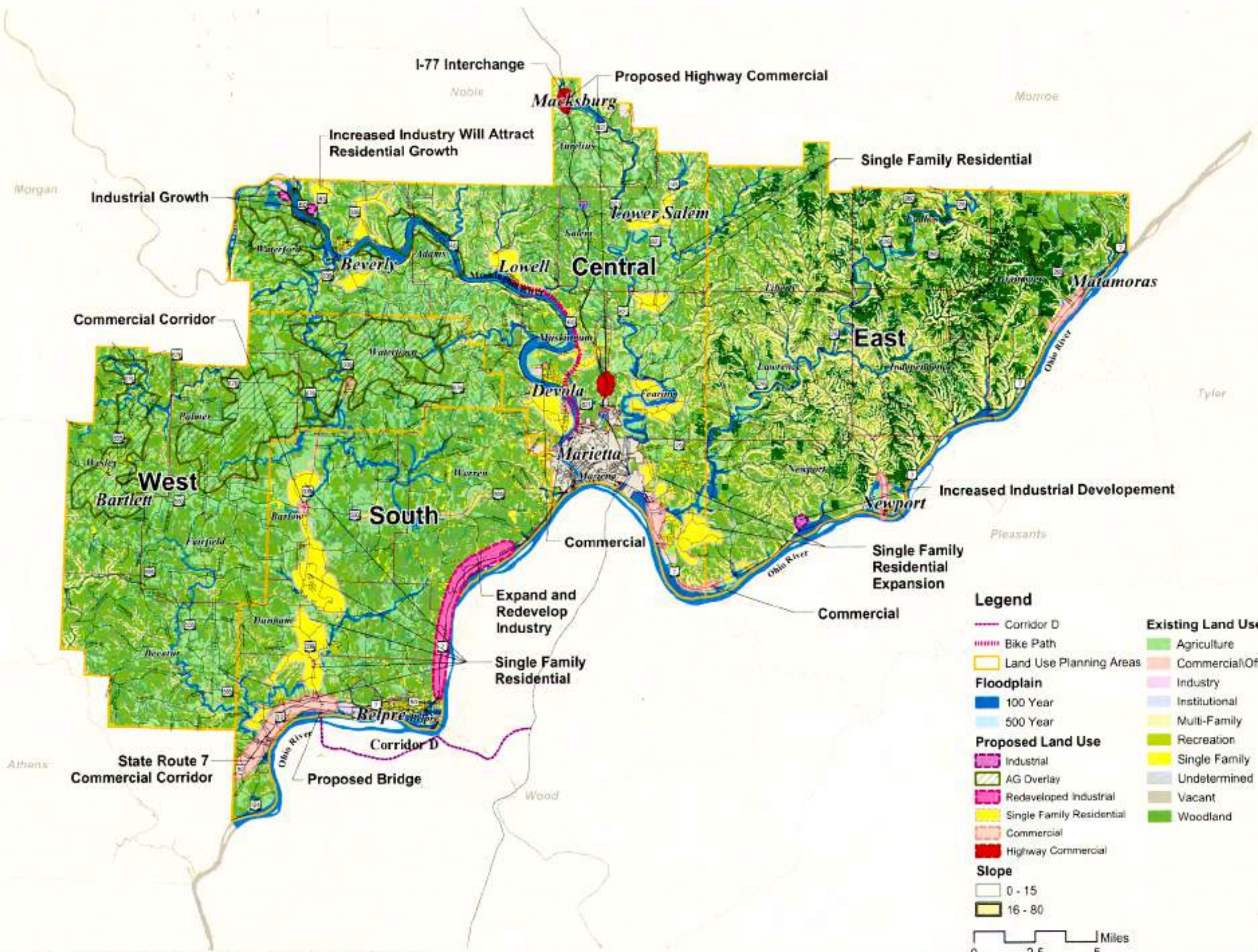
Washington County, Ohio Comprehensive Plan

Figure 8.1B

**Edwards
AND Kelcey**

May, 2004





Source: Interpreted From 2000 Aerial Photographs - Field Verified February 2002



Land Use Scenario 2 with Existing Land Use

Figure 8.2A



May, 2004

Washington County, Ohio Comprehensive Plan



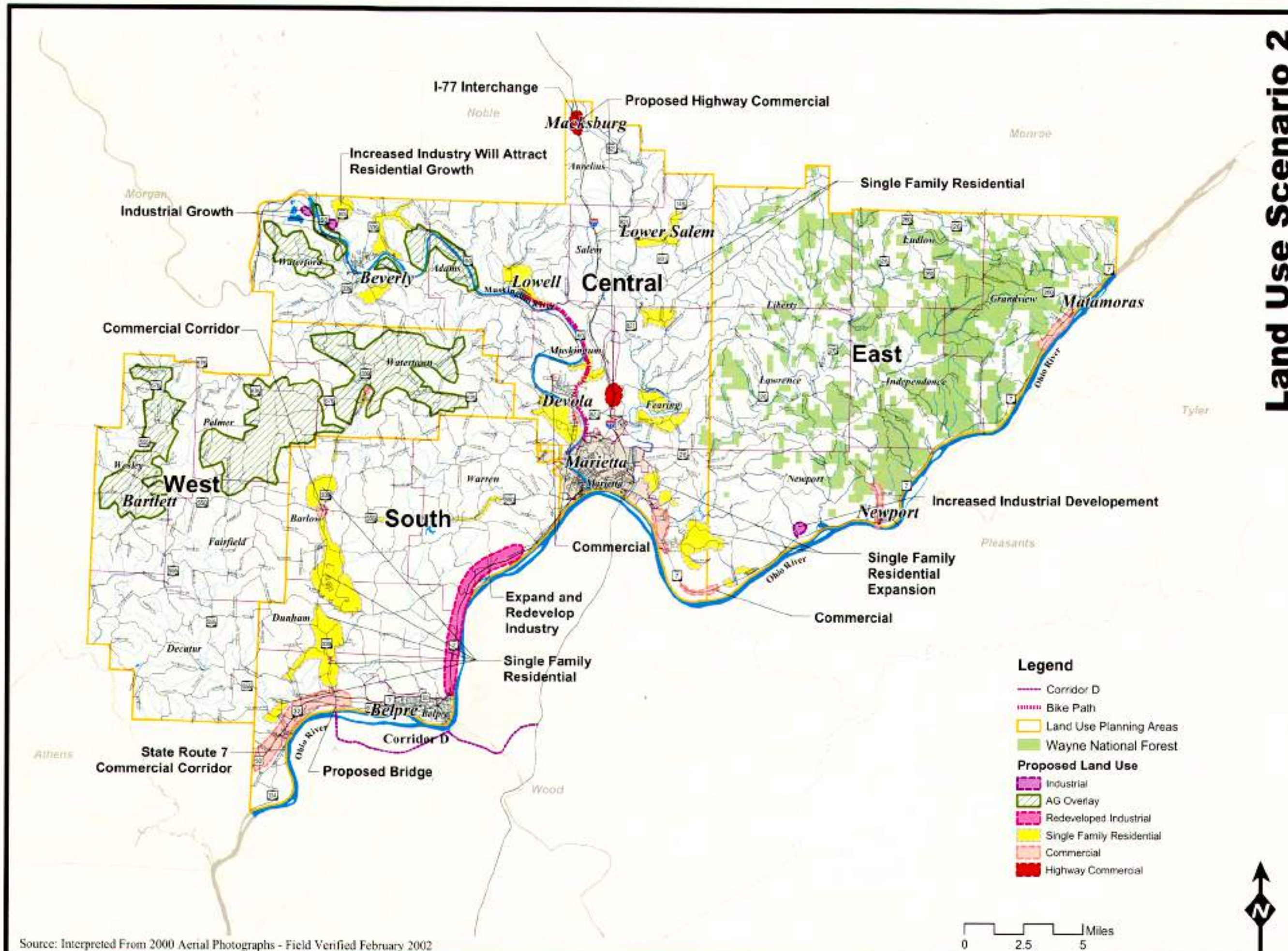


Figure 8.2B

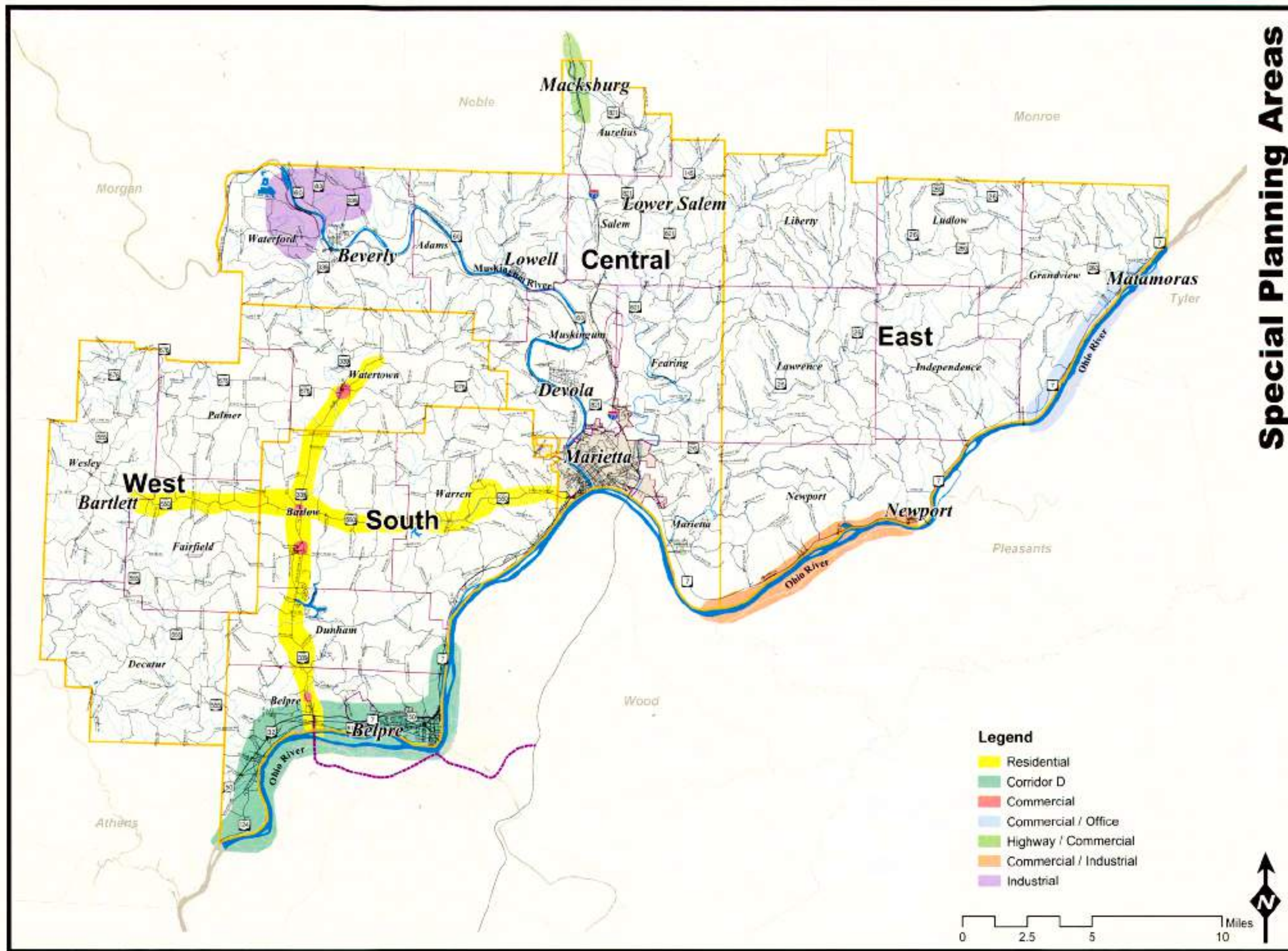
**Edwards
AND
Kelcey**

May, 2004

Washington County, Ohio

Comprehensive Plan





Washington County, Ohio Comprehensive Plan



Figure 8.3

**Edwards
AND Kelcey**

January, 2004

Countywide Land Use Policies

Overall Land Use

Manage growth. Managed growth means guiding growth in relation to community goals. Managed growth means decisions will be made in concert with the land's natural carrying capacity, the community's ability to financially support development through the provision of infrastructure and related community services and facilities, the community's desire and need for additional growth and development, and related provisions contained in the comprehensive plan. New infrastructure and new public services will be planned in direct relationship to the managed growth policy above. Any new infrastructure and/or new public services deemed necessary during this plan's projected time frame will be analyzed, studied and considered for the County's Capital Improvements Program. Preserve significant open space to buffer development and to preserve the area's view shed. Encourage land use patterns that promote energy conservation by seeking a balance between in-fill development and the reduction of congestion. Encourage in-fill development in established areas that is compatible with existing and/or planned land use, that is at a compatible scale with the surrounding area, and that can be supported by adequate public facilities and transportation systems.

Achieve compatible transitions between adjoining land uses through the control of height and the use of appropriate buffering and screening. Stabilize residential neighborhoods adjacent to commercial areas through the establishment of transitional land uses, vegetated buffers and/or architectural screens, and the control of vehicular access. Utilize landscaping and open space along rights-of-way to minimize the impacts of incompatible land uses separated by roadways. Use cluster development as one means to enhance environmental preservation when the smaller lot sizes permitted would allow more sensitive development of local topography with less land disturbance, or would enable continuity of greenways. Encourage planned developments. Increased density or intensity of development may be justified based on site design considerations. Encourage the underground placement of all existing wired facilities.

Environmental/Hazard Mitigation Element

Hazard mitigation planning is the process of determining how to reduce or eliminate the loss of life and property damage resulting from natural and human-caused hazards. The following describes the four basic phases of the hazard mitigation process.

Organize Resources: From the start, communities should focus on the resources needed for a successful mitigation planning process. Essential steps include identifying and organizing interested members of the community as well as the technical expertise required during the planning process.

Assess Risk: Next, communities need to identify the characteristics and potential consequences of hazards. It is important to understand how much of the community can be affected by specific hazards and what the impacts would be on important community assets.

Develop a Mitigation Plan to Implement the Plan: Armed with an understanding of the risks posed by hazards, communities need to determine what their priorities should be and then look at possible ways to avoid or minimize the undesired effects. The result is a hazard mitigation plan and strategy for implementation.

Monitor the Progress: Communities can bring the plan to life in a variety of ways ranging from implementing specific mitigation projects to changes in the day-to-day operation of the local government. To ensure the success of an ongoing program, it is critical that the plan remains relevant. Thus, it is important to conduct periodic evaluations and make revisions as needed.

Mitigation is defined as any sustained action taken to reduce or eliminate long-term risk to life and property from a hazard event. Mitigation, also known as prevention, encourages long-term reduction of hazard vulnerability. The goal of mitigation is to save lives and reduce property damage. Mitigation can accomplish this, and should be cost-effective and environmentally sound. This, in turn, can reduce the enormous cost of disasters to property owners and all levels of government. In addition, mitigation can protect critical community facilities, reduce exposure to liability, and minimize community disruption. Examples include land use planning, adoption of building codes, and elevation of homes, or acquisition and relocation of homes away from floodplains.

Communities that already participate in other FEMA programs such as the Community Rating System (CRS), Flood Mitigation Assistance Program (FMA), and Hazard Mitigation Grant Program (HMGP), should update current plans to account for additional hazards and current regulations.

Local Government Powers that Apply to Hazard Reduction

Planning. Although the degree of planning authority of a local jurisdiction is determined by state legislation, all local governments can use a planning process to educate, encourage participation, and reach consensus on promoting hazard mitigation.

Regulatory Power. Local jurisdictions have the authority to regulate land use development and construction through zoning, subdivision regulations, design standards, and floodplain regulations (note: many states have adopted statewide model building codes wherein the local governments are not allowed to modify or change the code).

Spending Authority. The way in which local jurisdictions use public funds can influence development in hazard areas. One fiscal management tool that many communities embrace is the capital improvement program, which is generally a 5-year plan for funding improvements to public facilities.

Taxing Power. If the private sector seeks development in hazard areas, special taxing districts can be created to balance more equitable and appropriate public investments. Preferential assessments can also be used as incentives to retain agricultural and open-space uses in high hazard areas.

Acquisition. Local governments can acquire lands in high hazard areas through conservation easements, purchase of development rights, or outright purchase.

Stormwater management plans: these plans describe actions to maintain system capacity to handle stormwater, which also provides flood mitigation benefits;

Open space and recreation plans: these plans target locations for open space and recreation areas where property acquisition or buyout programs in hazard areas can complement the planned improvements;

Redevelopment and housing plans: these plans identify areas where construction is occurring or will occur. Opportunities exist to incorporate mitigation techniques into retrofit activities and new construction, and to influence the location of redevelopment away from hazard areas; and

Transportation plans: these plans identify and prioritize road improvement projects where mitigation of transportation and utility systems can be incorporated.

Community Rating System (CRS): CRS is a program that provides incentives for National Flood Insurance Program communities to complete activities that reduce flood hazard risk. When the community completes specified activities, the insurance premiums of the policyholders in those communities are reduced.

Acquisition: Local governments can acquire lands in high hazard areas through conservation easements, purchase of development rights, or outright purchase of property.

Chapter 9: Implementation

The creation of a Comprehensive Plan has allowed Washington County to consider its future and determine its goals. This is the first step toward organized growth and development. Any plan, however, is only made effective through implementation. Implementation may require the development and adoption of a Zoning Resolution, a different approach to capital improvements, and adoption of new tools not previously used in the County. The Comprehensive Plan articulates the goals of the County, explains the basis for those goals, and sets out strategies, policies and directions in a general fashion.

The following implementation strategies are compiled in a summary format to implement the Comprehensive Plan Preferred Land Use Scenario for Washington County, Ohio. The Comprehensive Plan for Washington County maintains the rural atmosphere or character of the County as the major consensus and goals of the community. The other major goals are to maintain open space, control congestion, preserve nature, and minimize and control the amount of land to be developed both residentially and commercially. Other strategies we have addressed in the Plan include limiting undesirable uses and encouraging specific uses for the community, including, retail and commercial uses, such as mini-strip malls and convenience businesses, grocery stores, gas stations, and restaurants. These ideas along with many others are addressed in the implementation strategies listed below.

Plan Monitoring and Maintenance

This final chapter of the Washington County Comprehensive Plan identifies the specific steps that the County may take in order to bring the ideas of this Plan to fruition. Although a Comprehensive Plan is a valuable instrument for a County to use in setting its future direction, the actual impact that a Plan will have on the future depends on the degree to which the residents, institutions and stakeholders determine to make the desired improvements happen.

The descriptions on the following pages identify the general steps that must be taken in order to bring the recommendations of this Plan to reality. The matrix at the end of this Chapter gives specific recommendations and is organized according to the Planning Areas –East, South, Central and West and by category –Economic, Transportation, Recreation, Land Use, and Infrastructure used to identify recommendations throughout the text of the Plan.

Finally, every plan must have a champion: a person, group or entity that takes responsibility for monitoring the implementation of the Plan, promoting the completion of the Plan Strategies, and making modifications when appropriate. The Commissioners Office of Washington County should have responsibility for this oversight. It is recommended that the Commissioner's Office use this matrix as a benchmark for reviewing the implementation of the Plan on a regular basis. It is also recommended that the County lead efforts to update the Plan approximately every five years after its adoption.

Topic Areas

The results of the SWOT analyses and the Visual Preference survey combined with the analysis of the existing conditions were translated into development strategies and a list of Topic Areas that are important and critical to the development of Washington County. The topic areas developed out of the SWOT analyses and Visual Preference Survey are:

- Land Use –Regulatory, Agriculture and Housing;
- Transportation;
- Economic;
- Infrastructure; and
- Parks and Recreation.

These Topic Areas were developed into a matrix of strategies and recommendations and were grouped by Planning Area. The matrix is located at the end of this Chapter.

Future Implementation Strategies

Land Use Regulatory Strategies

To successfully implement a Land Use Plan, the County will need appropriate regulatory strategies in order to ensure that future development meets the County's goals, control growth, and prohibit producing negative impacts for the County as a whole. The following recommendations will improve the County's ability to effectively regulate future development.

Develop zoning or regulatory controls for the Townships. Coordinate zoning with individual Townships. Look at the existing zoning codes of Marietta, Belpre and east Muskingum Township. Consider appointing a County wide steering committee to develop and coordinate the codes in conjunction with the Townships and a consultant.

Consider the creation of access management requirements to be applied to properties that have ingress or egress from US 7, US 50, or other major roadways. By limiting curb cuts and encouraging shared access points and internal connections between adjoining parking facilities, Washington County can improve the transportation function and safety of the existing roadways.

Consider the creation of an agricultural overlay district for properties identified on the preferred land use scenario. This overlay district could incorporate lot size requirements and other agricultural friendly characteristics. Items for review in this overlay district should be at an appropriate scale for suburban development.

Work with the Townships, and incorporated areas to establish consistent land use controls in areas coterminous to the County and incorporated boundaries.

Agricultural Overlay District/Farmland Preservation

Prime agricultural land differs from other agricultural land designations in that it generally consists of highly productive soils. However, moderate and low productivity soils should be designated prime if such soils lie within, or are surrounded by contiguous areas identified as prime farmland. The inclusion of these soils may act to discourage development on the less productive or sloping soils of an otherwise prime agricultural area. Should such development occur, remaining prime agricultural land may no longer satisfy the requirements of a prime designation. Productivity is also a secondary factor when considering prime land designations in a rural area with confined feeding operations. Furthermore, "unique" farmland within metropolitan areas can be considered prime if it provides a community with demanded farm produce, open space, or related amenity benefits.

A variety of private and public land protection methods can be employed to protect agricultural operations from the impacts of non-farm development. However, their success ultimately relies on public and political support. Without that support, justification for prime farmland conservation is difficult. Often, environmental, social, and aesthetic effects of prime farmland loss are not readily quantifiable and most protection programs require administrative and financial resources beyond that required for current zoning policies.

Agricultural preservation has been an important aspect within Ohio's rural areas. According to The Ohio State University Population and Land Use Change at the Rural Urban Interface study, a decrease of 23% has occurred between 1978 and 1997. The number of farms in non-metropolitan counties has experienced 22% decline. Various methods can help reduce the number of farms endangered by growth trends in Ohio counties. The comprehensive planning process provides a guideline for the type, placement, and location of future growth, therefore maintaining the existing atmosphere enjoyed by Washington County residents.

Various strategies should be implemented to ensure the preservation of the County's farmland:

- Establish a strategy for assisting landowners who wish to preserve their property in its agricultural state
- Establish corresponding zoning controls to preserve agricultural property
- Establish criteria for determining the viability of agricultural uses

Ohio Farmland Preservation Program: *A variety of options to preserve farmland and to enhance the economic viability of agriculture. Source: Ohio Farmland Preservation Task Force.*

- Crops important to the people and economy of the state should be preserved.

Purchase of Development Rights (PDR) Program: *Gives the farmer the right to sell development rights to farmland in return for the acceptance of a permanent conservation easement on the affected land. Source: Ohio Farmland Preservation Task Force.*

Lease of Development Rights (LDR) Program: *Offers the owner to protect farmland from development by allowing a long-term commitment. Source: Ohio Farmland Preservation Task Force.*

- An LDR Program should have a minimum of 30 years.
- A second 30 year term can be renegotiated at the end of the first term.
- Farms to be protected using any state farmland preservation funds shall be located in an Agricultural Security Area as identified in a local comprehensive land use plan.

Transfer of Development Rights (TDR) Programs: *Protects higher productive soils for agricultural production and directs new development to less productive soils. Source: Ohio Farmland Preservation Task Force.*

30-year Land Use Tax Credit (LUTC) Program: *Offers a tax credit based on property taxes in return for a 30-year easement on the affected land. Source: Ohio Farmland Preservation Task Force.*

Buffer Residential Development from Agricultural Uses

Development indirectly reduces the productive potential of surrounding agricultural land by limiting its current or future use. In fact, impacts on the converted tract itself may be small in comparison to the current and future consequences impacting adjacent farmland. Scattered residential development also increases the potential for

nuisance conflicts. Odor, noise, and dust are potential problems associated with agricultural production. These problems can often only be avoided by locating operations (especially confined feeding operations) away from people. Furthermore, even if an area's proportion of agricultural land area remains high, but available only in smaller scattered parcels, farmers may be prevented from employing newer technologies that require more land to achieve full economies of scale. Such restrictions reduce efficiency and increase production costs, perhaps even leading to premature idling of land.

A New Definition of Prime Agricultural Land

The United States Department of Agriculture (USDA) defines prime farmland as the land best suited to food, feed, forage, fiber, and oilseed crops. Prime farmland produces the highest yields with minimal inputs of energy and economic resources, and farming it results in the least damage to the environment. County Soil Surveys also follow this productivity-based approach to identifying prime agricultural land. In fact, a County Soil Survey not only contains yield data for crops and pasture, but often specifically identifies soils considered prime farmland. Consequently, the County Soil Survey provides a preliminary definition of prime agricultural land. However, problems created by direct and indirect effects of development indicate that, within the context of land use planning and zoning, the definition of prime agricultural land must be based on more than the traditional measures of soil productivity and crop yields. Instead, prime or select farmland should be defined by a combination of productivity and location. In the rural and urban fringe areas of today, the distance to residential development is becoming an increasingly important spatial characteristic affecting production.

Retaining Land in Agriculture: The Zoning Example

Ruled constitutional by the U.S. Supreme Court in 1926 (see *Euclid v. Ambler Realty Co.*, 272 U.S. 365), zoning is justified under the police powers of the state to prevent land uses that threaten the safety, health, morals, and general welfare of the public. Zoning ordinances influence urban land use primarily through the physical isolation of uses. While zoning is the primary method used to influence urban land use, relatively little zoning is practiced in rural and urban-fringe areas.

Current planning and zoning practices provide only a weak device for retaining land in agricultural. For example, in some Ohio counties, areas of prime agricultural land are given the AA (Select Agriculture) designation in the zoning ordinance. While such a land use designation may identify areas of agricultural importance, it does little to retain land in agriculture when the ordinances are subject to variances, zoning amendments, and special exceptions. Similarly, minimum lot size is the primary conventional zoning method used to insure low residential density in rural areas. Unfortunately, two, five, or even ten acre residential parcel size restrictions do little more than scatter development and consume or cripple prime farmland. Even if the minimum lot size is forty acres or more, an ordinance must prohibit nonagricultural uses of the tract. Furthermore, minimum lot size restrictions should primarily address the public health concerns of on-site waste disposal systems, not farmland preservation.

Fortunately, unconventional zoning methods do exist to preserve prime agricultural land. Open space zoning and exclusive agricultural zoning are two of the most promising. The conventional approach to development results in an entire development parcel being covered with house lots and subdivision streets. Open space zoning, on the other hand, relies on the principal of cluster development, whereby new homes are clustered onto part of the development parcel. Clustering allows the remainder to be preserved as productive farmland or unbuilt open space. Since only the density and not the number of houses is changed, open space zoning can permanently protect a substantial portion of every development tract's agricultural productivity without decreasing the development potential for both landowner and developer.

Exclusive agricultural zoning is less frequently used than nonexclusive zoning such as open space zoning, because it prohibits nonagricultural use of the land within the district. The main advantage is that it ensures there will be no conflict between residential and agricultural uses. However, the ordinances are more difficult to adopt because the farmland owners must forego (often reluctantly) the opportunity to sell their land to residential developers.

Voluntary Creation of Agricultural Districts

A more landowner friendly form of exclusive agricultural zoning is the voluntary creation of agricultural districts. The benefits which farmers obtain by voluntarily joining an agricultural district may include differential assessment, protection against nuisance ordinances, and limits on public investments for nonfarm improvements. Basic standards for reviewing district petitions should be outlined in the County Zoning Ordinance, if not at the state level. Like any zoning ordinance, however, its effectiveness can be undermined by a zoning authority's lax supervision of rezoning and variance requests.

The Property Rights Example

In addition to zoning, a County or local government can utilize transferable property rights to provide a more lasting means of preserving prime or select agricultural land. A program for transfer of development rights (TDR) allows landowners to sell their development rights to a developer. In turn, the developer may use them to develop qualified lands at higher densities than allowed under existing zoning laws. A TDR program allows local governments to steer development to desirable areas (such as those with sufficient infrastructure) while assuming little financial burden.

Under a similar program for purchase of development rights (PDR), landowners can sell conservation easements to governmental agencies or nonprofit organizations. PDR involves the purchase of a deed restriction on qualified farmland that restricts the future use of the land to agricultural or open space uses, either permanently or for a specified period of time. While the farmer retains the right to sell or transfer the land, it remains subject to the deed restriction precluding any future development or activities that may negatively impact its agricultural viability. An owner of agricultural land may also donate a conservation easement to a governmental agency or charitable organization and receive a charitable deduction (see 26 U.S.C. § 170 (h)(4)(A)).

Acquiring the financial resources needed to purchase development rights is the greatest hurdle for implementing a PDR program. Importantly, a planning commission/ordinance committee must carefully establish criteria from which to determine a farm's eligibility for participation in the program. Criteria should specifically target key parcels that would preserve the County's agricultural potential and open space amenities.

Smart Growth Strategies

Smart Growth For Rural Areas

Smart growth is an approach to development that concentrates on investing in existing communities. By directing growth to communities where people already live and work, smart growth regulates the amount of farmland and open space that is preserved and developed, makes existing communities more attractive -- with a mix of housing, restaurants, parks, cafes, and jobs, and minimizes the need for new water, sewer and road infrastructure that increase taxpayer burdens.

For rural communities, smart growth means supporting existing town centers and Main Streets, and attracting and encouraging growth and investment in and around these centers and within existing communities, preserving the character of rural towns. This would apply to the growing City of Belpre, and Barlow, Bartlett, Devola, Little Hocking, Dunham, and Watertown Townships. In contrast, sprawling development in rural, suburban and urban areas is auto-oriented, single use development -- frequently along or at the intersection of nearby highways -- that draws economic activity out of downtowns, damaging their vitality and dramatically increasing infrastructure needs. Smart Growth, in contrast, simultaneously preserves open space and farmland while ensuring that there is an adequate supply of housing for families with a mix of incomes. Smart Growth provides residents with a mix of shops, offices, restaurants, and other services that they can get to by automobile, bus, bike or foot.

Economic Benefits

Communities across the United States have found that protecting open space, parks and farmland is a strategy that can be used to strengthen existing communities, attract businesses, and avoid the costs of urban and suburban sprawl. As part of a package of smart growth programs and policies, communities that offer a high quality of life including well-maintained neighborhood parks and extensive park systems consistently attract and retain businesses.

Agriculture contributes to local economies directly through sales, job creation, support services and businesses, and by supplying lucrative secondary markets such as food processing. In many rural areas, tourism is a major industry that supports local economies, and as discussed earlier, farmland and open space impose significantly fewer costs on local governments.

Transportation & Sprawl

Until recently, the transportation system primarily supported sprawl. The almost single-minded focus on highway development from the 1950s through the 1980s encouraged spread-out housing, and made it easy for businesses to locate in remote office parks, far from traditional, walkable downtowns. As a result, the automobile became almost the only way to travel, and traffic increased exponentially, bringing with it congestion and frustration. It has been reported that sixty-nine percent of the increase in traffic can be attributed to factors associated with sprawl.

Smart Transportation

Land use comes first, then transportation. You build the transportation network to serve the kind of development pattern you want. You don't just build roads and watch what happens.

What does a 'smart growth' transportation system look like? Smart Growth transportation provides choice and convenience, and is coordinated with the way the community is growing.

Transit Oriented Development puts bus and train stops at the center of communities, so that housing, offices, and shops are all within walking distance. People have more opportunities to live or work near a bus or train, and to run errands, on foot, on their way to or from the bus and train.

Walking Gets Priority Smart growth communities are often designed first for walking. They feature a grid street pattern that makes it easy to make direct connections on foot; wide sidewalks, traffic circles, and other devices slow automobile traffic and maintain a safe walking environment. Many developers try to locate essential services, such as a corner store or a bus stop, within a mile of all homes, to encourage walking.

Bicycle-Friendly Communities The Bicycle Friendly Community Campaign is an awards program that recognizes communities that actively support bicycling. A Bicycle-Friendly Community provides safe accommodation for cycling and encourages its residents to bike for transportation and recreation.

Better Road Design A new book by the Congress for the New Urbanism, *Civilizing Downtown Highways*, shows that local leaders in California are winning the right to influence the design of state highways in their communities. For California residents, that means more walkable main streets, and fewer freeway-style thoroughfares in the center of town.

Smart Growth Strategies for Washington County

1. **Mix Land Uses.** New, clustered development works best if it includes a mix of stores, jobs and homes. Single-use districts make life less convenient and require more driving.
2. **Take Advantage of Existing Community Assets.** From local parks to neighborhood schools to transit systems, public investments should focus on getting the most out of what we've already built.
3. **Create a Range of Housing Opportunities and Choices.** Not everyone wants the same thing. Communities should offer a range of options: houses, condominiums, affordable homes for low income families, and "granny flats" for empty nesters.
4. **Foster "Walkable," Close-Knit Neighborhoods.** These places offer not just the opportunity to walk—sidewalks are a necessity—but something to walk to, whether it's the corner store, the transit stop or a school. A compact, walkable neighborhood contributes to peoples' sense of community because neighbors get to know each other, not just each other's cars.
5. **Promote Distinctive, Attractive Communities with a Strong Sense of Place, Including the Rehabilitation and Use of Historic Buildings.** In every community, there are things that make each place special, from train stations to local businesses. These should be protected and celebrated.
6. **Preserve Open Space, Farmland, Natural Beauty, and Critical Environmental Areas.** People want to stay connected to nature and are willing to take action to protect farms, waterways, ecosystems and wildlife.
7. **Strengthen and Encourage Growth in Existing Communities.** Before we plow up more forests and farms, we should look for opportunities to grow in already built-up areas.
8. **Provide a Variety of Transportation Choices.** People can't get out of their cars unless we provide them with another way to get where they're going. More communities need safe and reliable public transportation, sidewalks and bike paths.
9. **Make Development Decisions Predictable, Fair, and Cost-Effective.** Builders wishing to implement smart growth should face no more obstacles than those contributing to sprawl. In fact, communities may choose to provide incentives for smarter development.
10. **Encourage Citizen and Stakeholder Participation in Development Decisions.** Plans developed without strong citizen involvement don't have staying power. When people feel left out of important decisions, they won't be there to help out when tough choices have to be made.

Housing Element

Work with Buckeye Hills-Hocking Valley Regional Development District⁶ and Community Action Program of Washington-Morgan Counties⁷ to build on existing programs.

Buckeye Hills-Hocking Valley Regional Development District (BH-HVRDD) was established in 1968 and named a Council of Governments for an eight County region which presently includes: Athens, Hocking, Meigs, Monroe, Morgan, Noble, Perry, and Washington. In 1974 it was designated by the Ohio Commission on Aging as an Area Agency on Aging for Planning and Service Area 8. The Agency broadened its functions even more when the state selected it as a Regional Planning and Development Organization and as the A-95 Review Regional Clearinghouse. BH-HVRDD serves as a Local Development District (LDD) for the Appalachian Regional Commission (ARC) and an Economic Development District (EDD) for the Economic Development Administration (EDA). The Agency assists the District communities on developing ARC (Appalachian Regional Commission, EDA, Community Development Block Grant (CDBG), Ohio Public Works Commission/Issue 2 (OPWC), projects and applications, as well as in the development of major federal and state grant applications that improve community infrastructure as well as promote growth and development.

The Community Action Program Corporation of Washington-Morgan Counties, Ohio, is a non-profit corporation that was formed to identify and eliminate, the causes of poverty among the low income individuals and families of Washington and Morgan Counties.

Housing Repair Programs

The County needs to be conscious that 72% of its' housing units were built prior to 1980. With an aging housing stock, Washington County should consider implementing home repair and rental property repair programs that include, but are not limited to the following:

- Low interest financing;
- Grants for those that are income qualified;
- Incorporation of energy efficiency elements into repairs to help reduce the cost of utility bills; and
- Preventative maintenance issues as well as immediate concerns.

These measures if implemented will have a positive impact on property values and will serve as a way to encourage households to stay in older communities. Financial incentive should not be income specific (if funding permits) to make repairs and to encourage households to stay rather than leave. More households in the community may "fix-up" homes so there is a strong feeling of investment rather than "disinvestment" in the community. The County may want to consider maintaining a list of quality contractors for reference.

⁶ <http://www.buckeyehills.org/>

⁷ <http://www.wmcap.org/index.htm>

Funding

Local Lending Institutions

The County should work with *Local Lending Institutions* to get the best rates, fees etc. for households who qualify for this assistance. The County can play the CRA card to encourage investment by the institution and to establish a consortium of lenders to share the perceived and actual risk.

Local Government

There are HOME and CDBG funds available through local governments. Many times these funds are tied to income requirements.

Fannie Mae Foundation

Grants are available for developing and maintaining/expanding affordable programs (not for capital expenditures).

Senior Housing

As Washington County's population ages, there will be an increased need for housing suitable for seniors. Encouraging this type of housing development in conjunction with development of additional senior oriented amenities (medical care, senior activity centers, "elder hostel" type activities (possibly tied to Marietta College) could make Washington County a destination for retirement. This will also encourage current residents in the County to stay in the County rather than move away once they retire. Ways to achieve this might include the following:

- o Encourage this type of development close to urbanized areas (unless most services will be provided on site);
- o Consider retirement communities where people may transition from independent living, to assisted living, to nursing home;
- o Developments may be varied – single-family, duplexes, multi-family;
- o Provide opportunities for people to "age in place";
- o Establish programs that provide funding to modify existing structures so that they are handicap accessible – could be tied to home maintenance program; and
- o Expand senior out reach programs (i.e. visiting nurse, book mobile, transportation to churches, medical facilities, shopping, etc.) Seniors living further away from services may find it hard to get to them (driving issues). If the services were brought to them or if transportation was provided individuals may feel more comfortable staying in their current home.

The County currently maintains a variety of assisted living facilities and the County maintains the County home, senior centers, nutrition sites and senior housing

Reverse Mortgages for Seniors⁸

There are two types of Reverse Mortgages for Seniors, the Home Keeper Mortgage and HUD's Home Equity Conversion Mortgage (HECM).

The Home Keeper Mortgage:

- o Great way for seniors to finance repairs for their homes and/or modify them so they can stay in them (ramps, new kitchens and baths that are handicap accessible, etc.)
- o Adjustable-rate conventional reverse mortgage, allows homeowners 62 and above to borrow against the value of their homes and receive the proceeds according to the payment option they select.
- o Anyone 62 years or older who either owns his or her home free and clear or has very low mortgage debt is eligible for a Home Keeper.

HUD's Home Equity Conversion Mortgage (HECM):

- o Great way for seniors to finance repairs for their homes and/or modify them so they can stay in them (ramps, new kitchens and baths that are handicap accessible, etc.)
- o The eligibility requirements for a HECM are similar to those of The Home Keeper Mortgage and do not impose any limits on income.
- o The maximum mortgage amount insured by FHA is based upon local FHA loan limits.

Home Keeper for Home Purchase

- o Affordable way for seniors to move into more suitable housing (smaller, one level, etc.).
- o Gives seniors wishing to buy a home additional flexibility not available through standard first mortgage financing.

This product allows seniors to purchase a new home without using all of their personal resources to fund the purchase, and they will have no monthly mortgage payments.

Affordable Housing

Affordable housing is an issue for those that currently own their homes. In 1999 18% of those that owned their home (does not include mobile homes) paid 35% or more of their household income in monthly owner costs. Monthly owner costs include monthly mortgage amount(s) and monthly expenses for taxes, insurance, utilities and, when appropriate, condominium fees. Of those renting homes, 26% paid 35% or more of their household income in gross rent. Gross rent includes the contracted rent amount and an estimate of the average monthly utility expenses. Even more dramatic is the fact that 14% of the households paid 50% or more of their income in gross rent in 1999. The County should initiate programs that will make housing more affordable.

The County should also consider affordable homeownership opportunities in an effort to retain young households and to encourage new young households to move to the County. Often it is not the monthly payments that are the issue but the upfront costs. Programs that address these upfront expenses may be especially helpful.

⁸

<http://www.fanniemae.com/housingcommunity/solutions/reverse.html?c=Affordable+Housing+%26+Community+Development&c=Affordable+Housing+Solutions&c=Reverse+Mortgages+for+Seniors>

Transportation

Washington County's ability to efficiently integrate its land uses with the regional transportation system will play a key role in the long-term success of the County. Washington County's major roadways are vital to its residential, recreational, and economic activities, but existing road systems and current development patterns sometimes conflict, resulting in traffic congestion, inefficient land use, unattractive settings and decreased mobility for residents.

The recommendations for regional transportation are discussed in this section. Figure 9.1 shows the roadway improvements for the County that have been coordinated with ODOT and WWW-IPC. Regional transportation needs can be separated into long and short range recommendations due to the differing time frames necessary for their implementation. The recommendations below focus on small and larger projects that will help the County minimize the impact of traffic that goes through the County, while the short term projects are designed to increase the efficiency of traffic movement through the County and increasing overall traffic volumes. These transportation improvements are recommendations by the 2003 Comprehensive Long Range Multimodal Transportation Plan. Figure 9.1, Traffic Projects Map, shows by year what projects are scheduled or have been completed in Washington County. Descriptions of the projects are mentioned later in this chapter.

Transportation Enhancements and Bicycle/Pedestrian/Trail Improvements



Boaz- Bicycling on River Road –Marietta Times

The Alternate Transportation Advocacy Committee, Inc. (ATAC) has been working to promote projects that will benefit all forms of non-motorized transportation in the Washington County area. ATAC's primary goals have been to form a network of routes with key destinations that will encourage awareness of multiple use access. These efforts have been integrated into the 2003 Comprehensive Long Range Multimodal Transportation Plan.

Included are some of the recommended improvements from the 2003 Plan below.

Belpre: A Signage and Streetscape Enhancement Program along Washington Boulevard and Main Street (US 50) in Belpre is recommended. This program would be coordinated with the 7th Street program in Wood County. It would serve to provide for specially designated travel/tourism signing to identify businesses and commercial areas along SR 618 (Washington Boulevard), in downtown Belpre to attract Corridor D traffic to this area. Improvements could include streetscape improvements, pedestrian/sidewalk amenities, lighting and benches. Existing tourism signs are located along Washington Boulevard, which could be consolidated into a single, consistent form of signing. Existing four-lane sections along portions of Washington Boulevard could be reconfigured as three-lane sections with either on-street parking or expanded pedestrian facilities.

Marietta Riverfront Improvements: This program would extend to the existing levy walkway in conjunction with construction of docking facilities for recreational boats along the riverfront areas of Marietta.

Belpre Riverfront Improvements: This program would provide a riverfront trail from the Parkersburg/Belpre Bridge along Washington Boulevard to connect with the Little Kanawha Connector in Parkersburg.

Muskingum Riverfront Bikeway: This bikeway will extend along the Muskingum River from the Harmer Railroad Bridge to the Devola Locks and Dam on the Muskingum River. Bicycle lanes have been recommended along Gilman Avenue from the Putnam Street Bridge to the Proposed North Muskingum bridge.

Paving berms and widening of existing paved berms along roadways can offer additional bicycle /pedestrian trails.

Roadway surface improvements and signage could serve to enhance and designate selected roads in the County as Bicycle Routes.

Priority Corridors identified are:

- Washington County 79: 23 miles- Gilman Street to CR 4 to CR 79 to CR 650 to Township 32 back to CR 4;
- Highland Ridge: 31 miles- Glendale Road to CR 375 to SR 821 to CR 8 to SR 530 to SR 60;
- Stanleyville: 16 miles- Glendale Road to CR 375 to CR 26 to Green Street;
- Churchtown: 16 miles Market Street to Fort Harmer Drive, to Pearl Street to High Street to Vista Street to SR 676 to CR 183 to CR 4; and
- Blue Knob Hill: 16 miles- Virginia Street to SR 7 to CR 10 to Township 125 to Township 126 to SR 676 to Township 446.

Highway Improvements

Ohio SR 7 is the primary highway facility that extends along this intermodal corridor. Between Belpre and Marietta, SR 7 is a divided four lane roadway that connects with US 50 and eventually to the new Corridor D bridge. As a result highway system access from the south is very efficient. Difficulties lie on the north side in Washington County where access to I-77 is severely restricted through the City of Marietta. Highway program improvements are considered as part of this transportation planning effort that would offer improved highway connections between SR 7 and I-77. These improvements will upgrade portions of SR 7.

A companion project, the North Muskingum River Bridge is also designed to reduce congestion on SR 7 in Marietta.

Airport, Waterway and Rail Service Improvements

Programs to address access needs for air, rail and waterway facilities throughout the region are important components of the regional transportation system. Facilities include both passenger services as well as freight/intermodal services and are key linkages between different transportation modes. As a result, this system supports a wide range of economic activity, businesses and industrial developments in the region.

Specific recommendations for the airport, waterway facilities and railroads are beyond the scope of work for the Comprehensive Plan.

Traffic Projects

The traffic projects identified on Figure 9.1 (WWW-Transportation Improvement Program 2004-2007 map) and in Table 9.1 are included as a part of the Comprehensive Plan. The close coordination between the Ohio Department of Transportation, The MPO-WWW-IPC and the local governments has resulted in numerous roadway improvements planned for the area. The Comprehensive Plan includes these projects so that the County can coordinate its land use decisions, land area growth patterns and water and sewer infrastructure improvement around these programmed improvements as part of the comprehensive planning process.

Significant Road Way Projects Planned for Washington County

North Muskingum River and Bridge Project -SR 821 The North Muskingum River Corridor project and Bridge Crossing is a project that would upgrade and connect Gilman Avenue from SR 7 to SR 821 north of Marietta (which is a direct link to I-77). Specifically the new route would extend north along the Muskingum River along Gilman Avenue. This project is planned to be a 2-lane urban highway. SR 821 is planned to cross the Muskingum River and access Marietta via Gilman Avenue. This project when completed will lend significant access to and will take unneeded traffic from Marietta. The construction of this by-pass will create opportunities for land use development for commercial /service, highway commercial and residential development. It will also open up access into the County and increase the economic development opportunities in the eastern part of Washington County.

Corridor D-SR 7/US 50 Improvements



Corridor D, discussed for more than 30 years, is the name given to a series of highway improvements that eventually will reroute traffic on U.S. 50 around downtown Parkersburg. It will connect with U.S. 50 in Ohio west of Belpre.

The Primary objective of the Corridor D project is to stimulate economic development in and around the greater Parkersburg / Belpre area. The increased access and mobility will help the area achieve its full development potential by attracting new investment and corporate interest.

Located along the Ohio River, one of the busiest commercial waterways in the nation, the Parkersburg / Belpre area will provide an attractive new investment site to new or expanding business. The area's close proximity to major markets such as Columbus, Ohio, and Pittsburgh, Pennsylvania, will also help attract both industrial and commercial development. According to recent studies, one of the greatest deterrents to growth in the study area was a lack of sufficient highway infrastructure along the east - west axis.

The project will also help alleviate increased traffic congestion along Route 50 by providing an alternate route for commuters and travelers. Controlled access to the new highway will provide motorists with greater access to downtown Parkersburg, as well as, access to new land for development in Washington County.

Studies have concluded that as a result of the incomplete Corridor D system, local traffic is conflicting with regional travelers that have destinations well beyond the Parkersburg/ Belpre area. In fact, studies predict that by 2013, without the completion of Corridor D, the current roadway system will be unable to provide adequate service in the greater Parkersburg/ Belpre area. Traffic volumes along the US Route 50 facility through Parkersburg have exceeded the route's ability to serve them adequately.



Ohio River Bridge Rendered from North – West Virginia to Ohio

In addition to relieving heavy traffic volume, the new corridor will provide a much safer alternative for motorists. Current roadways in the Belpre and Parkersburg area are characterized by restricted sight distance, diminished intersection operating characteristics and horizontal alignment based upon old standards, and significant on street parking and other obstructions to traffic flow.

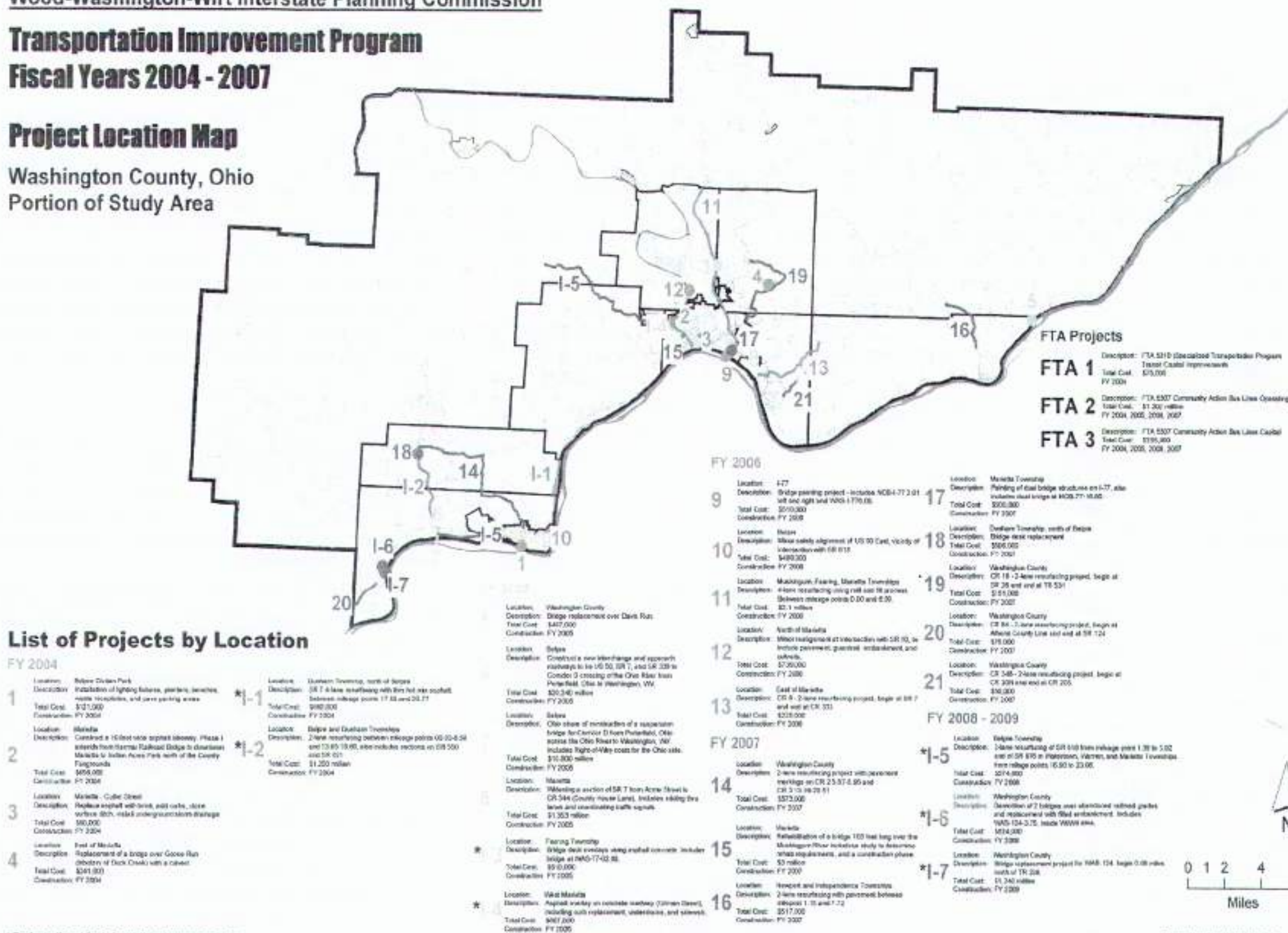
Figure 9.1

Wood-Washington-Wirt Interstate Planning Commission

Transportation Improvement Program
Fiscal Years 2004 - 2007

Project Location Map

Washington County, Ohio
Portion of Study Area



* Projects listed for informational purposes only.

Prepared by: Wood-Washington-Wirt
Interstate Planning Commission

Table 9.1
Traffic Project Descriptions for FY 2004 - 2009
FY 2004

1	Location:	Belpre Civitan Park
	Description:	Installation of lighting fixtures, planters, benches, waste receptacles, and pave parking areas
	Total Cost:	\$121,000
	Construction:	FY 2004
2	Location:	Marietta
	Description:	Construct a 10-foot wide asphalt bikeway. Phase I extends from Hammar Railroad Bridge in downtown Marietta to Indian Acres Park north of the County Fairgrounds
	Total Cost:	\$656,000
	Construction:	FY 2004
3	Location:	Marietta – Cutler Street
	Description:	Replace asphalt with brick, add curbs, close surface ditch, install underground storm drainage
	Total Cost:	\$60,000
	Construction:	FY 2004
4	Location:	East of Marietta
	Description:	Replacement of a bridge over Goose Run (tributary of Duck Creek) with a culvert
	Total Cost:	\$241,000
	Construction:	FY 2004
*1-1	Location:	Dunham Township, north of Belpre
	Description:	S.R. 7 4-lane resurfacing with thin hot mix asphalt. Between mileage points 17.60 and 20.77
	Total Cost:	\$660,000
	Construction:	FY 2004
*1-2	Location:	Belpre and Dunham Townships
	Description:	2-lane resurfacing between mileage points 00.00-8.58 and 13.65-18.60, also includes sections on SR 550 and SR 821
	Total Cost:	\$1.293 million
	Construction:	FY 2004

*Shown on Figure 9.1.

Table 9.1
Traffic Project Descriptions for FY 2004 – 2009 *Continued*

FY 2005

5	Location:	Washington County
	Description:	Bridge replacement over Davis Run
	Total Cost:	\$497,000
	Construction:	FY 2005
6	Location:	Belpre
	Description:	Construct a new interchange and approach roadways to the US 50, SR 7, and SR 339 to Corridor D crossing of the Ohio River from Porterfield, Ohio to Washington, WV.
	Total Cost:	\$20.240 million
	Construction:	FY 2005
7	Location:	Belpre
	Description:	Ohio share of construction of a suspension bridge for Corridor D from Porterfield, Ohio across the Ohio River to Washington WV. Includes right-of-way costs for the Ohio side.
	Total Cost:	\$10.800 million
	Construction:	FY 2005
8	Location:	Marietta
	Description:	Widening a section of SR 7 from Acme Street to CR 344 (County House Lane). Includes adding thru lanes and coordinating traffic signals.
	Total Cost:	\$1.353 million
	Construction:	FY 2005
*1-3	Location:	Fearing Township
	Description:	Bridge deck overlays using asphalt concrete. Includes bridge at WAS-77-02.80
	Total Cost:	\$510,000
	Construction:	FY 2005
*1-4	Location:	West Marietta
	Description:	Asphalt overlay on concrete roadway (Gilman Street), including curb replacement, underdrains, and sidewalk.
	Total Cost:	\$667,000
	Construction:	FY 2005

*Shown on Figure 9.1.

Table 9.1
Traffic Project Descriptions for FY 2004 – 2009 *Continued*

FY 2006

9	Location:	I-77
	Description:	Bridge painting project – includes NOB I-77 2.01 left and right and WAS-I-776.08
	Total Cost:	\$510,000
	Construction:	FY 2006
10	Location:	Belpre
	Description:	Minor safety alignment of US 50 East, vicinity of intersection with SR 618
	Total Cost:	\$496,000
	Construction:	FY 2006
11	Location:	Muskingum, Fearing, Marietta Townships
	Description:	4-lane resurfacing for I-77 using mill and fill process. Between mileage points 0.00 and 6.59.
	Total Cost:	\$2.1 million
	Construction:	FY 2006
12	Location:	North of Marietta
	Description:	Minor realignment at intersection with SR 60 at SR 821 to include pavement, guardrail, embankment, and culverts.
	Total Cost:	\$739,000
	Construction:	FY 2006

FY 2007

14	Location:	Washington County
	Description:	2-lane resurfacing project with pavement markings on CR 2 5.57-5.95 and CR 3 13.19-20.51
	Total Cost:	\$573,000
	Construction:	FY 2007
15	Location:	Marietta
	Description:	Rehabilitation of a bridge 103 feet long over the Muskingum River includes a study to determine rehab requirements, and a construction phase.
	Total Cost:	\$3 million
	Construction:	FY 2007

Table 9.1
Traffic Project Descriptions for FY 2004 – 2009 *Continued*

16	Location:	Newport and Independence Townships
	Description:	2-lane resurfacing with pavement between milepost 1.15 and 7.72
	Total Cost:	\$517,000
	Construction:	FY 2007
17	Location:	Marietta Township
	Description:	Painting of dual bridge structures on I-77, also includes dual bridge at NOB-77-16.80.
	Total Cost:	\$500,000
	Construction:	FY 2007
18	Location:	Dunham Township, north of Belpre
	Description:	Bridge deck replacement
	Total Cost:	\$506,000
	Construction:	FY 2007
19	Location:	Washington County
	Description:	CR 16 – 2-lane resurfacing project, begin at SR 26 and end at TR 531
	Total Cost:	\$151,000
	Construction:	FY 2007
20	Location:	Washington County
	Description:	CR 84 – 2-lane resurfacing project, begin at Athens County Line and end at SR 124
	Total Cost:	\$76,000
	Construction:	FY 2007
21	Location:	Washington County
	Description:	CR 348 – 2-lane resurfacing project, begin at CR 20N and end at CR 20S
	Total Cost:	\$50,000
	Construction:	FY 2007

FY 2008 – 2009

*1-5	Location:	Belpre Township
	Description:	2-lane resurfacing of SR 618 from mileage point 1.39 to 3.92 and SR 676 in Watertown, Warren, and Marietta Townships from mileage points 16.90 to 23.06.
	Total Cost:	\$74,000
	Construction:	FY 2008

*Shown on Figure 9.1.

Table 9.1
Traffic Project Descriptions for FY 2004 – 2009 *Continued*

*I-6	Location:	Washington County
	Description:	Demolition of 2 bridges over abandoned railroad grades and replacement with filled embankment. Includes WAS-124-3.75, inside WWW area.
	Total Cost:	\$824,000
	Construction:	FY 2009
*I-7	Location:	Washington County
	Description:	Bridge replacement project for WAS 124, begin 0.08 miles north of TR 298.
	Total Cost:	\$1.240 million
	Construction:	2009

*Shown on Figure 9.1.

Federal Policies that Encourage Transportation Choice

Federal transportation policy is a powerful determinant of local and regional land use through highway, transit and other investments. In fact, a 1999 Fannie Mae Foundation survey of leading urban scholars ranked the Interstate Highway System to be the strongest influence in shaping metropolitan development patterns in the past half century. Transportation also has a substantial impact on Americans' quality of life, from access to employment to environmental quality.

Federal Transportation Law: TEA-21 In 1991, Congress passed the Intermodal Surface Transportation Efficiency Act (ISTEA), which ended the focus of Federal transportation policy on building the Interstate Highway System, and made it possible for communities to use federal transportation money on a broader range of transportation investments. This gave communities the power to improve their quality of life by allowing for more transportation choices. The Transportation Equity Act for the 21st Century (TEA-21), which passed in 1998, reauthorized ISTEA, and is the current law guiding Federal transportation policy. TEA-21 has funding available for transportation enhancement projects including – bicycle facilities, scenic easement or historic site acquisition, scenic or historic highway programs, historic preservation, preservation of abandoned railway corridors and conversion of these corridors for pedestrian and bicycle trails.

Economic Development Strategies

Although Washington County has derived a great deal of benefit from its role as a regional tourism destination, the County's long-term vitality will depend to a great extent on its ability to enhance its business environment and build its economic base. Not only will the County and surrounding areas need to provide job opportunities to attract residents, but the County must develop increased fiscal income streams that derive from non-residential land uses in order to support the services that the County provides.

The recommended future land use scenario identifies physical opportunities and areas for economic development. However, employers are not likely to locate to Washington County without some proactive effort to attract them. Given that Washington County has a few economic generators in place which can serve as catalysts for future strategies, it will be necessary to undertake coordinated efforts to broadcast Washington County's potential as an attractive business destination.

The County should work with its leading businesses, schools and institutions to spearhead an economic development summit. This summit's activities should be designed to build consensus around the Washington County Economic Development Office to administer proactive economic development, identify a preferred organizational strategy and gauge the level of commitment to financial and organizational leadership. Following this summit, a Task Force should be formed to develop a structure and bylaws for an Economic Development Council, which should then be endorsed by the County and its partners for the County as a whole.

The Economic Development Council can take one of three forms. Each form has its advantages and disadvantages, and the Task Force will need to determine the most appropriate strategy, given Washington County's political and business environment and the type of financial support available. Potential organizational forms include:

- A Network/Expanded area Chamber of Commerce. There is an existing Marietta Chamber of Commerce and a Washington County Convention and Visitor's Bureau. These larger chambers undertake proactive economic development initiatives. In general, an expanded Chamber of Commerce may provide a relatively stable means of establishing a new economic development organization for the area, including the Townships, Cities and Villages.
- An Economic Development Authority or Port Authority. An Authority of either type is essentially a branch of the City or County government, and can represent a joint activity of the City and County. An Authority usually has some powers that may not be available to the City, such as the ability to buy and sell property without competitive bidding, but an Authority may also be bound by restraints common to governments, including open records laws, which can impair the Authority's ability to negotiate with developers or agents. Authorities usually have relatively stable funding that is provided by appropriation from the City or County. An Authority may be a prudent approach if the majority of financial support is expected to come from the City or County, but this approach may not provide as much flexibility in terms of activities as other strategies.
- An independent Washington County nonprofit corporation with the mission of promoting economic development in the Washington County area. This organization could work closely with the Appalachian Ohio organization. A nonprofit corporation may provide several advantages in terms of flexibility and funding sources, but it may also have limitations in terms of organizational stability. A nonprofit economic development corporation will derive its legitimacy from the participation of local governments and leading businesses, institutions and organizations. Each of these entities will need to commit to the corporation

both financially and in terms of providing organizational leadership; if the County or any key businesses are not willing to participate, the organization's ability to foster economic development will be limited. A nonprofit corporation may raise funds from a variety of sources, including corporate, foundation and individual pledges, grants and fundraising events, and may be able to access grants and other funding sources that are not available to the County government. If the corporation can obtain 501(c)3 status, its donations will also be tax-deductible, which will also support fundraising.

Regardless of the organization strategy chosen, the Economic Development Council will be required to undertake several activities, which may include the following:

Employer/Student Partnerships. Washington County has also been aggressively adding to the work force, using innovative "welfare-to-work" programs that couple effective life skills and technical training with mentoring and support efforts. Build more alliances for student/employee partnerships with Washington County Career Center, Marietta College, Washington State Community College, Southeast Ohio Office of Economic Development, and Buckeye Hills- Hocking Valley Regional Development District (BH-HVRDD) and potential employers. The results of ongoing employee training are seen in increased productivity and a solid competitive edge in the marketplace. These types of student/ employee placement programs will keep the graduating student population within the County and will provide economic opportunity to the area.

Medical Service/Offices. Work with area, state and regional universities with graduating medical doctors to attract physicians to the area. Develop a start-up incentive program for Medical doctor professionals and other medical professionals to locate in the area. The eastern-Ohio/Appalachian region has begun to place particular emphasis on developing world-class health care professionals. The excellent health care is supported by an educational system that includes the Ohio University's College of Osteopathic Medicine and the Nursing School at Shawnee State University. These care providers can offer quality care to residents of the region. Service providers to attract include clinics and assisted living centers. Washington County could improve its number of health care facilities and available physicians and other medical professionals by coordinating an incentive program to attract and retain the medical industry.

Relocating and expanding companies have discovered that all other areas of the community area poised for growth, with sites and infrastructure available for industrial development. These include river communities such as Belpre, Matamoras, Newport, and Porterfield, as well as inland communities such as Beverly. Washington County also has an Enterprise Zone program, which can provide tax incentives to employers. Another important "incentive" is the County's reputation for moving quickly on needed infrastructure improvements to help companies relocate or grow in the community.

The Ohio River carries more cargo than the Panama Canal—over 250 million tons. Conduct or commission a market study and business sector composition study. These are two separate studies, but they should be conducted in concert so that opportunities identified in one can be incorporated into the other. The market study will evaluate the level of demand for Washington County goods and services by area of the County. This study should define the Washington County trade area and identify the purchasing power and retail and service needs of the trade area's residents and businesses. The business sector composition study will examine the types of businesses currently operating in the trade area and evaluate the opportunities that the existing business mix presents. These may include:

- clustering opportunities (strategies for attracting businesses that are suppliers of existing establishments or buy goods and services from existing establishments);

- niche opportunities (strategies for attracting businesses that compliment existing establishments), and
- expansion opportunities (strategies for attracting businesses that have similar needs to successful local businesses and are likely to benefit from the environment).

Although the market study and a business composition study must address the entire Washington County area, these studies should give particular attention to the existing and potential economic composition of Belpre, Muskingum, Devola, Matamoras and Bartlett/Barlow. These studies must attempt to identify the potential demand among commercial residents for specific types of general goods and services in the commercial areas, such as groceries or clothing. Given the proliferation of retail and service providers in Marietta in recent decades, establishing a balance between specialty retail and general retail and services in other downtown area, such as Belpre, Little Hocking, Newport, and Matamoras and the communities growing along SR 339, are likely to require the County to play an assertive, proactive role in facilitating desired types of development.

On the basis of the data gathered in the market study and the business composition study, the Washington County Economic Development Council will be prepared to develop a strategic economic development plan. This plan should be designed to capitalize on the information gathered to date and make the best possible use of it given the Economic Development Council's limited resources. The Economic Development Council will use its knowledge of local economic opportunities and resources to evaluate a variety of possible strategies, including:

- Development of business retention and enhancement strategies for existing businesses.
- Construction of a conference center;
- Continued Installation of high-capacity telecommunications systems;
- Development and distribution of promotional materials; and
- Proactive recruitment of appropriate new businesses.

The key findings of the studies and the Economic Development Council's strategic plan should be shared with the public. Publicizing the results of this effort will help build broad support for the Council's strategies and for any public expenditure that may be necessary.

Available Incentive Programs

Ohio's Manufacturing Machinery & Equipment Investment Tax Credit is designed to enhance companies' competitiveness by encouraging investment in new manufacturing equipment. The investment tax credit was created in 1995 and is authorized until 2015. All Ohio manufacturers making purchases of manufacturing M&E in excess of their historic annual investment are entitled to the credit. The credit is calculated based upon purchases per County in a calendar year. Only purchases in excess of historic average M&E purchases in a County count toward the tax credit. A three-year carry forward of unused tax credits is permitted. The credit is applied against either the company's corporate franchise tax or the Ohio income tax of the owner(s), depending upon how the company is organized. The following investments are eligible:

- Purchases of new manufacturing M&E above the company's historic base; • Purchases of used manufacturing M&E never before used in Ohio above the company's historic base; and

- Retooling of manufacturing M&E (above the historic base) that is capitalized and depreciated for federal income tax purposes. Taking advantage of the credit is simple. No application or approval is required. Just file a notice of intent online and then claim the credit on your Ohio tax return. Most southeastern Ohio counties are considered "Priority Investment Areas," which allow a tax credit equal to 13.5% of excess investments.

Technology Resources

Edison Technology Center

The Edison Technology Centers link industry with academia and government in partnerships to strengthen industrial competitiveness through technological innovation. Each of the Centers offers capabilities in specific technologies including: advanced manufacturing, polymers, materials and processes, welding and materials joining, biotechnology and environmental science.

Small Business Innovation Research

Ohio's Small Business Innovation Research Program helps Ohio's small research-oriented firms compete for federal agency research and development grants or contracts.

Innovation Center

The Ohio University Innovation Center is a business incubator that provides business services, success strategies, networking, and flexible facilities to emerging Southeast Ohio businesses. Its new 36,000-square-foot facility features the latest technologies, including shared bioscience laboratories.

ITAAO

The Information Technology Alliance of Appalachian Ohio is dedicated to growing and improving the competitiveness of southeast/south central Ohio's information technology (IT) industry.

Clean Coal

The Ohio Coal Development Office (OCDO), within the Ohio Air Quality Development Authority, co-funds the development and implementation of technologies that can use Ohio's vast reserves of high sulfur coal in an economical, environmentally sound manner.

Technology Investment Tax Credit

Ohio's Technology Investment Tax Credit program offers a variety of benefits to Ohio taxpayers who invest in small, research and development and technology-oriented firms. Through this innovative program, Ohio investors may reduce their state taxes by up to 25 percent of the amount they invest in qualified, technology-based Ohio companies. The program's maximum credit of \$37,500 per investment may be applied to personal income tax, corporation franchise tax, public utility excise tax or the tax on dealers in intangibles.

Technology Action Fund

The Technology Action Fund grants go hand in hand with the Third Frontier Project, designed to make Ohio a high-tech leader in the 21st century. These projects are making it possible for Ohio to accelerate the commercialization of new and innovative technologies, which will lead to more high-tech, high-paying jobs for the people the state.

Starting a Business

1st Stop Business Connection

The 1st Stop Business Connection, formerly the One-Stop Business Permit Center, provides FREE state-level information needed to get started or continue on the entrepreneurial journey.

Business Incubation

Business incubation programs provide a full round of business assistance to emerging companies in environments that promote networking, shared resources and innovation.

Business Licenses

Apply for or renew specialized business licenses and contracts online.

Minority Contractors and Business Assistance Program

The Minority Contractors and Business Assistance Program (MCBAP) provides outreach for the Division of Minority Business Affairs (DMBA) into the minority business community. The MCBAP offices assist minority entrepreneurs with loan and bond packaging services, management, technical, financial and contract procurement assistance.

Ohio Chambers of Commerce

The chambers in this region not only work hard to improve business conditions in their own communities, but also collaborate on more far reaching initiatives. 33 Works is an example of one project involving four chambers and the Ohio Department of Development.

Small Business Administration

The U.S. Small Business Administration is a partner in helping our region provide financial, technical and management assistance to help Americans start, run and grow their businesses.

Small Business Development Centers

Established in 1985 in partnership with the U.S. Small Business Administration's National SBDC Program initiative, SBDCs provide professional, in-depth counseling and training to entrepreneurs and foster a strong climate for small business growth. In Appalachian Ohio, the SBDCs have a reputation for excellent service and the ability to help companies thrive through all their growth stages. Specialized units help new and existing companies with exporting, manufacturing and procuring government contracts. THE SBDC in Washington County is located in Marietta.

Growing a Business

Adena Ventures

This \$34 million venture capital enterprise provides equity investments and operational assistance to growth businesses operating in central Appalachia. Add to this a network of seasoned angel investors, and it adds up to the ingredients for creating businesses that create wealth for the region.

Appalachian Regional Entrepreneurship Initiative

The Appalachian Regional Entrepreneurship Initiative (AREI), which is part of the Voinovich Center for Leadership and Public Affairs at Ohio University, brings a new level of expertise and resources to businesses and community development organizations in Ohio's 29 Appalachian counties. AREI's services are designed to increase regional economic vitality, helping to transform Appalachia into a global commerce center. Through a combination of direct assistance, events, on-line services and other programs, AREI offers guidance in sales

and marketing, financing and accounting, information technology, business development and strategic planning.

International Technical Assistance Centers

These Centers assist your companies in entering the export market by providing training and technical assistance needed for Appalachian businesses to be successful worldwide.

Procurement Technical Assistance Centers

Procurement Technical Assistance Centers, (PTAC) help businesses sell goods and services to local, state and federal governmental agencies by providing marketing, training, technical and quality assurance counseling. The program is operated in partnership with the Ohio Department of Development's Division of Minority Business Affairs, the Ohio Small Business Development Centers and the U.S. Defense Logistics Agency.

Infrastructure Element

Sewer and Water Infrastructure

Sewer and Water Infrastructure development and management represents one of the most significant challenges to the future of Washington County, both because of the unique characteristics of Washington County's topography and areas that are not served by centralized sewer or water systems and because of the growing pressure that will be placed on a system as a result of increasing development. At present, Washington County residents and businesses are coping with inadequate infrastructure systems and are limited in development by the lack of adequate service. As Washington County gains more residential development, and as the Corridor D improvements are made and other transportation improvements are completed throughout the County, the County's sewer and water infrastructure problems will become increasingly severe unless the County moves proactively to improve the system.

Washington County must proactively address these challenges via the following recommendations.

- Coordinate an intergovernmental infrastructure expansion plan. Conduct an inventory of all existing infrastructure and develop a phased infrastructure plan. Develop a plan for water service expansion, sewer service expansion and telecommunications and utility service enhancement. Develop an infrastructure coordinating committee.
- Conduct an inventory and analysis of existing development controls. Update development controls where necessary.
- Establish a coordinated effort among the local jurisdictions for digitized mapping throughout the County.
- Coordinate infrastructure expansion to development controls, soil conditions, wetland, slope and floodplain conditions. Develop incentive programs for commercial businesses to locate and tie into infrastructure development.
- Coordinate infrastructure extensions with the Ohio School Facilities Commission and Local school districts anticipating expansion and location of facilities.
- Review community services such as safety, fire, health, and emergency medical services to ensure a high quality delivery system.

- Consider adequate power and gas service as basics to community development. Utilities should include adequate electric and natural gas service.
- Target sewer improvements and cooperation near Belpre, Marietta, Matamoras and Beverly.
- Coordinate with Developers to pay for infrastructure improvements.
- Consolidate Water and Sewer Districts where possible, especially in the western portion of the County where development is occurring – Barlow, Bartlett, Little Hocking, Vincent, Veto and Belpre.

Parks and Recreation Element

Washington County's park and recreational facilities will play a key role in the future desirability of the County as a residential and business location. Washington County has a variety of park and recreation resources, as identified in the Existing Conditions section. The following recommendations build upon Washington County's strengths in this area and identify opportunities for improvement.

The County should partner with local organized sports organizations and operators of non-public sports facilities (such as the colleges and the public school district) to evaluate existing demand and expected future need for specific types of field space. Although public comments and analysis gathered during the course of this project indicate that there is need for additional field space for a variety of sports, it is possible that this need can be met through improved management of existing resources and improved access to underutilized resources. This evaluation should be pursued before additional facilities are implemented.

The County should review the recreational programming that is available and partner with existing institutions to develop programming throughout the County. Programming should meet the needs of residents of all ages. Activities that may be particularly beneficial include summer camps, community festivals, and additional recreation leagues and seniors activities. Providing an appropriately expanded menu of recreational opportunities will increase the community's attractiveness to residents of all ages.

The County will need to pursue opportunities to develop parks and recreation facilities in developing areas of the County. Given existing resources and projected population growth in the western portion of the County, the County would benefit from approximately three new five to 10-acre parks. Each of these park facilities should include active and passive recreational opportunities, and should be connected to surrounding neighborhoods and other parks through the trail system discussed below.

The County should pursue the donation or acquisition of land for active park and recreation uses in conjunction with new development. Providing park and recreation facilities in these areas will increase the value of these neighborhoods and will help them maintain their market value in the future.

The Wayne National Forest will continue to provide outdoor recreation and wildlife options to Washington County. The County should coordinate its park improvements and programming with the Wayne National Forest Master Planning efforts.

Facility Standards

The following facility standards are guidelines that have been derived after consultation with parks and recreation experts, local staff, citizens, National Recreation and Park Association (NRPA) guidelines, the Ohio SCORP standards, and with numerous communities in Ohio that possess similar population demographics and interests. Both the NRPA and the SCORP guidelines emphasize the importance of using standards that reflect the unique nature of local parks, as well as the community's recreational needs. Four park classifications identify the type of recreation facilities Within County: Regional Park, Community Park, Neighborhood Park, and Special Use Facilities. These four classifications are based upon minimum standards for area and service radii, and include individual activity recommendations. A fifth type of park is recommended: the District Park, which is where more active recreational activities can take place. These five park classifications provide a minimum standard of 16 acres per 1,000 citizens of park land or about 750 total acres with a County population of 62,000 natural features of the land. This approach does not preclude the development of parking lots, rooftops, impervious trails, fencing, lights, and other amenities commonly provided in parks, but it does encourage environmentally responsible planning in accordance with All parks should be planned, designed, and constructed in a sensitive manner to preserve the natural environment and to maximize the best available technologies and planning practices. Parks should be balanced for both active and passive recreational activities. To accomplish this, parks should include appropriate buffers around property boundaries and as needed between centers of activity within the park. A good design standard for town park development maintains that a park should be no more than 50 percent developed with 100-foot minimum vegetative buffers along a park's boundary. For example, district parks are usually flatter properties, such as open fields or former farm fields, with buffers concentrated heavily on property borders and between nodes of activity. Trails or other passive amenities are commonly found within buffer areas. The inclusion of these features depends on the park activities, the orientation of adjacent structures such as residential housing, and other specific details.

Regional Park

Regional parks typically provide a wide variety of activities for the greater community, and also present opportunities for non-traditional recreation. These parks are often funded, developed, or operated as multi-jurisdictional facilities. Nature and community centers, festival grounds, extensive trail systems, and water activities are features that can typically be found in regional parks. To accommodate their unique amenities, regional parks span a minimum of 100 acres and have a service radius of approximately 25 miles. Additionally, the typical acreage/population ratio for regional parks is four to five acres per 1,000 persons.

District Park

District parks serve a wide variety of community interests and include intensively developed areas for active recreation, as well as supporting infrastructure. Typical active recreational amenities include playgrounds; athletic fields for soccer, baseball/softball, and for multi-use; tennis and volleyball courts; and trails. Typical infrastructure may include restrooms, concession stands, benches, picnic areas, shelters, and parking areas. Access to district parks should be along or near a major road, and access should be multi-modal in nature. District parks are a minimum of 50 acres in size and have a service radius of approximately five miles.

Community Park

Community parks serve several neighborhoods within a community. They typically provide active recreation facilities for neighborhoods, but otherwise they act as oversized neighborhood parks. Typical recreational amenities found in community parks are similar to those provided in district parks; however, differences include varying scales, more traditional neighborhood park amenities like horseshoes, basketball courts, recreation centers, and similar amenities unique to the community. Community parks are usually a minimum of 20 acres

in size and have a service radius of approximately one-mile. Access should be along, or near, a major road that is multi-modal in nature. A typical acreage/population ratio for community parks is three to four acres per 1,000 persons.

Neighborhood Park

Neighborhood parks are located within walking distance of adjacent neighborhood(s) and serve the area's specific recreational interests. A neighborhood park usually does not provide parking or restrooms, but depending on service level demand, a park may offer such facilities. Typical neighborhood park amenities include playgrounds, shelters, trails, and multipurpose fields. School parks may also be considered functional neighborhood parks. Neighborhood parks span a minimum of five acres and have a service radius of one-half mile. A typical acreage/population ratio for neighborhood parks is three acres per 1,000 persons.

Special Use Facilities

The special use facilities park category includes recreation centers, aquatic centers, nature centers, outdoor swimming pools, school parks, mini-parks, golf courses, urban spaces, historic sites, and greenways.

Washington County Implementation Strategies

The following tables denote the implementation strategies for each Planning Area by Topic Area.

Table 9.2
Washington County Implementation Strategies
Central Planning Area

Economic Implementation Strategies	Transportation Implementation Strategies
<ul style="list-style-type: none"> A. Encourage Commercial Development along SR 7. B. Promote heritage tourism along the Muskingum River. C. Encourage development of support businesses for the new power plants. D. Promote tourism related cultural activities at local colleges. E. Support development of commercial businesses along I-77 and SR 60. F. Encourage railroad related commerce. G. Encourage additional redeveloped industrial growth areas along SR 60. 	<ul style="list-style-type: none"> A. Develop Access Management Guidelines for SR 7. B. Coordinate I-77 commercial corridor expansion efforts with any interchange design modifications needed or capacity demands. C. Work with WWW on planning issues related to SR 821 bypass down to the Muskingum River. D. Maintain working relationship with the CSX Railroad to ensure any changes in system component economic development activities. E. Develop a plan to promote and coordinate SR 60 as a Scenic Byway. <p>Coordinate appropriate transportation and roadway expansion efforts with WWW, ODOT and the County. Coordinate with the Metropolitan Planning Organization – WWW, Marietta, Belpre, and ODOT to get projects programmed into the State Implementation Plan and overall work program at the MPO and district levels.</p>
Recreation Implementation Strategies	Land Use Implementation Strategies
<ul style="list-style-type: none"> A. Develop bike/recreation facility along the Ohio, Muskingum and Little Muskingum Rivers. Coordinate with the planned bike trail in Marietta and develop a bike/activity facility along the Ohio and Muskingum Rivers. Expand upon the existing bike plans and extend a share the road program along SR 60. B. Promote recreational activities such as kayaking, canoeing and camping activities on the Little Muskingum. C. Encourage recreational activities that tie into the lock system on the Muskingum River. D. Plan for increased utilization of the rivers as a public recreation resources. E. Promote Recreation and Parks plan in Marietta Township. 	<ul style="list-style-type: none"> A. Focus industry and recreation along the Ohio and Muskingum Rivers B. Locate commercial uses along SR 7. C. Promote commercial-recreation/tourism related uses – near the Ohio and Muskingum Rivers. D. Locate residential development along SR 7 and pockets outside of Marietta on the south east side, including Marietta Township. Plan development closely with soil and slope conditions. E. Promote green space preservation along the Muskingum and Ohio Rivers and the Duck Creek by acquisition of title or conservation easements. F. Increase industrial development growth along SR 60 north of Beverly. Increased industry will attract residential growth. G. Develop commercial highway uses along I-77 at Macksburg and SR 821. H. Maintain and preserve agricultural uses.
Infrastructure Implementation Strategies	
<ul style="list-style-type: none"> A. Ensure infrastructure systems adequate to meet demands of development pressures along SR 7 and SR 339 and I-77. B. Construct sewer lines to Devola, Macksburg, and Elba and Oak Grove. C. Construct sewer lines in Reno, Brown Road area. D. Unsewered areas should have regular septic tank inspection. E. Construct Sewer lines in the Devola and Oak Grove areas F. Develop sewerage option along SR 821 from Macksburg to Whipple. 	

Table 9.3
Washington County Implementation Strategies
East Planning Area

Economic Implementation Strategies	Transportation Implementation Strategies
<ul style="list-style-type: none"> A. Support development of small business especially those related to tourism. B. Encourage park/lodge development in or around the Wayne National Forest – similar to Cannan Valley. Incorporate the Wayne's 2005 Plan into the County's recreational plan. C. Encourage value added industry related to natural resources. D. Support small businesses that complement regional businesses. E. Encourage land exchange with the Wayne National Forest for economic development opportunities. F. Increase industrial uses along SR 7 with infrastructure expansion. G. Acquire land along the Ohio River for bike trails, public access for fishing and picnicking. H. Encourage Economic opportunity along SR 7 near Matamoras and Newport. 	<ul style="list-style-type: none"> A. Develop and Implement Access Management Guidelines for SR 7 north of Marietta. Develop plans to widen SR 7 for increased volume from northern part of County. B. Explore possibilities of new business development related to Ohio River access. The shipping and receiving of goods and materials through river ports helps to keep large shipments off the roadways, adding truck traffic and its ensuing wear and tear on the roadway network.
Recreation Implementation Strategies	Land Use Implementation Strategies
<ul style="list-style-type: none"> A. Develop bike recreation facilities along the Ohio and Little Muskingum Rivers. B. Promote recreational opportunities related to the Wayne National Forest such as boating along Ohio River, camping, and lodge/resort type development. C. Promote opportunities around Leith Run Recreation area in the Wayne National Forest. D. Encourage opportunities around Hune Covered Bridge Wayne National Forest site E. Promote opportunities that complement canoe livery at Wingett Run in Ludlow Township. 	<ul style="list-style-type: none"> A. Promote recreation and green space along the Ohio and Little Muskingum Rives. B. Encourage industrial uses along the Ohio River at SR 46. C. Maintain agricultural uses. D. Locate commercial uses along SR 7. E. Focus industrial growth along SR 7. F. Maintain landscape buffers around smaller industrial parks in rural areas.
Infrastructure Implementation Strategies	
<ul style="list-style-type: none"> A. Concentrate water/sewer line construction along SR 7. B. Construct sewer lines from Grandview to Matamoras. C. Inspection as needed for efficiency check of unsewered sites. D. Extend water service from Matamoras into Grandview Township 	

Table 9.4
Washington County Implementation Strategies
South Planning Area

Economic Implementation Strategies	Transportation Implementation Strategies
<ul style="list-style-type: none"> A. Plan economic development to coincide with Corridor D expansion. B. Promote industrial development along SR. 7, utilizing the proximity to Corridor D, I-77, CSX, Railroad and the Ohio River. C. Encourage the development of a commercial corridor at the intersection of SR 339 and 550. D. Expand the commercial corridor along US 50 towards Belpre. E. Expand and develop the existing Industrial Corridor located along SR 7 and SR 165 into a redeveloped industrial area. 	<ul style="list-style-type: none"> A. Develop Access Management Guidelines for SR 7, especially important around Corridor D connections. Coordinate commercial corridor expansion along SR 7 with proposed Corridor D bridge alignment. B. Develop plan to ensure local roads adequately handle new traffic flow resulting from Corridor D expansion. C. Maintain working relationship with CSX Railroad to ensure any changes in rail system complement economic development activities. Coordinate economic development with CSX Railroad Plans.
Recreation Implementation Strategies	
<ul style="list-style-type: none"> A. Develop bike/recreation facility along the Ohio River. B. Promote recreational opportunities related to Veto Lake State Wildlife Area. 	
Infrastructure Implementation Strategies	Land Use Implementation Strategies
<ul style="list-style-type: none"> A. Ensure infrastructure systems are adequate to meet demands of development pressures near SRs 339 and 550. B. Ensure infrastructure systems are adequate to deal with development pressures due to Corridor D expansion. C. Construct sewer lines to serve Edgelawn subdivision (north of Belpre, east of SR 339) D. Construct sewer lines in Little Hocking area, near Little Hocking Elementary School E. Abandon Oxbow WWTP, pump to Belpre F. Abandon Riverview and Stacey Meadow Crest WWTP, pump to Little Hocking G. Construct sewer lines along Beach Drive (south of Belpre and SR 618). H. Establish regular inspection of private sewage systems and upgrade as needed 	<ul style="list-style-type: none"> A. Develop light or redeveloped industry along the Ohio River. B. Concentrate residential and commercial development around Corridor D Expansion – Little Hocking area. C. Promote commercial development around intersection of SRs 339 and 550. D. Provide residential pockets of single family housing along SR 339. E. Plan for the preservation of green space around the Ohio River. F. Develop a Greenland preservation program. G. Encourage farmland and greenspace use and preservation. H. Encourage preservation of the area's natural resources. I. Encourage preservation of green space around Veto Lake State Wildlife Area.

Table 9.5
Washington County Implementation Strategies
West Planning Area

Economic Implementation Strategies	Infrastructure Implementation Strategies
<ul style="list-style-type: none"> A. Support small business development through loans and grants. B. Continue to encourage existing agricultural use of land. C. Seek Infrastructure improvements that will encourage residential development. D. Develop heritage tourism programs related to covered bridges, natural features and history. 	<ul style="list-style-type: none"> A. Construct sewer lines for Northlake subdivision (north of Veto Lake). B. Construct sewer lines at intersection of SR 550 and 555. C. Construct sewer lines in Watertown area at intersection of SRs 339 and 676. D. Concentrate water/sewer line construction along SR 339 north of Barlow. E. All unsewered areas should have regular inspection of septic systems and upgrades as required.
Recreation Implementation Strategies	Transportation Implementation Strategies
<ul style="list-style-type: none"> A. Develop recreational opportunities linked to covered bridges, natural features and history. B. Coordinate and plan additional park and playground facilities as needed as population increases and school facilities are added to the County. C. Expand recreation opportunities in conjunction with economic development and residential growth activities. D. Combine passive recreation areas with conservation easements in environmentally sensitive areas. Passive sites can have hiking trails that focus on natural resource preservation and wildlife habitats. 	<ul style="list-style-type: none"> A. Improve local roads to accommodate current and future traffic volumes. B. Link local road improvements with economic development and infrastructure growth strategies. C. Improve local roads to accommodate changes in traffic patterns resulting from the construction of Corridor D.
Land Use Implementation Strategies	
<ul style="list-style-type: none"> A. Preserve green space around covered bridges. B. Preserve rural setting. Develop passive parks in coordination with rural and natural habitats. C. Maintain existing agricultural throughout Palmer Township and Wesley Township. 	

Table 9.6
Washington County Implementation Strategies
County-Wide

Economic Implementation Strategies		
<p>A. Develop incentive programs with potential employers, state agencies local colleges and universities and the Chambers of Commerce to coordinate economic development in Washington County.</p> <p>B. Partner with WSCC Career Center and employers to develop workforce development programs.</p> <p>C. Develop and encourage additional heritage tourism efforts in the County.</p> <p>D. Coordinate with state and local agencies to attract high quality/high paying jobs, and environmentally friendly employers that provide living wage positions.</p> <p>E. Develop programs and incentives to attract and retain business in Washington County including both business start-ups and proven players with local colleges, agencies, organizations and local governments.</p>	<p>F. Encourage mechanisms that support existing and new small, locally owned businesses throughout the County.</p> <p>G. Encourage local school districts' to provide academic programs that will support new economic development opportunities.</p> <p>H. Emphasize added public investment in Washington County.</p> <p>I. Establish Enterprise Zone, Tax Increment Finance Districts or Community Redevelopment Area Districts.</p> <p>J. Pursue funding options to finance infrastructure.</p> <p>K. Develop industry in conjunction with roadway improvements.</p>	<p>L. Promote close proximity to I-77 and Corridor D.</p> <p>M. Coordinate economic development with land uses.</p> <p>N. Link transportation and infrastructure improvements with economic development.</p> <p>O. Explore the potential for additional industrial parks in area.</p> <p>P. Encourage commercial and redeveloped industrial development.</p> <p>Q. Offer incentives to attract and retain business.</p>
Recreation Implementation Strategies		
<p>A. Develop and coordinate existing and additional recreation and camping facilities in coordination with the Wayne National Forest.</p> <p>B. Coordinate with the planned bike trail in Marietta and develop bike/activity facilities along the Ohio and Muskingum Rivers. Expand upon the existing bike plans and extend a program along State Route 60.</p> <p>C. Coordinate and plan additional park and playground facilities as needed as population increases and school facilities are added to the County.</p> <p>D. Expand recreation opportunities in conjunction with economic development and residential growth activities.</p> <p>E. Plan for increased utilization of the rivers as a public recreation resource.</p> <p>F. Combine passive recreation areas with conservation easements in environmentally sensitive areas. Capitalize on covered bridges, history, and other landscape/cultural elements for recreation opportunities.</p> <p>G. Purchase and maintain public control of sensitive and historic areas. Based on the 2003 Ohio SCORP, Washington County is ranked highly on the number of acres of outdoor recreation facilities. It is recommended that the County encourage the development of a Park and Recreation plan that follows the general guidelines of the 2003 Ohio SCORP is implemented.</p>	<p>H. Identify and promote revenue-generating activities, programs, and facilities to help offset costs associated with providing excellent public recreation.</p> <p>I. Periodically administer a citizen preference survey and a recreational facility user survey to help determine facility and program deficiencies and future community needs.</p> <p>J. Utilize County school facilities for public recreational programs and as neighborhood or community parks.</p> <p>K. Create a Comprehensive Parks Master Plan to guide the acquisition and development of park facilities and recreational programs.</p> <p>L. Install local directional signs to all public park facilities Countywide.</p> <p>M. Develop history-based programs through identifying and preserving historic sites.</p> <p>N. Identify, plan, design, and develop a community center that would include a gymnasium, community space, indoor playground, and zero depth recreation pool among other innovative and needed community amenities for the Barlow/Vincent area of the County.</p> <p>O. Preserve Fairfield Township's Natural Bridge and Piers area.</p>	<p>P. Plan, design, and develop an indoor sports complex that would serve the needs of the community and the region. Possible joint public/private partnerships.</p> <p>Q. Develop/acquire land for land banking/acquisition of title or conservation easements for areas along major streams, rivers and arteries for preservation and recreation uses.</p> <p>R. Incorporate language in the Unified Development Ordinance for sediment and erosion control and riparian buffer strips along rivers.</p> <p>S. Develop riverbank protection language or guidelines for future development.</p> <p>T. Conduct a riverbank assessment to identify areas to be bet protected for public access. Coordinate uses compatible with the rivers.</p> <p>U. Develop a coordinated buffer plan along Corridor D development.</p> <p>V. Consider development of a County-Wide Park District.</p> <p>W. Consider preservation of the Churchtown community, the backwater Sawyers Run adjacent to the Belpre Township Park; Camp Hervida in Watertown Township, the locks and dams of the Muskingum River; Buell Island in Lowell, the Little Muskingum River (among Ohio's Highest Quality Streams) for consideration as natural or cultural amenities and preservation.</p>

Table 9.6
Washington County Implementation Strategies - County-Wide *Continued*

Infrastructure Implementation Strategies		
<p>A. Coordinate an infrastructure expansion plan. Conduct an inventory of all existing infrastructure and develop a phased infrastructure plan. Develop a coordinated plan for water service expansion, sewer service expansion and telecommunications and utility service. Develop an infrastructure coordinating committee.</p> <p>B. Conduct an inventory and analysis of existing development controls. Update development controls where necessary. Establish digitized mapping throughout the County.</p> <p>C. Coordinate infrastructure expansion to development controls, soil conditions, wetland, slope and floodplain conditions. Develop incentive programs for commercial businesses to locate and tie into infrastructure development.</p>	<p>D. Coordinate infrastructure expansion with the Ohio School Facilities Commission and local school districts. Review community services such as safety, fire, health, and emergency medical services to ensure a high quality delivery system.</p> <p>E. Target sewer improvements and cooperation near Belpre, Marietta, Matamoras and Beverly. Consider development of a water and sewage system consortium to ensure they are operating together.</p> <p>F. Develop a coordinated telecommunications plan for installation of cell towers due to a limited network architecture and system capacity. Work with carriers to develop additional cell towers in the area.</p>	<p>G. Develop a cell tower ordinance to coordinate placement and standards for future cell towers.</p> <p>H. Develop water extension plans for Palmer and Grandview Townships and Adams Township near Lowell and Lawrence and Newport Townships Newport and Reno.</p> <p>I. Develop Sewer extensions in the Grandview suburb of Matamoras, in Reno, Oak Grove and Devola communities near Marietta, along the Duck Creek Watershed at Macksburg and Whipple; adjacent to Beverly; and along SR 339 and in the communities of Bartlett and Little Hocking.</p> <p>J. Coordinate a body to develop priorities for infrastructure expansion and extension to present to the County Commissioners.</p> <p>K. Coordinate specifically a sewer system analyses and to coordination between the Belpre and Marietta areas, and water system improvements in Matamoras and Grandview.</p>
Transportation Implementation Strategies		
<p>A. Link transportation improvements with economic development and infrastructure growth strategies. Improve roads to accommodate current and future traffic volumes.</p> <p>B. Improve utilization of the I-77 corridor with commercial and economic development expansion.</p> <p>C. Develop Access Management Guidelines for SR 7.</p> <p>D. Encourage a commercial and redeveloped industrial development plan along Corridor D.</p> <p>E. Other improvements include:</p> <ul style="list-style-type: none"> SR 339 from what connects Beverly to Barlow to just west of Belpre, SR 60 that follows the Muskingum River to Marietta from Beverly, SR 821 that connects Macksburg to Lower Salem and then to Marietta, and SR 26 that connects the northeastern part of the County with Marietta North Muskingum River Bypass at Marietta <p>F. Major east/west corridors that need transportation planning consideration include:</p> <ul style="list-style-type: none"> A small part of US 50, Corridor D. SR 550 that connects Marietta to Barlow and Bartlett. <p>G. Explore possibilities of new business development related to Ohio River access.</p>	<p>H. Implement regulation controls to encourage developers to pay for roadway expansion and improvements.</p> <p>I. Coordinate appropriate transportation and roadway expansion efforts with WWW, ODOT and the County.</p> <p>J. Coordinate with surrounding communities to improve air service for the region.</p> <p>K. Coordinate with private rail companies to ensure any plans for expansion benefit the County's economic development activities.</p> <p>L. Establish the appropriate body or designate appropriate body with authority to provide design review for new and redeveloped parcels within the study area.</p> <p>M. Establish evaluation criteria to assess the impact of proposal infrastructure projects on financial resources of the County.</p> <p>N. Link local road improvements with economic development and infrastructure growth strategies.</p> <p>O. Improve local roads to accommodate changes in traffic patterns resulting from the construction of Corridor D.</p> <p>P. Adopt controls that will permit a regulating body to consider fiscal impact on County resources prior to approval of proposed development.</p> <p>Q. Establish requirements for residential development.</p> <p>R. Establish the appropriate body or designate appropriate body with authority to provide design review for the Corridor D area.</p>	<p>S. Develop regulations restricting the locations of land uses including extractive facilities and heavy industry. Require adequate screening and buffering between uses.</p> <p>T. Discourage pass-through traffic patterns in residential areas. Coordinate access management efforts with the County and State agencies.</p> <p>U. Identify Scenic areas and areas of conversion along the riverfront. Develop regulations or easements to protect the land.</p> <p>V. Connect the system of pathways and trails to future pathways and trails that connect existing recreational uses.</p> <p>W. Minimize traffic impacts on the Historic District of Marietta.</p> <p>X. Support improvements to MOV Regional Airport.</p> <p>Y. Pursue an interchange along I-77 to the Duck Creek Area watershed communities.</p>

Table 9.6
Washington County Implementation Strategies - County-Wide *Continued*

Land Use Implementation Strategies		
<p>A. Encourage open space development with new development especially with commercial and industrial developments along SR 7 and Corridor D.</p> <p>B. Encourage responsible subdivision of land for residential development.</p> <p>C. Develop a farmland preservation program. Maintain agricultural uses within the County.</p> <p>D. Coordinate and encourage single family residential development with infrastructure expansions, new school facilities and transportation improvements.</p> <p>E. Promote the integration of landscape buffers in new development plans.</p> <p>F. Explore new methods to guide and manage development in the County.</p> <p>G. Coordinate Environmental issues for contaminants with existing organizations such as Marietta's Hometowns for Healthy Air resolution the U.S. Department of Health and Human Services, the Little Hocking Water Association and the Ohio Citizen Action Council.</p> <p>G1. Pass a resolution endorsing supporting the Ohio Environmental Council "hometown for healthy air" campaign for the entire County.</p> <p>G2. Require the Ohio Environmental Protection Agency to determine the source and risks to the area posed by the elevated levels of PCBs recorded in the air.</p>	<p>H. Establish requirements for residential development. Implement Smart Growth Strategies for the incorporated areas.</p> <p>I. Develop Housing Programs to retain affordable housing and promote varied housing opportunities.</p> <p>J. Adopt guidelines, regulations, and/or incentives to encourage the type and density of residential development proposed in Comprehensive Plan Selected Scenario.</p> <p>K. Establish additional development controls to promote cohesive residential development with controlled densities.</p> <p>L. Establish the appropriate body or designate appropriate body with authority to provide design review for new and redeveloped parcels within this study area.</p> <p>M. Integrate landscape buffers for new developments. Analyze population projections for potential high school/grade school location.</p> <p>N. Require buffering between residential/commercial/industrial uses.</p> <p>O. Preserve open space.</p> <p>P. Limiting undesirable uses and encouraging specific for uses specific for the community, including, retail, commercial uses, and industrial uses.</p>	<p>Q. Developing regulatory controls and coordinating with local and state agencies for funding and infrastructure development.</p> <p>R. Developing a County image or identity through the use streetscape design elements.</p> <p>S. Ensure land area for future schools.</p> <p>T. Ensure sizable sites for future parks.</p> <p>U. Design architectural, landscape and lighting design standards. Appoint a design review committee to evaluate.</p> <p>V. New development locating in areas that should not be developed - such as farmland or environmentally sensitive areas.</p> <p>W. Develop and plan for increasing elderly population with the Department of Aging – conduct a plan and inventory of assisted living/nursing homes. Coordinate land use and smart growth planning for walkable communities and access to health care.</p> <p>X. Coordinate with the Marietta City Comprehensive Plan</p>

Table 9.6
Washington County Implementation Strategies - County-Wide *Continued*

County-wide Regulatory Recommendations		
<p>A. Environmental: To better define the health concerns, specific recommendations for monitoring air quality are provided below.</p> <ul style="list-style-type: none"> ATSDR or the U.S. Environmental Protection Agency (EPA) should model emissions from industrial companies located along SR 7 and in Waterford Township to determine what contaminants could be present in ambient air and the water and the locations where they are likely to most significantly impact human health. This information will aid in determining the most appropriate locations for additional air and water sampling. After modeling is completed, ATSDR, Ohio EPA, and EPA should determine what additional ambient air and water data is necessary to adequately investigate the impact of facility emissions on the health of residents. When contaminants of concern have been identified, additional, long-term sampling should be performed (for 1 year or more). <p>ATSDR should evaluate the data collected from additional air and water quality monitoring and air and water quality modeling to better assess air and water pollutant exposure levels and the potential for health consequences in area residents.</p> <p>Water Quality should be evaluated and monitored by appropriate and governing agencies on a regular basis. It is recommended that a County-Wide Advisory group be formed. Coordinate with Wood County on environmental issues.</p>	<p>B. Unified Code Ordinance Development</p> <p>A Unified Development Ordinance (UDO) is defined as a single land-use ordinance that combines the provisions found within a jurisdiction's zoning code and subdivision regulations. However, the UDO incorporates other development-related regulations that jurisdictions—such as stormwater ordinances, watershed protection, erosion control, sign ordinances, design standards and flood control ordinances.</p> <p>It is recommended that Washington County develop a Unified Code Ordinance that incorporates the erosion control, Stormwater management and regulations, flood plain ordinance, urban design guidelines and zoning where applicable. This will provide a single document and issuing agency to regulate the development in a unified manner.</p> <p>Provide a uniform set of definitions that are consistent.</p> <p>Provide a coordinated system for development and code enforcement.</p>	<p>C. Zoning Regulations</p> <p>It is recommended that the County consider educating and implementing zoning at the township level and develop a plan of action to target the townships that are growing substantially.</p> <p>D. Building Permit Process</p> <p>A coordinated building permit process could be developed to monitor and track all new development, including new construction of facilities. The process should be developed so the new construction permits can be evaluated separately. The building permit process should also be developed so that it is coordinated with the unified code ordinance and acts as a filter for development in the flood plain or watersheds, etc.</p>