



Part I Vision and Framework for the Future

UNION COUNTY, PA

Part I - Vision and Framework for the Future

Table of Contents

1. Introduction.....	1	Figures	
1.1 Why a Comprehensive Plan.....	1	Figure 1-1 Location and Planning Areas.....	2
1.2 Plan Overview.....	3	Figure 1-2 Planning Process Chart.....	7
1.3 Planning Process.....	5	Figure 2-1 Regional Context.....	10
2. Regional Context and Trends.....	9	Figure 2-2 Historic and Cultural Resources.....	21
2.1 Regional Position.....	9	Figure 2-3 Existing Land Use.....	26
2.2 Population and Growth Trends.....	11	Figure 2-4 Residential and Commercial Structures (2001-2006).....	27
2.3 Natural and Historic Resources.....	16	Figure 2-5 Generalized Zoning.....	28
2.4 Land Use and Zoning.....	22	Figure 2-6 Agricultural Zoning Districts.....	29
2.5 Housing.....	30	Figure 2-7 Existing Roadway Classifications.....	45
2.6 Economy.....	33	Figure 2-8 Key Intersections.....	46
2.7 Transportation.....	38	Figure 2-9 Existing Roadway Deficiency Maps.....	47
2.8 Community Services and Utilities.....	48	Figure 2-10 School Districts and Facilities.....	53
3. Sustainable Growth and Preservation Framework.....	60	Figure 2-11 Community Facilities.....	54
3.1 Introduction.....	60	Figure 2-12 Parks, Recreation, and Open Space....	55
3.2 Vision Statement and Sustainable Growth Principles.....	61	Figure 2-13 Community Protection.....	56
3.3 Growth Scenarios.....	63	Figure 2-14 Fire and EMS Protection.....	57
3.4 Growth Management Strategy.....	67	Figure 2-15 Sewer and Water Facilities.....	58
		Figure 3-1 Growth Management Strategy.....	70



1. Introduction

1.1 Why a Comprehensive Plan?

The primary purpose of *Cultivating Community: A Plan for Union County's Future* is to chart a course that can be used by the County and municipalities; their partners in the public, private, and non-profit/institutional sectors; and by citizens in making decisions that affect the County's future. While not technically a legal document dictating how a community is to be developed, a comprehensive plan outlines a vision and how it is to be realized via planning policy, capital investment, and regulatory tools.

The plan establishes countywide and multi-municipal vision statements, a framework for future growth and preservation, goals and strategies, and actions to achieve this vision. The three multi-municipal planning areas are illustrated in Figure 1-1 (Location and Planning Areas). The vision, framework, goals, and strategies were developed with input from residents, local stakeholders, and municipal leaders. Consistent with the Pennsylvania Municipalities Planning Code (MPC), the components of the plan include:

- Community Vision, Goals, and Objectives
- Natural and Agricultural Resources
- Land Use
- Housing
- Economic Development

- Transportation
- Cultural, Historic, and Recreational Resources
- Community Facilities, Utilities, and Energy Conservation
- Implementation

The Plan addresses the interrelationships between plan elements through the identification of “sustainability keys” for each element. The Implementation component defines a blueprint for action at the countywide and municipal levels. Included are projects, initiatives, policies, and procedures that will be followed over the short, medium, and long terms to realize the vision.

Union County completed its previous Comprehensive Plan (*Vision 21*) in 1996. While agriculture and woodlands remain the predominant land uses, new patterns of growth and development, increased mobility, and regional economic changes have affected the County over the last decade. In this context, the Comprehensive Plan provides a guide to assist decision-makers, including municipal leaders, with managing future growth, promoting sustainable economic development, and preserving farmland, forestland, and other key natural resources.

Multi-Municipal Planning provides many benefits for participating municipalities. Examples include:

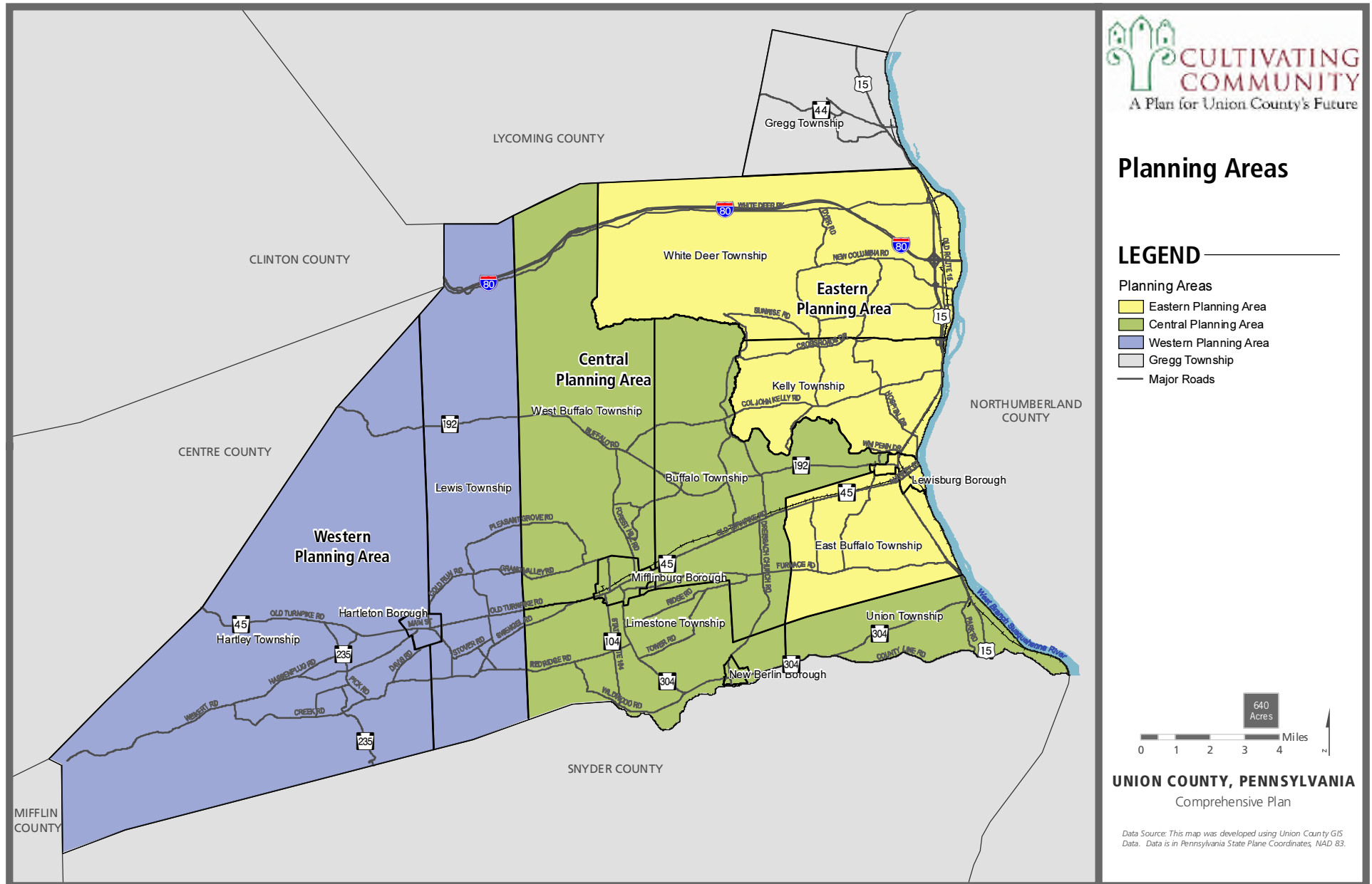
- Consistency in land use and transitions between adjoining municipalities
- Increased ability to protect rural resources by directing development to regionally designated growth areas
- Protection against “curative amendment” lawsuits because municipalities within a multi-municipal planning area do not have to provide for every use
- Priority eligibility for state funding programs
- Increased capacity to share costs and resources among participating municipalities
- Ability to Transfer Development Rights (TDR) across municipal boundaries within the planning region.

It is important to note that this Comprehensive Plan has a ten-year timeframe and should be updated by the year 2018.¹ During the ten-year period, the action plan presented in Chapter 11 should be reviewed and updated periodically to reflect implementation progress and change.

¹ The MPC requires that county plans be updated not less than once every ten years (MP Section 302(d)).

Figure 1-1

Location and Planning Areas



1.2 Plan Overview

Union County's Comprehensive Plan, *Cultivating Community: A Plan for Union County's Future* is divided into three major parts:

I. Vision and Framework for the Future

II. Comprehensive Plan Elements

III. Partnerships for Implementation

The Comprehensive Plan functions on both the county-wide and multi-municipal levels. Three multi-municipal Planning Areas are addressed by the Plan:

- **Eastern Planning Area** (White Deer, Kelly, and East Buffalo Townships and Lewisburg Borough)
- **Central Planning Area** (West Buffalo, Buffalo, Limestone, and Union Townships and Mifflinburg and New Berlin Boroughs)
- **Western Planning Area** (Lewis and Hartley Townships and Hartleton Borough).

Although referenced in some sections of the plan, Gregg Township (which is located in northern Union County) participated in the 2006 US 15 South Planning Area comprehensive plan and is not included in any of the three Planning Areas. The US 15 South Comprehensive Plan can be viewed at www.lyco.org or at the Gregg Township Supervisors' office in Allenwood.

Part I (Vision and Framework for the Future), provides an introduction and overview of the process used to develop the plan, summarizes existing conditions and trends, and sets the vision and framework for what citizens want the County to be over the next 10 to 20 years and beyond.

Chapter 1 (Introduction) provides an overview of a Comprehensive Plan under state law, describes the structure of the plan, and summarizes the planning process used to create the plan.

Chapter 2 (Regional Context) summarizes existing conditions and future growth trends in the County and each of the Planning Areas. It addresses demographics, housing, the economy, land use and zoning, community services, natural and historic resources, and transportation.

Chapter 3 (Sustainable Growth and Preservation Framework) presents a vision statement for the County and its three multi-municipal planning areas. In addition, it sets the framework for future growth and preservation through a series of sustainability principles. The vision and principles are supported by a growth management policy and map to guide future develop-



ment and preservation in Union County. The vision and framework were developed based on input from municipal leaders, the Planning Advisory Teams (PAT), and the general public.

Part II (Comprehensive Plan Elements) contains the seven topical elements of the plan. These elements are:

- **Chapter 4 (Natural and Agricultural Resources)**
- **Chapter 5 (Land Use)**
- **Chapter 6 (Housing)**
- **Chapter 7 (Economic Development)**
- **Chapter 8 (Transportation)**
- **Chapter 9 (Cultural, Historic, and Recreational Resources)**
- **Chapter 10 (Community Facilities, Utilities, and Energy Conservation)**

Each element provides a summary analysis of its subject area elaborating on the existing conditions. Information presented in Part II identifies related strengths and issues, and presents goals and strategies to guide implementation. In addition, each element identifies a “sustainability key” that sets the priority direction for implementation. Sustainability keys highlight important

themes in each element and are designed to activate the sustainability principles (introduced in Chapter 3) through more detailed strategies and actions. They also reveal the interrelationships between elements. For example, the sustainability keys for Chapter 4 (Natural and Agricultural Resources) and Chapter 5 (Land Use) are “system integrity” and “mixed-use”, respectively. To maintain the integrity of the agricultural economy and conserve farmland, new development must be compact and focused in mixed-use centers, rather than spread out across the rural landscape. Similar relationships can be drawn between each of the sustainability keys. The keys are also important for future plan monitoring, specifically with regard to identifying indicators to measure success (see Chapter 11).

Part III (Partnerships for Implementation) defines different types of actions (regulatory, policy/planning, capital investment, and partnerships) to implement the strategies described in the plan elements. In addition, it addresses how progress made in implementing the plan will be monitored.

Chapter 11 (Implementation) provides an overview of the Countywide and three Planning Area Action Plans. It also identifies the major interrelationships between the plan elements as expressed in the sustainability keys.

Chapter 12 (Plan Monitoring) establishes a framework for monitoring progress in implementing the Comprehensive Plan. This framework includes annual progress reports, complete plan updates at five to more than ten year intervals, and use of sustainability indicators to measure implementation progress. The sustainability indicators are tied to the sustainability keys for the various plan elements.

The detailed Countywide and Planning Area Action Plans are provided at the end of the Part III. Each plan details actions to carry out the strategies from the plan elements.

1.3 Planning Process

The planning process was completed in five phases over a 16-month period (see Figure 1-2).

Phase One: Project Organization and Mobilization

This phase set the direction for the planning process, including organization of the Planning Advisory Teams (PAT's) and the design of the public involvement process.

The County PAT included community representatives from across the County with special interest related to issues such as land use, recreation, agriculture, natural resources, and the economy. The three Planning Area PAT's included municipal elected officials and planning commission members designated by the municipalities. The PAT's role in the planning process has been to act as a sounding board, review and provide comments on the plan text and maps, and ensure that public input is translated into plan concepts. The County PAT has met on a regular basis with Union County staff and the consultant team to discuss the Plan and provide feedback throughout its development. The Planning Area PAT's met as needed.

The Comprehensive Plan has been developed through an open planning process with numerous opportunities for public input, including municipal officials' meetings, a random, statistically valid mail/telephone survey of County residents, stakeholder interviews and focus groups, "Meetings in a Box" (materials and instructions made available to citizen groups upon request), Mifflinburg Middle School program, and website comment. Two series of public meetings were held across the County in November 2007 and March 2008. The final public meeting series was held in early 2009. For a more detailed description of the extensive public involvement process refer to Appendix A.

Similar to the public workshops, municipal meetings were structured to discuss and gather information from breakout groups about the issues, challenges, and opportunities facing Union County and to review the future direction of the County. Throughout the process, survey results, meeting summaries, draft maps, and completed sections of the plan have been made available on the Internet at www.cultivatingcommunity.net.





Phase Two: Existing Conditions, Trends, and Issues

Phase Two included an analysis of existing conditions and trends and identification of key issues affecting Union County's future. This phase developed a detailed snapshot of physical and demographic conditions and trends, including GIS mapping and analysis. Subject areas addressed include housing, economy, land use and zoning, community services and utilities, natural and historic resources, and transportation. In addition to existing conditions data, a review of current plans and initiatives in the County was conducted and relevant nationwide "best practices" were compiled to address Union County's issues. The work developed in this phase is presented in Chapter 2 (Regional Context).

Phase Three: Framing the Vision

Input from the PAT meetings, stakeholder interviews, survey results, public meetings, and the existing conditions and trends analysis informed the development of a long-term vision statement and guiding principles for the Comprehensive Plan. The countywide vision statement and sustainable growth principles set the framework for the place that citizens want Union County to be in the year 2030. This vision and framework is presented in Chapter 3 (Sustainable Growth and Preservation Framework).

Phase Four: Plan Development

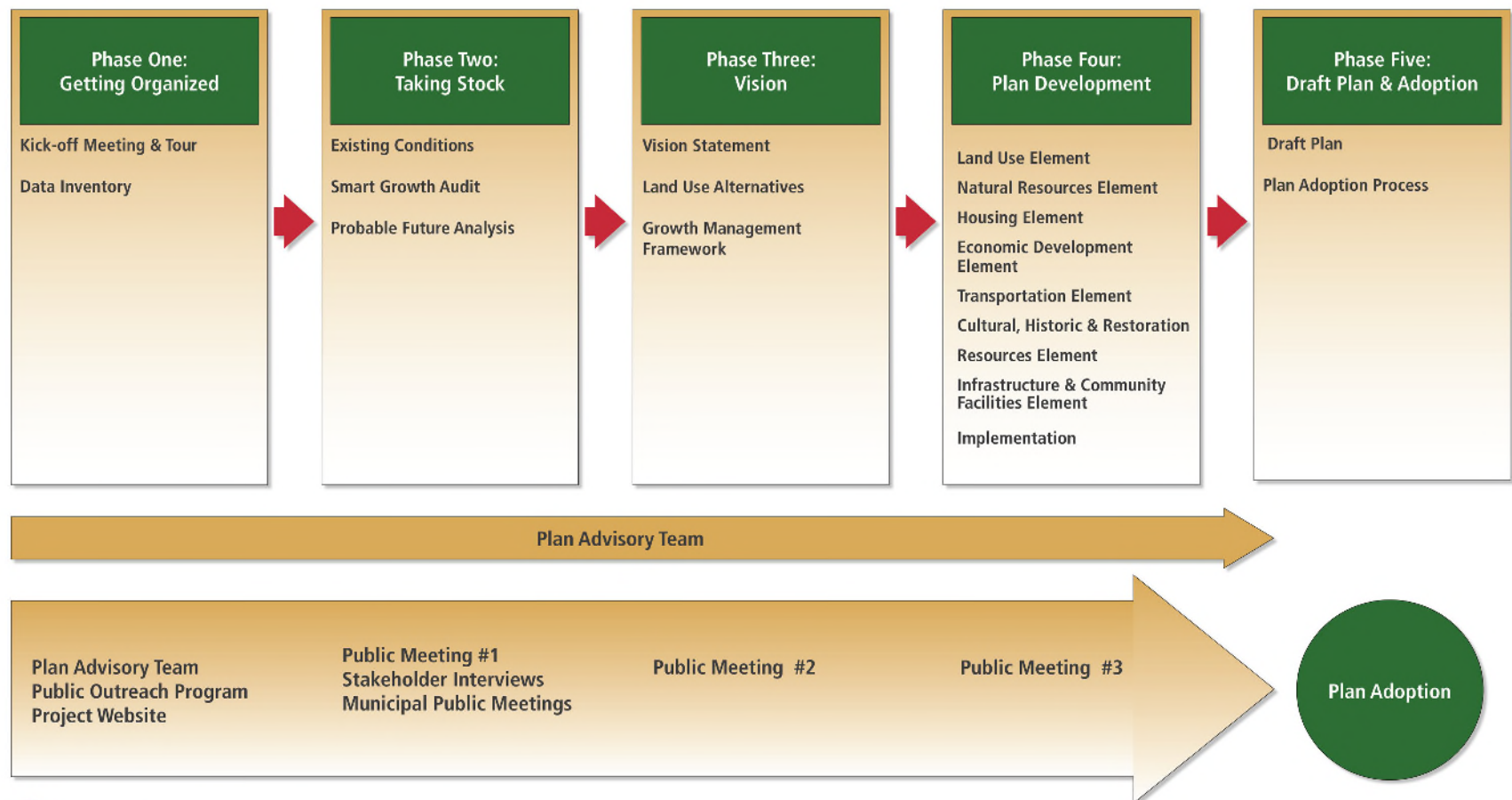
The Comprehensive Plan is organized into elements as required by the MPC, with plan elements defining policies and strategies in support of the Sustainable Growth and Preservation Framework. Presented in Chapters 4 to 10, the elements build on the framework set by Chapters 2 and 3 (Regional Context and Sustainable Growth and Preservation Element). Each Comprehensive Plan Element was developed in close coordination with the County PAT, including a series of reviews during the period from May through October 2008.

Phase Five: Comprehensive Plan Preparation, Review, and Adoption

Based on the review of plan elements in Phase Four, a complete Comprehensive Plan was prepared and presented to the County PAT, the Union County Planning Commission, and municipal officials for review and comment. The Final Draft Plan was made available, online and in hard copy format, for a 60-day public review period, from April through June 2009. During this public review period, the Draft Plan was presented at public meetings. Once revisions were made to the Plan, the Final Plan was submitted to the municipalities and county for adoption.

Figure 1-2
Planning Process Chart

Union County Comprehensive Planning Planning Process Chart



2. Regional Context and Trends

2.1 Regional Position

Regional Position

Situated within the picturesque Susquehanna River Valley in Central Pennsylvania, Union County is located within a three to four hour drive of most major metropolitan areas in the Mid-Atlantic region. About 165 miles northwest of Philadelphia, 200 miles east of Pittsburgh and 200 miles west of New York, Union County is easily accessible via Interstate 80 and US Route 15 (Figure 2-1).

The Susquehanna River, which forms the eastern boundary of the County, has played an important role in shaping the region's economic, community, and cultural identity. Union County provides an attractive rural quality of life yet is easily accessible to the major metropolitan areas of the Mid-Atlantic region. The region's quality of life is in large part due to its strong agricultural heritage and small historic downtowns.

While agriculture remains at the foundation of the county's heritage, industries such as agribusiness, wood products, education, and tourism, in addition to residential growth trends, are factors which will influence the pattern of future land use in the county. Understanding the County's position in the region and current demographic, employment, and land use trends is

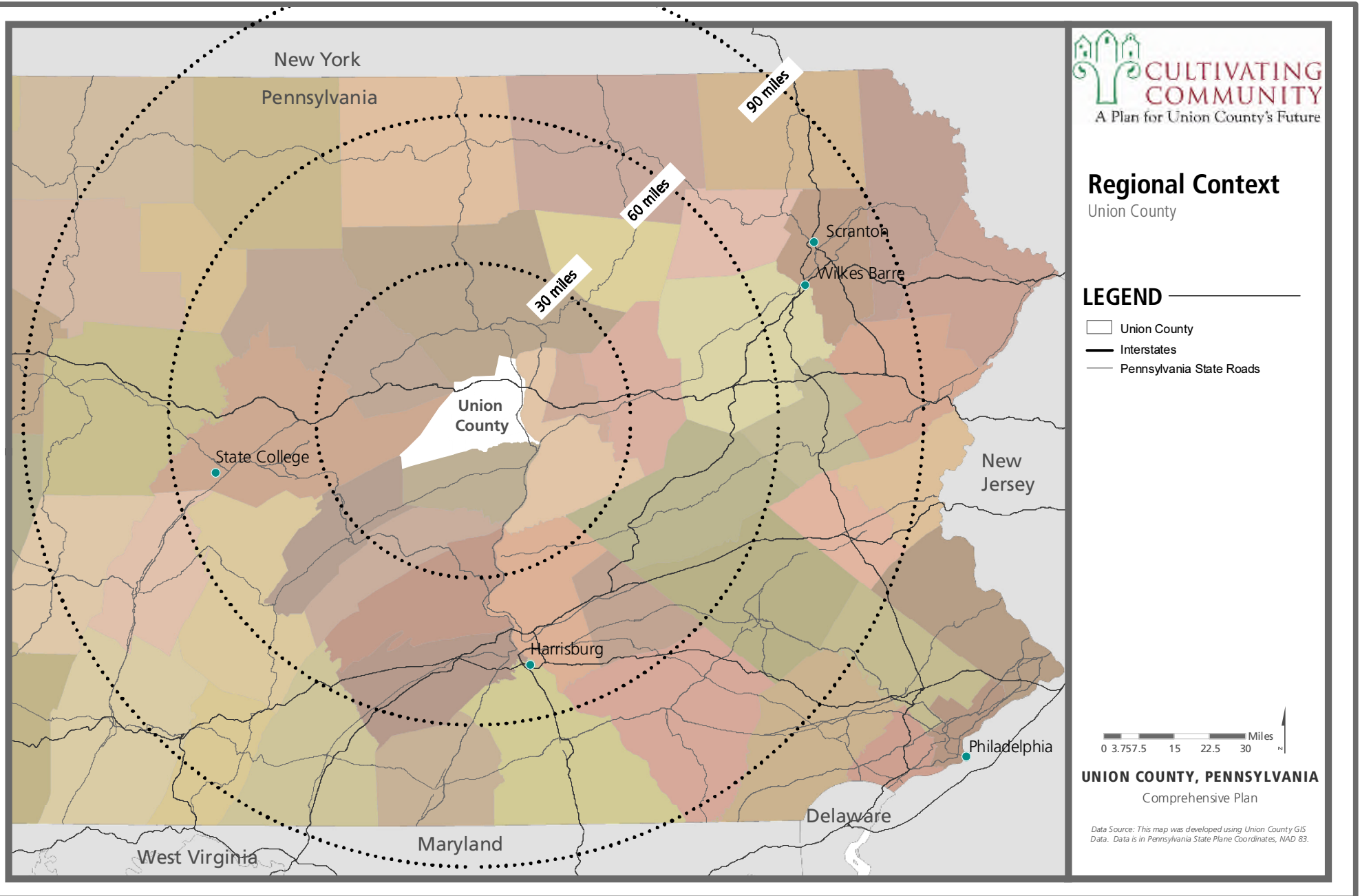
essential to creating a plan for the future that balances conservation with sustainable growth.

In order to capitalize on its location in Central Pennsylvania, regional planning and cooperation is essential to achieving Union County's vision for the future. Membership in the eleven-county regional council SEDA-COG² enables Union County to directly participate in and shape regional issues, including transportation and infrastructure, education, environmental preservation, energy conservation, and recreational planning.

² SEDA Council of Governments (SEDA-COG) is a Central Pennsylvania regional council of 11 county governments. Member counties are Centre, Clinton, Columbia, Juniata, Lycoming, Mifflin, Montour, Northumberland, Perry, Union, and Snyder Counties.



Figure 2-1
Regional Context



2.2 Population and Growth Trends

Union County Trends

Population in Union County has been increasing since its formation as a county in 1813, with the exception of a small decline which occurred between 1890 and 1920. Between 1920 and 1990, the County's population doubled in size. By 2000, population densities were highest in the Eastern Planning Area of Union County (Figure 2-1). The lowest densities of all were in the Western Planning Area, with an overall density of 28.3 persons per square mile.

Population in Union and Surrounding Counties, 1990-2000. According to the U.S. Census, Union County experienced a 15% population increase (5,448 persons) between 1990 and 2000. However, 3,424 of that increase were in group quarters, primarily the Federal prison population. By comparison, Northumberland County also had a large increase in group quarters population (2,134 persons), while the total population in Northumberland County actually decreased by 2.3%. Centre County had an increase of 9.7% in its population between 1990 and 2000, even with a small decrease in its group quarters population.

If you discount the group quarters increase, and look only at the population in households in the seven-county region surrounding Union County, Centre County had the largest population increase of 11.3%, and Union County had an increase of 6.5%. Northumberland County had the largest decrease of 4.6%. Clinton and Snyder counties had small increases in population (1.7% and 2.1%, respectively).

Population Estimates and Projections by County.

The Census Bureau provides estimates of population by County, the most recent of which were for 2006. They indicate that there has been a total population growth in Union, Centre and Snyder Counties since 2000. The other surrounding counties have experienced declines in population. Union County is estimated to have grown by 4.2%, followed by 3.8% growth in Centre County and a growth rate of 1.8% in Snyder.

Looking forward, the Pennsylvania Department of Environmental Protection, Bureau of Watershed Management publishes population projections for each of the Counties in the State. It projects that Centre County will have the largest growth in population (almost 26%) from 2000 through 2030. The next largest growth is projected to be Union County (about 20%). Recent

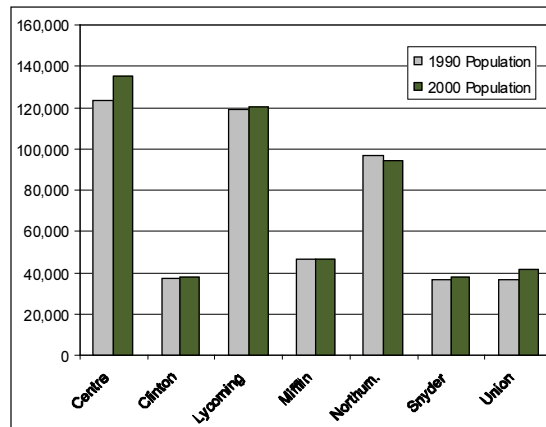
Overview of County-Wide Population Trends

- Total population in Union County grew by 15% between 1990 and 2000; however, if group quarters such as the prison population are excluded, then population grew by 6.5%.
- Of the surrounding counties, if group quarters are discounted, Centre County grew at the fastest rate (11.3%) while Northumberland shrank by 4.6%.
- Between 2000 and 2006, Union grew 4.2% in population; housing units increased by 7.5%.
- Union County's population is projected to grow 20% through 2030, which represents the second highest growth in the 7-county region.

Population Projections
Seven-County Region (2000-2030)
Centre County: + 26%
Union County: + 20%
Snyder County: + 10%
Lycoming County: + 1%
Mifflin: + 0.3%
Clinton: - 1%
Northumberland: - 6%

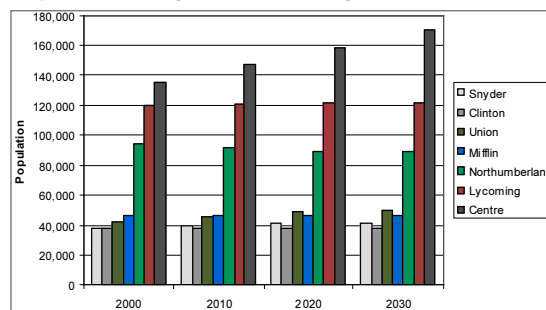
Sources: Population Division, U.S. Census Bureau, Annual Estimates for Counties of PA; PA Dept of Environmental Protection Bureau of Watershed Management, DEP Population Projections by County.

Change in Population, County 1990-2000



Source: PA Department of Environmental Protection, Bureau of Watershed Management, DEP Population Projections by County, June 2006

Population Projections, County 2000-2030



Source: PA Department of Environmental Protection, Bureau of Watershed Management, DEP Population Projections by County, June 2006

Pennsylvania State Data Center projections confirm this trend and suggest an even greater growth rate (25%) in Union County over the 2000-2030 period. Snyder County is the only other County that is projected to see substantial growth (about 10%). Northumberland is projected to decrease in population by 6% by the year 2030.

Migration by County. Centre County has the highest percentage of residents migrating from another county (22%) and from another state (10.5%). It is probable that this is due to the presence of Penn State University. Union County had the second highest percentage of in migrants from out of state and out of the county, probably due again to the presence of Bucknell University and the federal prisons.

Sex/Race by County. Union County has the highest percent of African-American or Black (7.7%) and Hispanic (4.1%) residents. It may be that this is due to the relatively large prison population in the region. Union County also has the lowest percentage of female population, which may again be due to the prison population. Centre County also has a higher minority population than the other counties, which may be due to the student population at Penn State University and/or the Rockview State Prison.

Education by County. Centre County has the most highly educated population of persons 25 years and older; 54% have some college or higher. Lycoming is next with 39% in this category and Union County is third, with 34%. At the same time, Union County and Snyder County have the highest percent of persons without a high school diploma (around 27%). This high percentage in Union County may be due in part to the relatively large prison population and a growing Plain Sect community.

Unemployment Rates. Of the seven counties in the Central Region, Snyder and Union had the lowest civilian unemployment rates of 3.8% and 3.9% respectively in the 2000 Census. Lycoming had the highest (6.3). However, by 2006, according to the Bureau of Labor Statistics, Centre County had the lowest rate (2.9) and Clinton County had the highest (5.7). Union County had an annual unemployment rate of 5.3 percent. This rate may be a reflection of the shifting economy and trend in loss of manufacturing jobs in the County and region. Section 2.4 of this report provides a snapshot of growth and decline in Union County's economy.

Income. Centre County had the highest Median Family Income (\$50,557) in the 2000 Census, followed by

Union County with a median family income of \$47,538. The lowest median incomes were in Clinton and Mifflin Counties (about \$38,000). Union County had the highest Median Household Income (\$40,336). It is probable that Union ranked higher than Centre County in this category because of the large number of college students with temporarily low incomes in Centre County.

Municipal Differences

Population Change 1990 to 2000. The Central Planning Area of Union County had the largest increase in total population between 1990 and 2000. West Buffalo, Limestone, and Buffalo Townships all had increases of over 10%, with West Buffalo having the highest increase of any municipality (24%). The municipalities in the Western Planning Area varied in terms of population change. Lewis Township had a 15% increase in population while Hartley Township had an approximate 10% decrease, largely due to the closing of Laurelton State Center, which had 200 residents. The decrease in population in Kelly Township is due to the decrease in the number of prisoners at the Lewisburg Penitentiary (Table 2.1)

Population Projections. The Union County Planning Commission projects a fairly significant increase in population in most of its municipalities between 2000 and 2050, and an overall growth of 41% for the County. A relatively small increase in population is projected for Gregg Township and Lewisburg and Hartleton Boroughs. In the Eastern Planning Area, White Deer and East Buffalo are projected to have the largest population increases. Buffalo, West Buffalo, Limestone, and Union Townships all are projected to have population increases in excess of 50% by 2050. Western Planning Area townships will also increase in population, but at a lower rate than the other planning areas. All of the boroughs in the County are projected to experience some population increase, with the greatest increases in Mifflinburg and New Berlin Borough growth areas.

Race/ethnicity. Kelly and Gregg Townships have a comparatively large nonwhite population, due to the prisons that are located in those municipalities. Lewisburg Borough has a slightly higher minority population than the other municipalities, possibly due to the presence of an institution of higher learning. In all other municipalities the nonwhite population percent ranges from .8% to 4%.



Table 2.1 – Union County Projections by Planning Area and Municipality

Planning Area	1990	2000	2006	2010	2020	2030	2040	2050	% Change 2000-2050
Gregg Township*	1,114	4,687	-	4,780	4,830	4,880	4,930	4,980	6.3%
Eastern Planning Area	19,549	20,125	20,853	22,388	23,957	25,527	27,096	28,666	42.4%
E. Buffalo Township	5,245	5,730	5913	6,701	7,389	8,077	8,765	9,453	65%
Kelly Township	4,561	4,502	4883	5,058	5,406	5,754	6,101	6,449	43.2%
Lewisburg Borough	5,785	5,620	5578	5,777	5,840	5,904	5,968	6,032	7.3%
White Deer Township	3,958	4,273	4479	4,852	5,322	5,792	6,262	6,732	57.5%
Central Planning Area	12,149	13,433	14001	14,816	16,248	17,681	19,115	20,545	52.9%
Buffalo Township	2,877	3,207	3317	3,579	3,957	4,335	4,714	5,091	58.7%
Limestone Township	1,346	1,572	1686	1,724	1,912	2,100	2,289	2,476	57.5%
Mifflinburg Borough	3,480	3,594	3568	3,951	4,243	4,536	4,828	5,120	42.5%
New Berlin Borough	892	838	824	955	1,010	1,064	1,119	1,174	40.1%
Union Township	1,300	1,427	1483	1,607	1,759	1,912	2,064	2,216	55.3%
W. Buffalo Township	2,254	2,795	3123	3,000	3,367	3,734	4,101	4,468	59.9%
Western Planning Area	3,364	3,379	3425	3,594	3,836	4,077	4,319	4,561	35%
Hartley Township**	1,896	1,714	1728	1,843	1,946	2,049	2,152	2,255	31.6%
Hartleton Borough	246	260	264	251	255	258	262	266	2.3%
Lewis Township	1,222	1,405	1433	1,500	1,635	1,770	1,905	2,040	45.2%
County Totals	36,176	41,624	43,387	45,578	48,871	52,165	55,460	58,752	41.1%

Source: U. S. Census Bureau, GCT-PH1. Population, Housing Units, Area, and Density: 2000, Data Set: Census 2000 Summary File 1 (SF 1) 100-Percent Data.
 Projections: Union County Demographic Digest, projections made using Linear Regression; *Projections adjusted for incarcerated persons; **Projections adjusted to account for loss of institutionalized population.

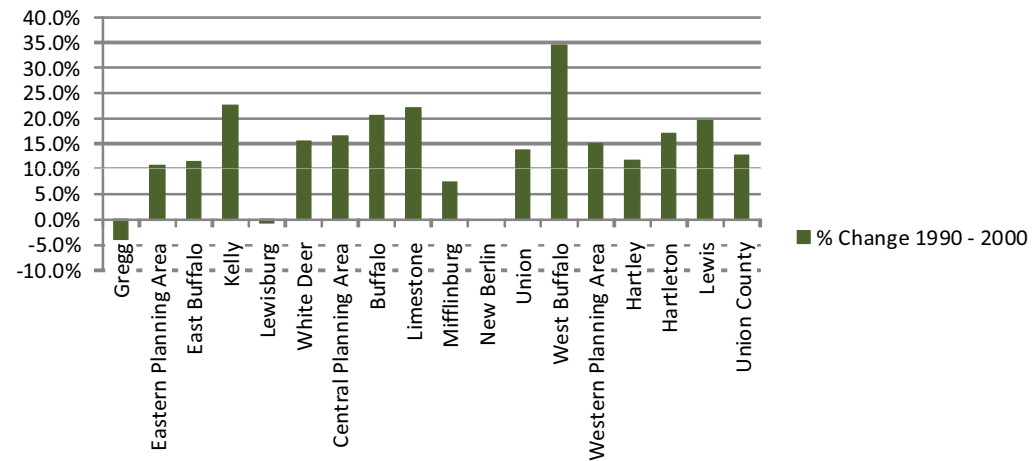
Age. The median age in Lewisburg Borough is a very low 22 years, again due to the presence of Bucknell University. In other municipalities the median age ranges from a low of 31.7 in Lewis Township to a high of 40.9 in Union Township. With the exception of Lewisburg, the Eastern Planning Area seems to have somewhat higher median ages likely due to the presence of several senior housing developments.

Education. The municipalities with the lowest educational levels are Gregg and Kelly, again because of the high prison population. East Buffalo Township has a significantly higher population with a college degree or higher than any of the other municipalities. Immediately behind East Buffalo Township is Lewisburg (Bucknell University is located in both Lewisburg and East Buffalo Township). All of the municipalities in the Western Planning Area have a comparatively low (<7%) percentage of the population with a college degree or higher.

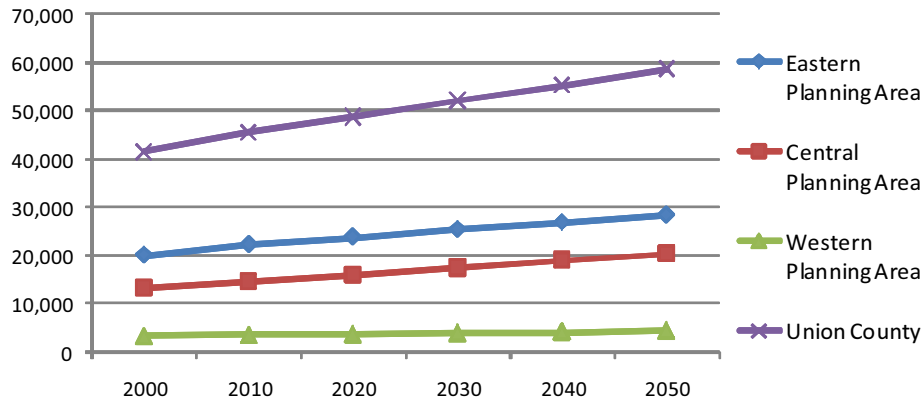
Household Change 1990 to 2000. Gregg Township and Lewisburg Borough had a decrease in the number of households between 1990 and 2000. West Buffalo Township (additional 254 households), Kelly Township (additional 241 households), and White Deer Township (additional 222 households) had the largest increase in household change.

Median Family and Household Income. The Western Planning Area has the least diversity in incomes as well as the lowest incomes. Median family incomes there ranged from \$39,650 to \$42,188 in 1999, while median household incomes ranged from \$35,278 to \$40,938. In the Eastern Planning Area, median family incomes ranged from \$40,786 to \$68,672. The Central Planning Area is more diverse, with the median family incomes ranging from \$39,000 in New Berlin to a high of \$51,842 in Union Township. The percent of families in poverty in the County is a relatively low 5.3%. Higher rates are found in Buffalo Township (8.4%), Mifflinburg Borough (7.6%), Hartley Township (8.5%), and Lewis Township (7.2%).

Households Percent Change (1990-2000)



Union County Population Projections (2000-2050) by Planning Area



Source: Union County Demographic Digest, projections made using Linear Regression *Projections adjusted for incarcerated persons, **Projections adjusted to account for loss of institutionalized population

2.3 Natural and Historic Resources

Union County Trends

Union County is rich in natural features, including prime agricultural soils, woodlands, high-quality streams, wildlife, and diverse vegetation. Its topography consists of mountain ridges and rolling valleys. The valleys stretch west from the Susquehanna River and consist of high-quality prime agricultural soils. The natural and scenic resources of Union County attract residents and visitors alike and are vital to the local heritage, culture, and economy.

Agricultural and Woodlands Resources. Agricultural soils, both prime and of statewide importance, are present throughout the valleys of Union County. Much of these areas are working farms, including cropland and grazing for livestock. The majority of agricultural land in the County is enrolled in Agricultural Security Areas (ASAs) and a growing number of farms are protected from development by agricultural easements. The County's abundant agricultural resources, discussed throughout this Plan, contribute to the regional economy, culture, rural landscape, and identity of Union County.

Union County is unusual in that the majority of its land use is forest land. The Bald Eagle State Forest stretches

across the northern portion of the County and is home to two state parks: the R.B. Winter State Park and the smaller Sand Bridge State Park. The public land system represents about 33% of land use in the County. The Bald Eagle State Forest occupies the majority of public land within the County and is also a regional resource located in Centre, Clinton, Mifflin, and Snyder Counties. Part of the Pennsylvania State Forest system, Bald Eagle joins Rothrock State Forest to the west and Tiadaghton State Forest to the north.

The vast woodlands in this area generally form a green ribbon around the farmland, and are the source of numerous assets in the County, including plant and animal habitats, protection of steep slopes and streams, scenic vistas, trails, recreation, and forest products, such as timber products, firewood, and woodchips. A major state initiative is Pennsylvania Wilds, which aims to increase visitation and recreation in the western and northern PA Counties. Union County is not directly involved in the PA Wilds Initiative. However, given its location, the County woodlands create a natural gateway to the north and west.

The few significant mineral resources within the County are limited to high-quality limestone aggregates. Both

Overview of Natural and Historic Resources

- Union County citizens have identified both agricultural and woodland resources as high preservation priorities.
- The Susquehanna River forms the eastern boundary of Union County; planning for the Susquehanna River Greenway, which extends the length of the State is underway.
- The high-quality streams in Union County provide excellent environmental benefits, fishing, and other recreation opportunities.
- Some stream segments are qualified by the PA DEP as impaired, based on either water quality issues related to fish consumption or aquatic life.
- Woodlands provide numerous benefits including wildlife habitat, protection of steep slopes and streams, scenic vistas, trails, and recreation.
- Both Lewisburg and Mifflinburg have Main Street Programs; the historic architecture in these towns and other locations around the County are important to the community fabric and landscape.



agricultural and woodland assets have been identified as a high preservation priority by Union County's citizens.

Water Resources. One of the largest continental rivers in the United States, the Susquehanna River forms the eastern boundary of Union County. The fertile Susquehanna River Valley has supported inhabitants for 10,000 years. The Susquehanna River flows from Western Pennsylvania and New York through Maryland, before emptying into the Chesapeake Bay. Just south of Union County, the Susquehanna splits into the north and west branches. Planning for the Susquehanna River Greenway, which will extend along the length of the Pennsylvania segment of the river, is underway.

Within Union County, Spruce Run, the North Branch of Buffalo Creek, and Cherry Run are watersheds of exceptional value. There are also many high-quality streams in the County, including Penn's Creek and White Deer Creek. Excellent fishing and recreation opportunities exist along Union County streams. Portions of Rapid Run, Buffalo Creek, and Weikert Run are Class A Wild Trout Waters as classified by the PA Fish and Boat Commission. Panther Run, Cherry Run, and Buffalo Creek headwaters are considered Wilderness Trout Streams.

There are also portions of 29 other streams that support wild trout reproduction in the County as of April 2007, according to the PA Fish and Boat Commission.

While many of Union County's streams are in good to excellent condition, there are a number of impaired (non-attaining) streams located in the County as classified by the Pennsylvania Department of Environmental Protection (PA DEP). The PA DEP monitors and seeks to protect four stream water uses: aquatic life, fish consumption, potable water supply, and recreation. If a segment of a stream is not attaining any of its four uses, it is considered impaired. Many segments of Union County streams are affected by either high levels of mercury in fish or run-off from agriculture, including: Buffalo Creek, Penns Creek, Beaver Run, and Turtle Creek. In all cases, the segments classified as impaired are either not meeting aquatic life or fish consumption standards.

The County has been involved in wellhead, aquifer, and water supply planning, in particular in the Buffalo Creek Watershed (a high quality aquifer supplying water to a large percentage of the population). Maintaining a quality water supply and monitoring aquifer recharge zones is especially important in rural areas with a sig-

nificant proportion of homeowners relying partially or completely on groundwater wells.

Floodplains in the County are most prominent along the West Branch of the Susquehanna River, White Deer Creek, Buffalo Creek, and Penns Creek. According to the Susquehanna River Basin Commission (SRBC), this river basin is one of the nation's most flood-prone areas. Both the SRBC and Pennsylvania Department of Environmental Protection (PA DEP) have developed extensive flood protection programs in areas outside of Union County.

The Union County Planning Commission maintains a GIS inventory of environmentally sensitive areas, such as wetlands, streams, and floodplains. As defined by the United States Fish and Wildlife Service (USFWS), wetlands are the transitional areas between terrestrial and aquatic systems that are, at a minimum, periodically saturated by groundwater and can support swamps, marshes, or other similar hydrophytic vegetation. Wetlands provide numerous benefits, such as absorbing floodwater, filtering pollutants, and providing food sources and natural habitat for numerous species. Existing wetlands are inventoried as part of the National

Wetlands Inventory and are regulated by federal and state laws.

Natural Areas Inventory. The Union County Natural Areas Inventory was updated by the Nature Conservancy in 2000. The report classifies sites of statewide significance for the protection of biological diversity in plant and animal species. Sites are ranked in order of importance (1-5). The following sites were given a priority ranking and are listed in order of importance. Recommendations for each site and additional conservation areas of statewide significance are included in the 2000 Report.³ The priority sites for preservation in the County include:

- Mohn Mills Ponds (Lewis Township)
- Shikellamy Bluffs (Union Township)
- Halfway Run (Hartley and Lewis Townships)
- Penns Creek at White Mountain (Hartley Township)
- The Gooseneck (Hartley Township)
- Seebold Quarry (Limestone Township)

Conservation. The conservation of natural resources, farmland and open space is highly valued by Union County's citizens. There are many conservation areas



³ A Natural Areas Inventory of Union County (Update 2000); Prepared by Pennsylvania Science Office of the Nature Conservancy.



already in place, including: the Bald Eagle State Forest, R.B. Winter State Park, and properties preserved by the Merrill Linn Conservancy. About 33% of the County (67,750 Acres) is either state forest, state parks, state gamelands, or within Merrill Linn Conservancy easements. Additionally, there are 52 farms (more than 6,000 acres) with agricultural preservation easements and thousands of acres in Agricultural Security Areas. Still the majority of agricultural land (over 52,000 Acres) in the County is not in protected easements.

Historic and Cultural Resources. In 1978, the Union County Preservation Plan was prepared by the County Planning Commission. This Plan provided an inventory of 700 historic sites, mostly concentrated in Lewisburg, Mifflinburg, and New Berlin. While Historic Districts were created in both Mifflinburg (National Register, 1980) and Lewisburg (National Register, 2004), the 1978 Plan was never formally adopted by the County and according to the 1996 Vision 21 Plan, many sites listed on the 1978 inventory have subsequently been demolished. Lewisburg is the only jurisdiction with a local historic district and Historic Architectural Review Board (HARB) in the County.

The Union County Historical Society, located in the Union County Courthouse in Lewisburg, houses a research library, educational programs, and provides tours of historic sites - such as the Dale/Engle/Walker farm house located on a 137-acre farm off of Route 192. A number of sites and districts are listed on the National Historic Register today. They include:

- **Allenwood River Bridge**, LR 460 over West Branch of Susquehanna River, Union
- **Buffalo Presbyterian Church**, W of Lewisburg on PA 192, Buffalo Township
- **Chamberlin Iron Front Building**, 434 Market Street, Lewisburg PA
- **Factory Bridge**, 1 Mile west of White Deer on T 514, White Deer
- **Griffey, Benjamin House**, West of Allenwood on PA 44, Allenwood
- **Halfway Lake Dam**, 16 M West of Lewisburg on PA 191, Lewisburg
- **Hassenplug Bridge**, N 4th Street, Mifflinburg
- **Hayes Bridge**, W of Mifflinburg on T 376, West Buffalo Township, Mifflinburg
- **Lewisburg Armory**, US 15 S of junction with PA 45, East Buffalo Township, Lewisburg
- **Lewisburg Historic District**, Roughly bounded by US 15, Beck St., Susquehanna River and Borough boundary, Lewisburg
- **Mifflinburg Historic District**, PA 45. Mifflinburg

- **Millmont Red Bridge**, Southwest of Millmont on LR 59005, Hartley Township, Millmont
- **New Berlin Presbyterian Church**, Vine and High Streets, New Berlin
- **Old Union County Courthouse**, Market and Vine Streets, New Berlin
- **Packwood House-American Hotel**, 10 Market St., Lewisburg
- **Reading Railroad Freight Station**, Junction of South Fifth and St. Louis Streets, Lewisburg
- **Slifer House**, North of Lewisburg off U.S. 15 on SR 59024, Lewisburg
- **Watson River Bridge**, LR 1010 spur over West Branch of the Susquehanna River, White Deer. (This bridge is technically located in Northumberland County but listed in Union County by the PHMC/NPS).
- **William A. Heiss Home and Buggy Works**, 523 Green Street, Mifflinburg

Today there is a renewed interest in historic main street settings nationally. Union County has two Main Street Programs in Lewisburg and Mifflinburg. Historic buildings and architecture in these towns and other locations around the County may not qualify for the National Historic Register, but are important to the community fabric and landscape of Union County. Figure 2-12 locates cultural sites, museums, and historic sites - both on and off the National Register. Currently there are few protections or incentives to preserve these places.

Municipal Differences

The three Planning Areas are distinct places within Union County. The Eastern Planning Area is the most densely populated and home to Bucknell University and other cultural and historic resources in the County. The Central Area is characterized by its agricultural and small town heritage. The Western Planning Area can be defined by its rural and recreational resources, in addition to its small towns.

Cultural Resources. Located in Lewisburg, Bucknell University is a highly competitive liberal arts university with 3,400 undergraduates. Founded in 1846, the campus is 450 acres in size and draws a national and international student body. Another community resource located in Lewisburg is the Campus Theatre. The art-deco theater was built in 1944 and renovated in the 1990s. The theater now shows independent and foreign films. Over the years, it has served as a cultural, architectural, and historic landmark for the surrounding community and university students.

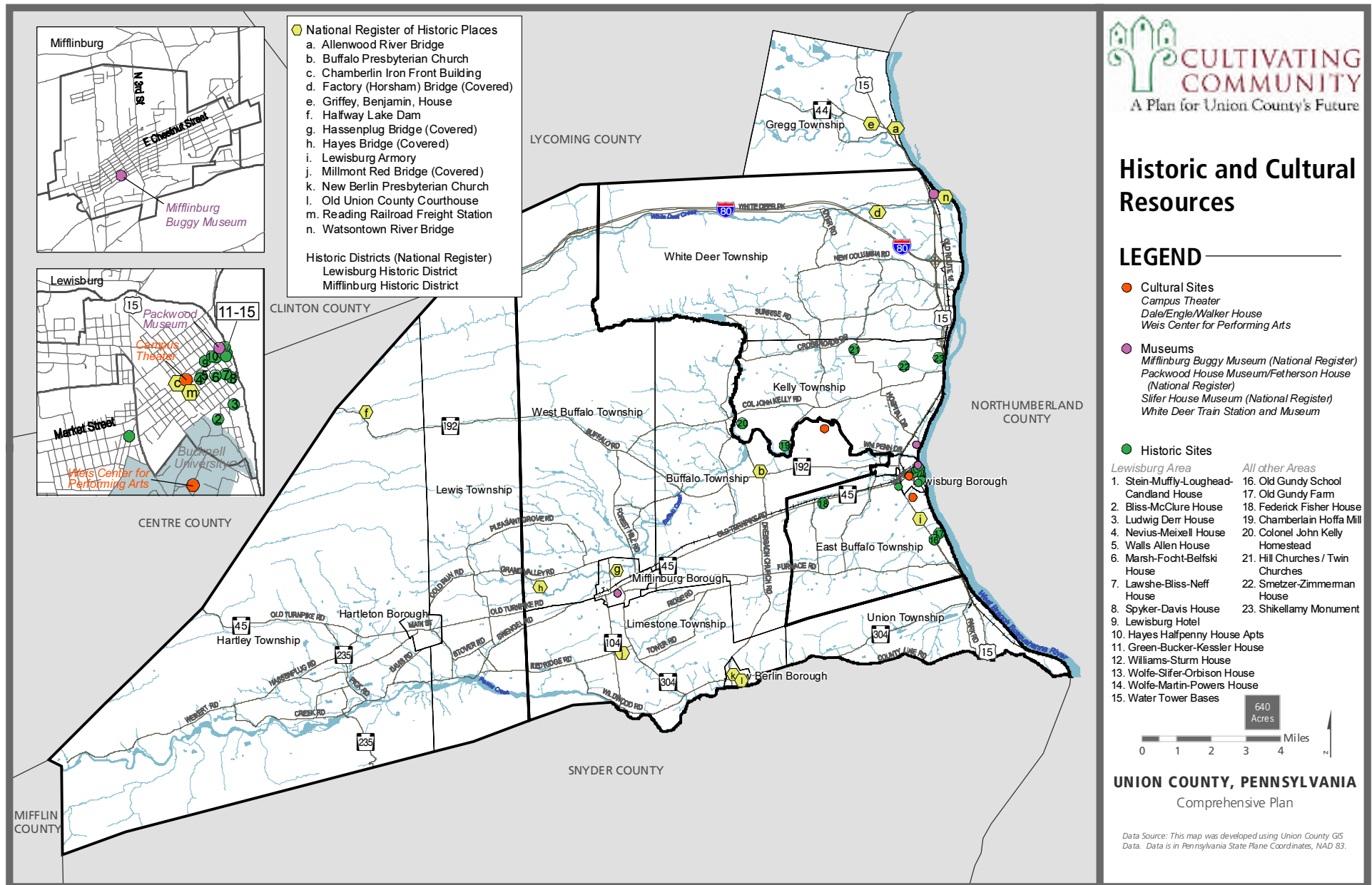
The Mifflinburg Buggy Museum is located in Mifflinburg within the Central Planning Area and offers visitors a glimpse into the Country's industrial past. The museum campus includes the Heiss house, buggy factory, and

repository. Exhibits include buggies, wagons, and sleighs from the original site. Mifflinburg was once known as "Buggy Town" and was home to at least thirteen coachmakers in 1855. The borough is also home to an authentic Christmas Market each year in December. The outdoor market lines Market St. for three days each year offering handmade crafts, traditional holiday music and German foods. Another event, Oktoberfest, provides entertainment, food, and drinks each year in October and celebrates the region's Germanic history.

In the Western Planning Area, the West End Fair (a traditional "country fair") takes place each year in Laureleton. The Fair has been celebrating agricultural heritage and local history with games, rides, and 4-H activities for over 80 years. Recreation is also a major cultural focus in the West End. Located in R.B. Winter State Park, Halfway Lake Dam is listed on the National Register and was built as a Civilian Conservation Corps project in the 1930s. Summer vacation cottages along Penn's Creek were constructed starting in the early half of the 20th century. Fishing, hunting, swimming, and hiking are among the activities residents and visitors enjoy.

Figure 2-2

Historic and Cultural Resources



2.4 Land Use and Zoning

Union County Trends

The land use patterns that are prevalent and valued in Union County – such as farmland, woodlands and open space – mirror the land use patterns in the Central Pennsylvania region. This general pattern of ridges and valleys distinguishes the region from other places. Union County is involved in planning for the future of the Central Pennsylvania region and is a partner in the SEDA-COG Valley Vision 2020 Plan. This Plan sets goals to address regional and state issues, such as land consumption and population growth, loss of farmland, and loss of forest land. While Pennsylvania ranks 45th of all states in population growth, it ranks 12th in land developed compared with all states. This development pattern occurring in the region and state is fiscally and environmentally unsustainable.⁴

The existing land use pattern in Union County is shaped by the County's natural features and agricultural heritage. Table 2.5 summarizes acreage within each land use category. Approximately 60 percent of Union County is classified as woodlands, which includes state owned, federally owned, or privately owned open space and forests. These woodlands are concentrated in the mountain ridges along the northern and southern boundaries of the County.

Agricultural land comprises the second highest percentage of land use in the County (29%). The County's most productive agricultural soils are located in Buffalo and Penns Creek valleys and are generally surrounded by forested land to the north, west, and south and the Susquehanna River to the east. This rural landscape is dotted with existing towns and villages that include a mix of residential, commercial, institutional and industrial-type land uses.

Over the past few decades as population growth has occurred in the County, residential, commercial, and employment-based land uses have spread west and north from the Susquehanna River and Lewisburg, changing the traditional land use pattern. Residential growth has been most pronounced along the edges between woodlands and agricultural land within White Deer, Buffalo, West Buffalo, and Lewis Townships. (Figure 2-3 – Existing Land Use). New non-residential development also has extended outside of the historic town centers in Mifflinburg and Lewisburg along Route 15 and Route 45.

Figure 2-4 (Residential and Commercial Structures 2001-2006) illustrates where recent development has occurred. Based on a visual analysis of recent develop-

Overview of Land Use and Zoning

Land Use

- Forest land represents the largest land use in the County (60% of total land use).
- Nearly 30% of land falls into the agricultural land use category; 3% of total land area is permanently protected agricultural land.
- Only 6% of land is residential (14,600 housing units); 1% of total land use is commercial.

Zoning

- 82% of the County is zoned for agriculture, preservation, woodland or rural density, but low-density residential uses are permitted in over two-thirds of those districts.

Development Trends

- Residential growth pressure is occurring at an increasing rate in the County. Between 1990 and 2000, the number of housing units grew by 14% and 7.5% between 2000 and 2006.
- Approximately 60% of recent development has occurred in or adjacent to towns or villages while 40% has occurred outside of towns or villages.

Future Growth Patterns

- 40% growth in residential housing units is projected by 2030.
- The highest growth (49-59%) is projected to occur in Buffalo, West Buffalo, White Deer, and Lewis Townships through 2030.
- Housing units are projected to grow by 68% through 2050.

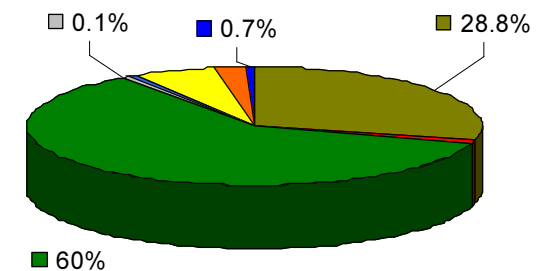
⁴ Growing Smarter - Regional Solutions to Community Betterment, SEDA-COG Community Resource Center, December 2007.



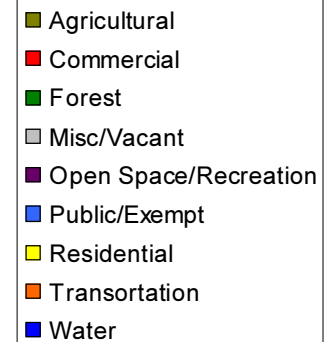
ment patterns using GIS data, approximately 60% of this development has occurred in or adjacent to towns or villages while 40% has occurred outside of towns or villages. This map also shows areas in public ownership (i.e., state gamelands, state parks, state forest, and municipal parks).

Zoning regulations within Union County's municipalities will have a major influence on future land use in the County. Figure 2-5 (Generalized Zoning) simplifies the fifty or more zoning districts that cover all of the municipalities into generalized categories – such as Residential (Rural Density), Retail and Commercial, and Mixed-Use. Table 2.2 summarizes these categories by acreage. Table 2.3 illustrates that a significant portion of the County is zoned for forestry/wildlife preservation with limited residential uses permitted. Further, about 25% of the County falls within the Agricultural Preservation Districts. In most of the Agricultural Preservation Districts, residential subdivisions are permitted on a sliding scale basis, which varies permitted densities based on parcel size. It is important to note that Limestone Township, Union Township, and Hartleton Borough do not have zoning; however, their total acreage is included in Table 2.2 for comparison.

Existing Land Use



Source: Union County GIS Data



Municipal Differences

Zoning districts of the nine townships and four boroughs that are part of the Union County comprehensive planning process are summarized in Figure 2-5 (Generalized Zoning). The type of zoning districts within the townships of Union County indicate a desire for agricultural and forestland preservation. The majority of the agricultural lands are zoned AP Agricultural Preservation or A Agriculture. As noted in Figure 2-6, residential subdivision is permitted in certain cases in the agricultural preservation zones and with lots less than 10 acres. The sliding scale density requirements, however, do restrict the number of parcels that can be converted from agricultural to residential uses. The intensity of farming operations and the location of residential uses within the agricultural districts have been identified as growing planning concerns. In a few of the townships (East Buffalo, White Deer, and Kelly), there is no sliding scale requirement for parcels with a size of ten acres or less. These parcels are highlighted on Figure 2-6.

Forest land located within White Deer, West Buffalo, Lewis and Hartley Townships, is generally zoned W Woodland or WP Woodland Preservation. Residential or commercial land uses other than commercial timber harvesting or recreation are generally restricted in these

zones in each municipality. In White Deer Township the minimum residential lot size is 3 acres for lots with slopes less than 15%, but is 5 acres in the other Woodland/Limited Residential Districts (Figure 2-5).

As shown in Figure 2-5, there is not a substantial amount of non-residentially zoned land (5%) in Union County and most of this area is located in the Eastern Planning Area. Still, retail and industrial vacancies are a growing concern in the County. In the Eastern Planning Area, one concern is the future of the vacant former WalMart site. There are also retail vacancies along Route 15 in Lewisburg, along the former rail corridor, and on Route 45 in Mifflinburg. The closing of Laurelton State Center in Hartley Township, the vacant Pennsylvania House Furniture site in Lewisburg, and the downsizing of Yorktowne in Mifflinburg have created additional vacancies and loss of employment in the County.

In general, many of the townships and boroughs have mixed-use districts, including V Village, RU Residential Urban, UF Urban Fringe, or DC Downtown Commercial. These districts are concentrated in the villages and towns of Union County. There are lower-density residential districts permitted along the ridge line, between



agricultural lands and woodlands, and in large districts in Hartley, Lewis, West Buffalo, Buffalo and White Deer Townships. As noted, Hartleton Borough, Union and Limestone Townships do not have zoning.

Table 2.2 Existing Land Use in Union County

	Acres	Percent
Agricultural	58,596	29%
Commercial	2,194	1%
Forest/Woodlands	123,188	60%
Industrial/Manufacturing	243	0.1%
Miscellaneous/Vacant	171	0.1%
Open Space/Recreation	512	0.3%
Public/Exempt	1,368	0.7%
Residential	12,034	6%
Transportation	4,192	2.1%
Water	1,380	0.7%
	203,878	100%

Table 2.3 Generalized Zoning in Union County

	Acres	Percent
Forestry or Wildlife Preservation	42,883	21%
Woodland Limited Residential (5-10 Acres/DU)*	47,578	23%
Agriculture/Limited Residential (sliding scale 0.5-50 Acres/DU)**	52,502	26%
Residential, Rural Density (2 or more Acres/DU)	1,200	1%
Residential, Low Density (40,000 SF – 2 Acres/DU)	11,919	6%
Residential, Med Density (0.9–4 Units/Acre)	4,030	2%
Residential, High Density (4-8 Units/Acre)	1,200	1%
Retail and Commercial	2,175	1%
Office and Light Industrial	1,423	1%
Institutional	1,185	1%
Bucknell University	408	0%
Mixed Use	4,824	2%
Recreation	779	0%
Unclassified or Highway	1,732	1%
Gregg Township (Outside of Study Area)	13,322	7%
Municipalities without Zoning		
(Limestone and Union Townships and Hartleton Borough)	16,718	8%
TOTAL	203,878	100%

Notes: *In White Deer Township, the Minimum residential lot size is 3 acres for lots with slopes <15%, but 5 acres for lots with slopes >15% in the Woodland District; ** Sliding scale densities are based on the parcel size that is to be developed for non-agricultural use; the number of residential lots that can be developed from any one tract in the Ag/Limited Residential category is restricted.

Figure 2-3
Existing Land Use

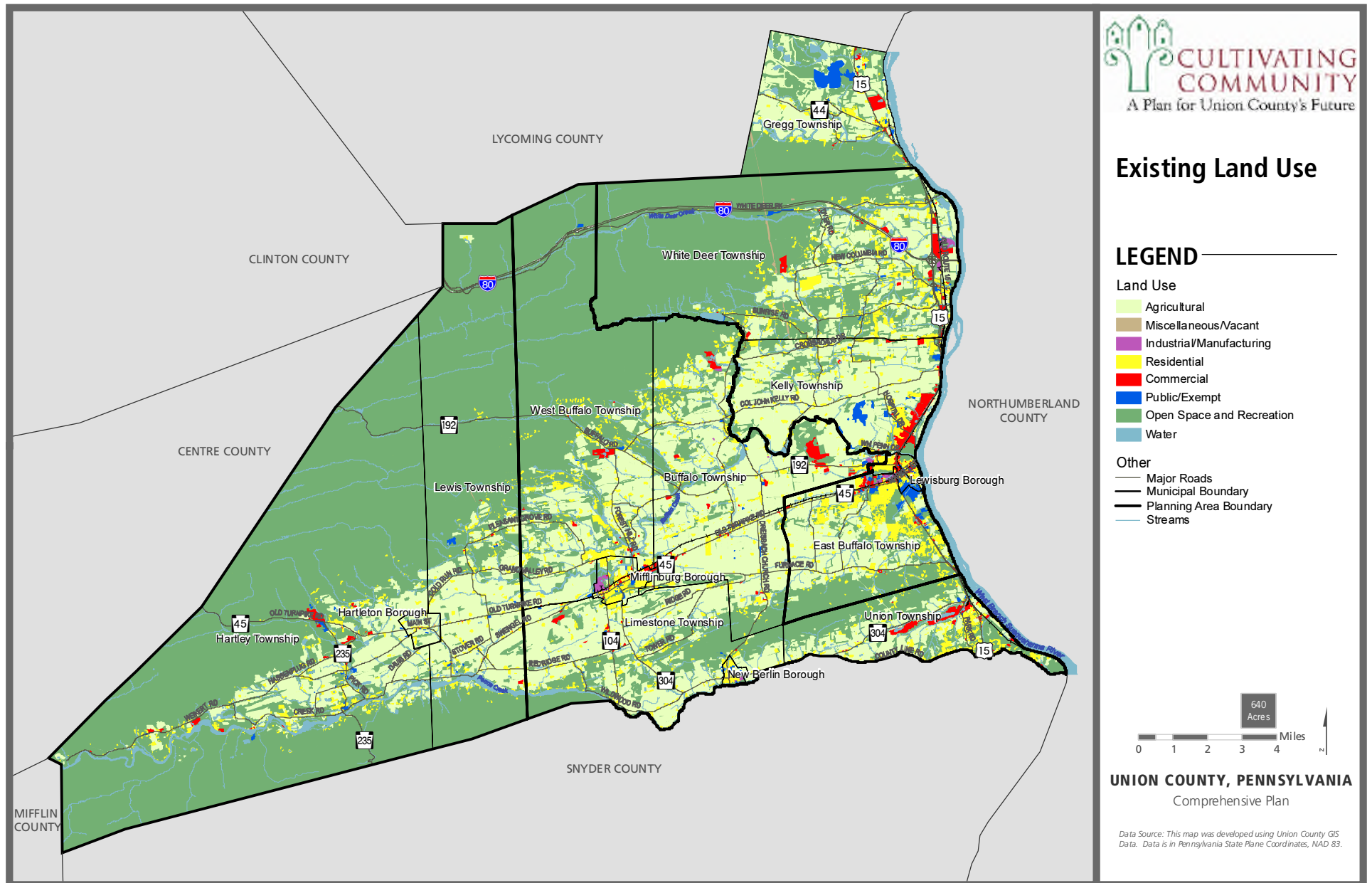


Figure 2-4

Residential and Commercial Structures, 2001-2006

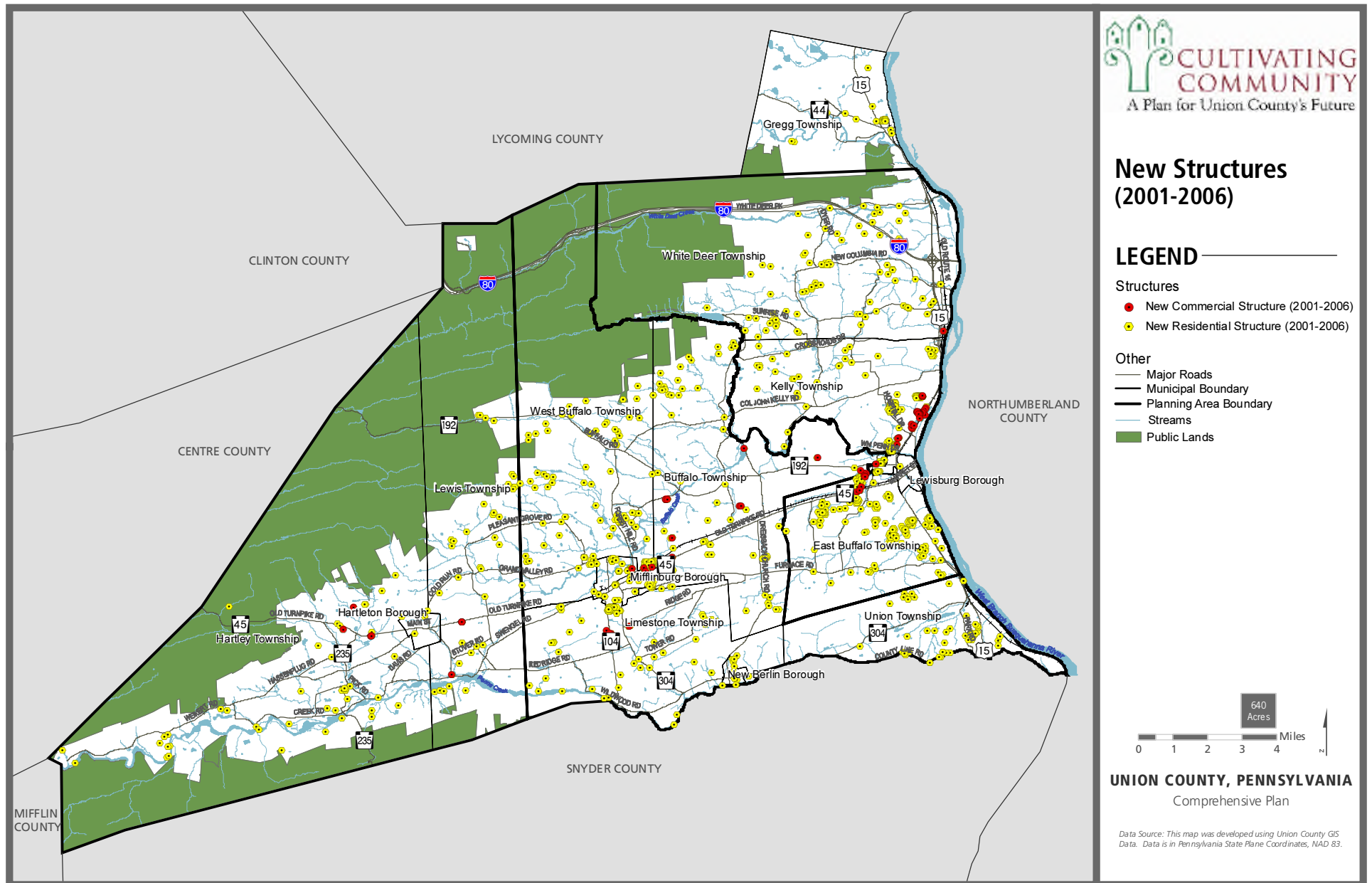


Figure 2-5
Generalized Zoning Districts

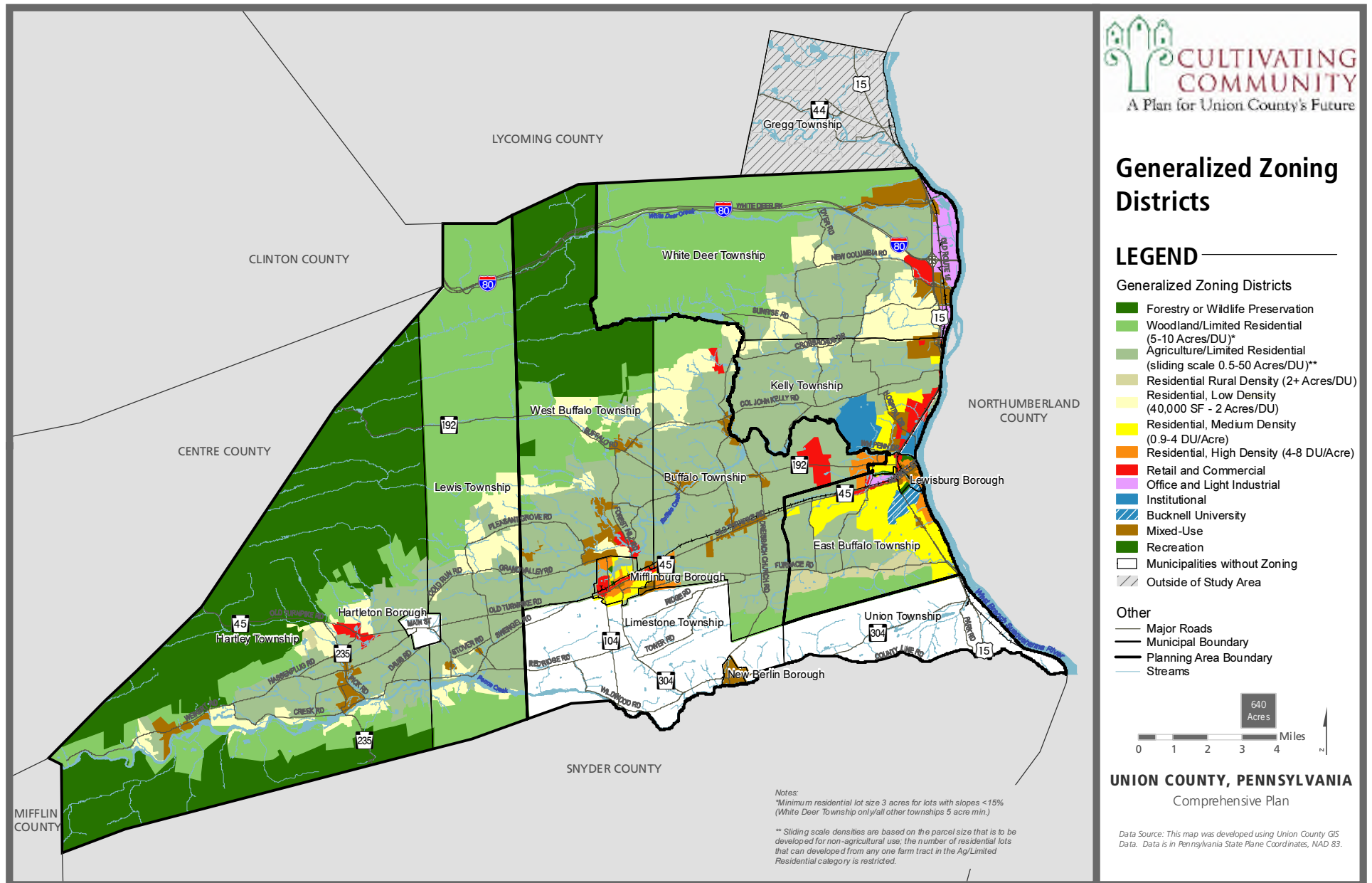
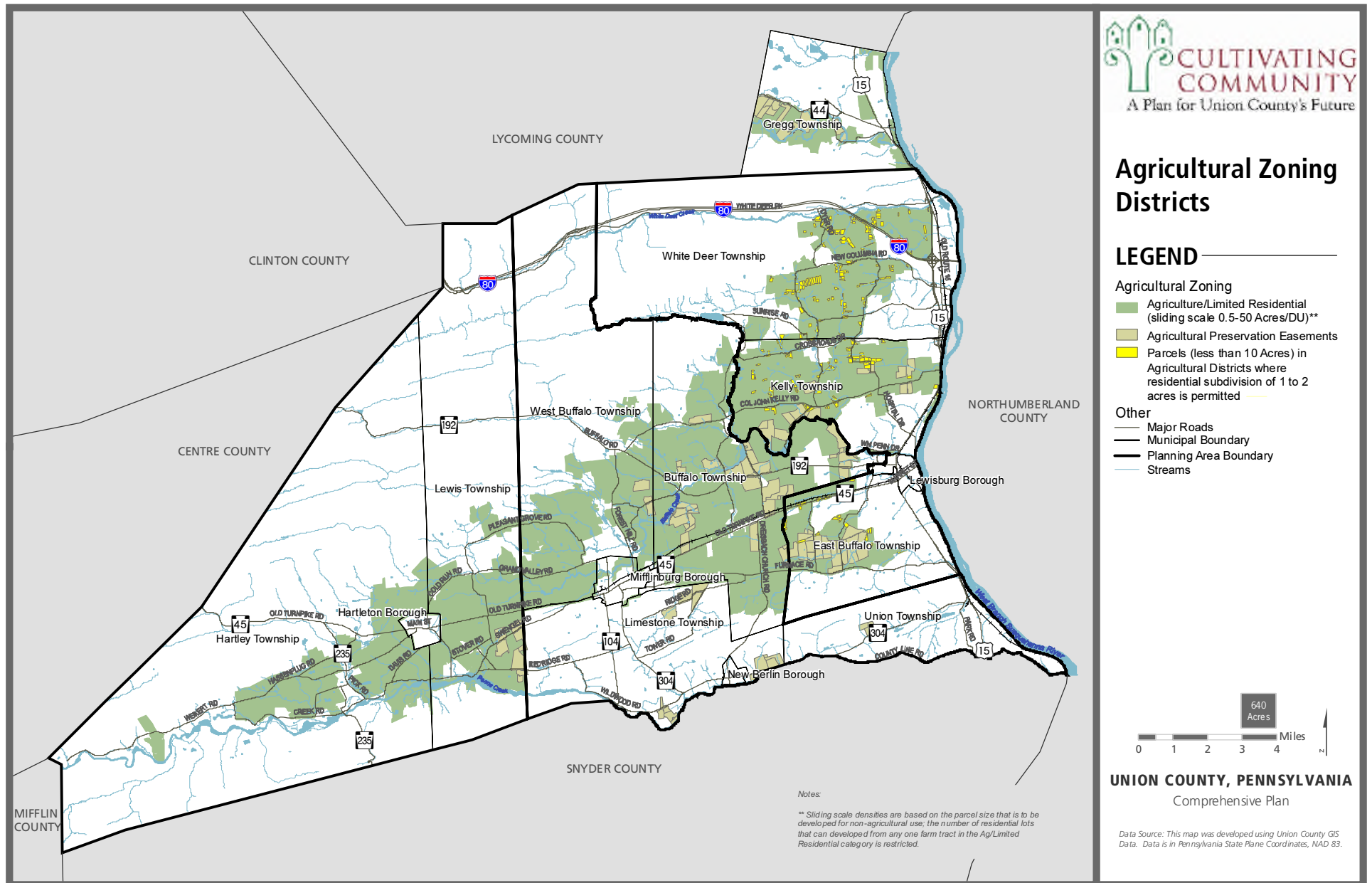


Figure 2-6

Agricultural Zoning Districts



2.5 Housing

Union County Trends

An examination of housing in the seven-county region surrounding Union County presents an interesting picture. In terms of number of households, Centre and Union Counties experienced the highest percentage of growth, 11.3% and 6.5% respectively between 1990 and 2000. Growth in the number of households in the rest of the seven-county area occurred at a rate of between 0.3 and 2.1%, with the exception of Lycoming and Northumberland, where housing decreased by 0.5% and 4.6% between 1990 and 2000.

Annual estimates from the Population Division, U.S. Census Bureau suggest that housing units in all seven counties increased between 2000 and 2006. Again, Centre County and Union County experienced the greatest increase in number of housing units, 8.2% in Centre and 5.1% in Union. Residential growth in the region, in terms of population, is projected to be most significant in Centre, Union, and Snyder Counties through 2030. Population rates are projected to either increase slightly or decrease in the remaining counties during the 2000 to 2030 period.

In 2000, Centre County had the highest median housing value (\$114,900) followed by Union County

(\$97,800) and Snyder County (\$87,900). Occupancy rates in the region were estimated above 90 percent in the 2000 Census with the exception of Clinton County (81%), where a high percentage of vacant units were for seasonal or recreational use.

Change in Housing Units. At the time of the 2000 Census there were 14,684 housing units in Union County. Since that time, 1,102 new units have been constructed. This brings the total number of units in the County to 15,786, for an overall growth rate of 7.5% during the seven-year period.

It is important to highlight that during the 2000 to 2006 time period, housing units grew at a faster rate than estimated population (6.9 % growth in housing; 4.2% population growth estimated 2000-2006). This trend may be a result of multiple factors, such as an overall decrease in household size, growth in the percentage of older householders, rise in the prison population, and/or the shrinking percentage of younger households (25-35 year old age bracket) in the County. As described in the Union County Demographic Digest⁵, the average number of persons per household decreased in every municipality across the County between 1990 and 2000. In Union County as a whole,

Overview of Housing Trends

- Between 2000 and 2006, Centre County had the largest increase in housing units (8.2%), followed by Union County (5.1%), and Snyder County (4.3%) within the seven-county Region.
- The largest increases in housing growth are projected in White Deer and East Buffalo Townships through 2050.
- Union County's housing stock is predominantly single-family; Lewisburg has the highest percentage of multi-family housing.
- Owner-occupied housing in the county increased by 10.8% from 1990-2000; the number of rental units increased by 18.3% during the same period.
- Housing units in Union County are growing at a faster rate than population, which may be the result of a shrinking average household size, an aging population, or combination of factors.

⁵ Union County Demographic Digest, October 2002; Union County Planning Department.



household size decreased from 2.6 in 1990 to 2.5 in 2000. The greater increase in housing units compared to population growth may also be attributed to the growing percentage of older and smaller households present in the County or the decrease in the younger age bracket that occurred during the 1990-2000 census period.

Municipal Differences

Total Housing Units. Only Gregg Township experienced a decrease in the total number of housing units between 1990 and 2000. The Central Planning Area had the largest overall percentage increase of almost 19%. Within the Central Area, the largest percentage increases occurred in West Buffalo Township (38.4%), Limestone Township (20.9%), and Buffalo Township (20.3%). The Eastern Planning Area had an overall 12% increase in housing units with Kelly (21%) and White Deer (17%) having the highest percentage increases within that area.

The Union County Planning Commission projects increases in housing units in all of the municipalities through 2050. The largest increases are projected to be in two Eastern Planning Area municipalities: White Deer Township (1,383) and East Buffalo Township (1,366).

The Planning Commission also projects more than 1,000 new units in Kelly Township and in the Central Planning Area Townships of Buffalo and West Buffalo Townships.

Housing Unit Estimates and Projections. The Census Bureau Population Estimates Division published their estimates of Housing Units by County in September 2007. These estimates indicate an increase of 755 housing units in Union County over a six-year period. In its Demographic Digest, Union County has projected an increase of 2,089 housing units in the County between 2000 and 2010, or an additional 1,334 units over the next four years. According to the Census Bureau estimates, Centre County had the largest increase in housing units between 2000 and 2006 (8.2%), followed by Union County (5.1%), and Snyder County (4.3%).

Based on Union County Planning Commission and county assessor's data, 1,012 housing units have been added in the County between 2000 and 2006, which equates to a growth rate of 6.9%. Given this data, the number of actual housing units in Union County is increasing at a faster rate than projected by the Census Bureau Population Estimates Division.

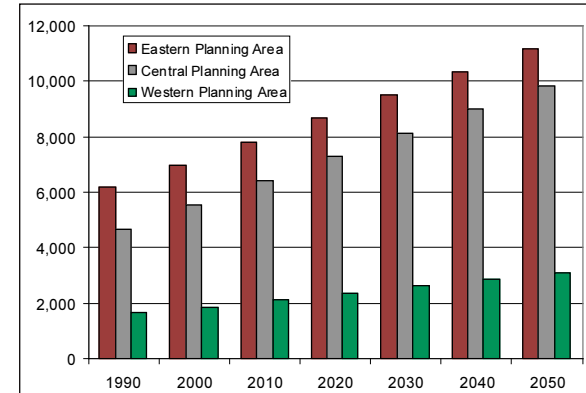
Housing Units by Type. The housing stock throughout the County is predominately single-family, but some municipalities have a higher percentage of single-family or multi-family units than others. In East Buffalo Township, Limestone Township and Hartley Township over 90% of the housing units are single family detached units. Kelly has about 19% of its units in structures with two or more units, and Mifflinburg Borough has about 17%. Lewisburg Borough has the highest percentage of multiple unit housing, with 35% of its units in structures with two or more units. West Buffalo Township in the Central Area and Hartleton Borough and Lewis Township in the Western Area have a high (over 17%) proportion of mobile homes.

Tenure. The Western Planning Area has the highest owner occupancy rate (81%), but also a very high vacancy rate of 35%. Approximately 32% of its housing units are seasonally vacant. The Central Planning Area overall owner occupancy rate is about 78%, but ranges from 70% in Mifflinburg Borough to 89% in Limestone Township. The Eastern Planning Area has the most variation in owner occupancy rate. At the low end with a 42% owner occupancy rate is Lewisburg Borough, the location of Bucknell University. Kelly Township has a 57% homeownership occupancy rate, and East Buffalo Township has a high homeowner occupancy rate of 87%.

Tenure Change. Union County experienced a 10.8% increase in the number of owner-occupied units and an 18.3% increase in its number of rental units between 1990 and 2000. In the Western Planning Area there was a 44% increase in the number of rental units and a 10% increase in the number of owner occupied units. In the Central Planning Area, West Buffalo Township, which has a high percentage of owner occupied units (82%), almost doubled its rental units during the 10 year period. Limestone, which also has a very high percentage of owner occupied units (89%), experienced a decrease in its rental units by about 3%. The only other municipality that had a decrease in the number of rental units between 1990 and 2000 was Mifflinburg Borough (-1%). Gregg Township, Lewisburg Borough and New Berlin Borough were the only municipalities that experienced a decrease in the number of owner occupied units.

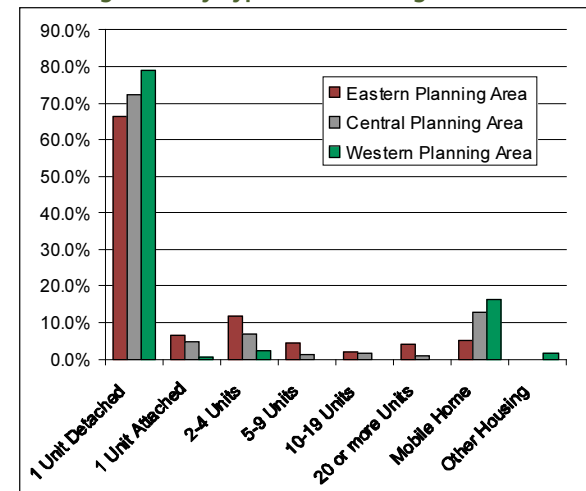
Median Values. The median value of an owner occupied house in Union County in 2000 was \$97,800. East Buffalo Township had a significantly higher median owner occupied value (\$143,900) than any of the other municipalities in the County. The lowest median values were in the Western Planning Area where the values ranged from \$80,700 to \$87,900. Median Values in the Central Planning Area municipalities ranged from \$86,100 (New Berlin) to \$98,200 (Limestone). The lowest median value in the Eastern Planning Area was \$91,600 (White Deer).

Housing Projections by Planning Area



Source: US Census Bureau, 2000 and Union County Planning Department using linear regression method.

Housing Units by Type and Planning Area, 2000



Source: US Census Bureau, 2000

2.6 Economy

Union County Trends

The Pennsylvania Center for Workforce Information and Analysis (CWIA) has prepared employment projections by industry for the Central Pennsylvania area. This area includes Union County and the counties that are contiguous to it: Centre, Clinton, Lycoming, Mifflin, Northumberland and Snyder, plus Columbia and Montour counties. The projections are estimates of employment levels and trends, rather than exact counts.

The largest net growth for the ten year period from 2004 to 2014 in the Central Pennsylvania area is projected to be in Educational Services (6,940), Health Care and Social Assistance (4,330) and Accommodation and Food Services (1,610). The largest percentage growth is projected to be in Professional and Technical Services (16.9%) for a total of 1,190 employees. Arts, Entertainment, Recreation and Transportation and Warehousing are also projected to have a positive percentage growth. The largest decrease in employment (23.5%) is projected to be in non-durable Manufacturing. Utilities are also projected to have a fairly large (21%) decrease. However, the three digit North American Industrial Classification System (NAICS) for Wood Product Manufacturing is projected to increase by 1,090 employees over the 10 year period for a 16.6% increase, and was identified by the CWIA as a target industry (Table 2.4).

Occupation projections. The CWIA has also prepared occupation projections through 2014 for the Central Workforce Investment Area. The largest net growth in occupations is projected to be in the Education, Training, and Library occupations (2,010), followed by Food Preparation and Serving (1,990), and Office and Administrative Support.

Health Care Practitioners and Health Care Support and Management occupations are also projected to have net growth over 1,000. The highest percentage growth is projected to be in the Computer and Mathematical occupations.

Union County Industry Trends by Sector. Between 2001 and 2005, there was a decrease in private sector employment in Union County of about 1,000 employees, or 5.7% of the work force. Manufacturing employment decreased by almost 20%. However, wood product manufacturing increased by about 35%, from an average yearly employment of 641 in 2001 to 865 in 2005. While the largest percentage increase in employment occurred in Professional and Technical Services (39%), the largest actual increase in the number of workers was in Health Care and Social Assistance (241 employees for a 7.6% increase). Arts, Entertainment

Overview of Economy

Trends in Union County 2001-2005:

- Private sector employment decreased by 1,000 employees or 5.7% of the work force.
- Overall manufacturing decreased by 20%, except for wood manufacturing which grew by 35%.
- The largest percentage increase was in Professional and Technical Services (39%) and the largest number increase was in Health Care and Social Assistance.

Projections for the Central PA area:

- Growth is projected in Educational Services, Health Care and Accommodation/Food Services.
- Decline is projected to continue in the Manufacturing sector.

Economic Impact of Agriculture:

- Agricultural land represents about one-third of the county land use and 11% of the total assessed value of all taxable property in 2006.
- Net income receipts show 115% growth in industry between 1995-2005.
- Preservation of farmland is a growing concern in the region. More than 6,000 Acres or 52 farms have been protected to date.

Table 2.4 Employment Growth Projections

	2004	2014	Employment Change	Percent Change
Greatest Projected Loss				
Manufacturing (Non Durables)	8,980	6,870	-2,110	-23.5%
Manufacturing (Durables)	37,400	35,270	-2,130	-5.7%
Greatest Projected Growth				
Educational Services	45,140	52,080	6,940	15.4%
Health Care and Social Assistance	33,920	38,250	4,330	12.8%

Source: Central Pennsylvania Workforce Investment Board, Long-Term Industry Employment, Projections Analysis (2004 - 2014), December 2006

Table 2.5 – Private Sector Employment: Largest Employing Industries in Union County

	Employment (2005)	% Change (2001-2005)
Health Care and Social Assistance	3,418	+7.6%
Manufacturing	2,521	-19.5%
Accommodation and Food Services	1,774	+6.9%
Retail Trade	1,566	+6.7%

Source: PA Department of Labor and Industry, PA Work Stats, Center for Workforce Information and Analysis

*Note: Non-disclosing industries, such as Educational Services, are not included.

and Recreation had the next largest percentage increase (19%), but this was only an increase of 10 employees. The Accommodation and Food Services industry had an increase of 114 employees. Increases also occurred in Real Estate, Rental and Leasing, Finance and Insurance and Retail Trade (Table 2.5)

Unemployment. Reflecting the County's industry trends above, between 2001 and 2006, the unemployment rate for Union County rose from 4.6 to 5.3%. In the seven-county Central Pennsylvania region, the rate remained essentially the same or actually fell. In comparison, Pennsylvania has a 2006 unemployment rate of 4.7 percent; the average rate across the United States was 4.6 percent in 2006. In 2006, Centre County had the lowest unemployment rate (2.9) and Clinton County had the highest (5.7).

Commuting Patterns. Of the approximately 16,000 commuters who lived in Union County, about 66% of them worked within the County and about 34% commuted to locations outside the County. Of those Union County residents commuting outside of the County, 45% went to Northumberland County, 22% traveled to Snyder, and 13% commuted to Lycoming County.

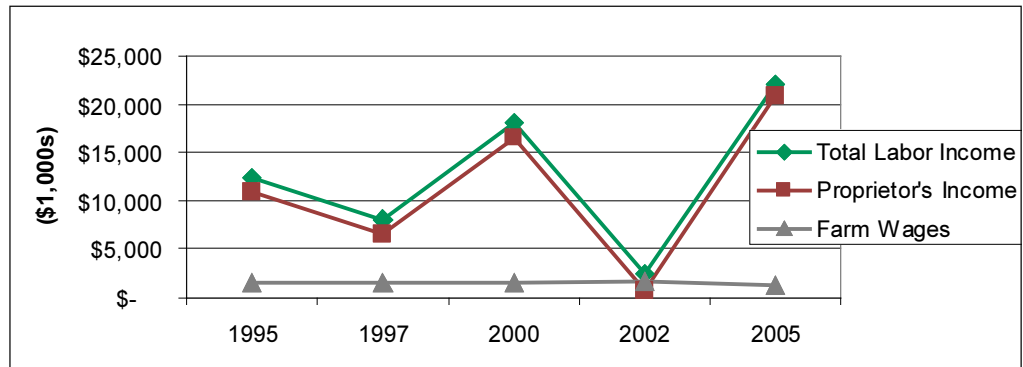
There were 7,847 commuters who came into Union County from other Pennsylvania Counties to work. Just under half of those commuters come from Northumberland County, about 20% came from Snyder County, and 15% came from Lycoming County.

Agriculture in Union County. Farming is a significant industry in Union County, representing about 29% of the County's total existing land use. In 2006, as reported by the National Agricultural Statistic Service, Union County had 520 farms on 68,500 acres. The most recent Census of Agriculture reported that the largest portion of farmland acreage was in cropland.

While the number of farm operations declined 21 percent from 1997 to 2002, the acreage of land in farms only declined by 3 percent. This suggests that consolidation is occurring. Between 1997 and 2002 the largest decline was in the number of small farms (<50 acres), with some loss of operations in farms with between 50 and 500 acres. At the same time, the number of large farms (>500 acres) increased slightly.

Even with recent trends, middle-sized farms between 50 and 179 acres remain the dominant size category in both the number of farms and the acreage of land

Agricultural Employment Income, Union County - 1995-2006



Overall, the trend from 1995 to 2000 was a 115 percent growth, though there was a sharp decline in 2002. Source: Regional Economic Information System, Table CA45, April 2007, adjusted for inflation.

Table 2.6. Market Value of Products Sold, 1997 and 2002 (\$1,000s)

	1997	% of total	2002	% of total	change 1997-2002	% change 1997-2002
Total Sales	\$ 59,494		\$ 55,016		\$ (4,478)	-8%
Crops	\$ 11,120	18.7%	\$ 5,639	10.2%	\$ (5,481)	-49%
Livestock, poultry	\$ 43,158	72.5%	\$ 49,378	89.8%	\$ 6,220	14%
Poultry and eggs	\$ 17,378	29.2%	\$ 15,350	27.9%	\$ (2,028)	-12%
Cattle and calves	\$ 5,702	9.6%	\$ 5,920	10.8%	\$ 218	4%
Milk and other dairy products	\$ 19,535	32.8%	\$ 21,701	39.4%	\$ 2,166	11%
Hogs and pigs	\$ 5,547	9.3%	\$ 5,539	10.1%	\$ (8)	0%
Miscellaneous	\$ 212	0.4%	\$ 867	1.6%	\$ 655	309%

Source: Pennsylvania Agricultural Statistics Service, U.S. Department of Labor, Inflation Calculator

The leading product in 2002 was milk and other dairy products with almost \$22 million in sales, or 39 percent of the total county production. Table 2.3 provides the sales figures in 2002 dollars for the various commodities in the county and trends from 1997 to 2002.

Table 2.7 The Economic Impact of the Agricultural Industry, 2004

Industry	Industry Output	Employee Compensation	Proprietor Income	Other Property Income	Total Value Added
Oilseed farming	\$ 3,418,248	\$ 4,899	\$ 704,219	\$ 1,482,854	\$ 2,274,710
Grain farming	\$ 3,158,076	\$ 20,337	\$ 570,891	\$ 1,205,768	\$ 1,861,826
Vegetable and melon farming	\$ 825,456	\$ 24,251	\$ 206,139	\$ 387,294	\$ 626,274
Fruit farming	\$ 558,881	\$ 23,212	\$ 82,025	\$ 217,308	\$ 337,306
Greenhouse and nursery production	\$ 381,504	\$ 32,425	\$ 106,804	\$ 148,097	\$ 292,315
All other crop farming	\$ 9,391,043	\$ 204,899	\$ 1,653,795	\$ 3,550,886	\$ 5,619,452
Dairy and cattle farming	\$ 34,977,371	\$ 570,663	\$ 192,602	\$ 4,094,371	\$ 5,791,393
Poultry and egg production	\$ 24,791,662	\$ 550,567	\$ 2,411,739	\$ 8,902,302	\$ 11,966,213
Animal production (except dairy and poultry)	\$ 4,400,290	\$ 170,586	\$ (66,146)	\$ 397,630	\$ 591,930
Logging	\$ 2,180,937	\$ 62,141	\$ 336,988	\$ 314,076	\$ 735,806
Agriculture and forestry support activities	\$ 1,969,010	\$ 289,007	\$ 951,524	\$ (110,820)	\$ 1,148,679
Flour milling	\$ 400,398	\$ 10,155	\$ 3,369	\$ 6,444	\$ 20,869
Confectionery manufacturing	\$ 2,505,650	\$ 222,561	\$ 27,818	\$ 311,375	\$ 573,444
Bread and bakery production	\$ 1,238,377	\$ 265,070	\$ 9,474	\$ 145,053	\$ 425,712
Sawmills	\$ 9,158,028	\$ 1,197,381	\$ 22,092	\$ 1,199,389	\$ 2,457,919
Totals	\$ 99,354,929	\$ 3,648,153	\$ 7,213,334	\$22,252,028	\$ 34,723,849
Percent of County Economy	4.9%	0.5%	9.5%	7.9%	2.9%
Source: 2004 IMPLAN Multiplier Reports. IMPLAN Group, Inc. Stillwater, Minnesota					
Notes: 1. IMPLAN is based on input-output economics, for which the value of production or output includes commodities used in the farm production process but not sold in the open market. This is true primarily for the feed grain and hay sectors. Output estimates for these sectors will almost always exceed published cash receipts data. Output is equal to shipments plus net additions to inventory.; 2. The value added by the agriculture sector is the sum of employee compensation, total payroll costs paid by local industries, proprietor income (income from self employment) and other property income (includes corporate income, rental income, interest and corporate transfer payments).					

in farms, accounting for just over half of the number of operations and about 40 percent of the acres in farmland.

While changes in farmland acreage and farm numbers provide important insights into the county's agricultural economy, these trends do not provide a complete picture of the sector. In 2002, the total market value of products sold in Union County was a little over \$55 million, an increase of 15 percent over a 10-year period. Based on data from the U.S. Census of Agriculture, there is some evidence that farm product sales are becoming more concentrated due to increased contract sales for hogs and poultry. That is, more animals are being produced by fewer operations with farmland.

Based on data from the Regional Economic Information Service Bureau of Economic Analysis (BEA), farm employment in 2005 totaled 707 and represented about 3.2 percent of county employment. The number of employees and percentage of total county employment have been fairly steady since 2001. It is important to note that BEA's definition of agriculture is more extensive than that of other agencies, such as Pennsylvania Agricultural Statistics Service (PASS). For example, the BEA considers forestry employment as part of

agriculture, whereas PASS data generally do not include forestry related industries.

Agriculture's contribution to the local economy is even more pronounced when considering its ripple effects. For example, because farms purchase inputs (e.g., seed and fertilizer) to produce their commodities, they can create jobs in the local economy beyond the farm gate. Similarly, farm workers use their income to purchase goods and services in the local economy, generating still more jobs in the county. These ripple effects are often referred to as the economic multipliers, as one job can create additional jobs in the local economy.

IMPLAN data and software (see Table 2.7) were used to build an economic impact model for Union County's agricultural sector. The model examines output (i.e., sales) employment, income and value-added (i.e., wages and salaries plus profits). In 2004, the agricultural sector generated output of \$100 million, 717 employees, employee compensation of \$3.6 million and proprietor income of \$22.3 million. The impact of the agricultural industry is shown in Table 2.7.

The total economic output of Union County in 2004 was a little over \$2 billion. The agricultural industry accounted for about \$100 million or 5 percent of county output. The individual sectors that make up the agricultural industry are shown in Table 2.7.

According to the 2002 Census of Agriculture, livestock and poultry comprise 90 percent of the County's agricultural sales and dairy 39 percent of its agricultural production. Concentrated livestock operations appear to be growing: sales values have increased while farm numbers and land in farms declined. For example, the number of farms raising cattle and calves dropped 15 percent from 1997 to 2002, while the number of animals in inventory increased 10 percent. Hog farms dropped 23 percent, but the number of hogs increased 1 percent.



2.7 Transportation

Union County Trends

Union County's transportation and circulation network plays an important role in defining present and future land development patterns and activities. Development activity is influenced by its proximity to major transportation corridors. As with many other rural Pennsylvania communities, motor vehicle use is the primary form of circulation within Union County.

Union County's Roadways. The Pennsylvania Department of Transportation (PennDOT) owns and maintains approximately 286 miles of roadway in Union County, with Interstate 80 comprising approximately 16 miles of the total.

There are four major inter-county transportation corridors within Union County. Interstate 80 serves regional and interstate traffic, running east/west across the northern portion of the County with interchanges at U.S. Route 15 and Mile Run Road. PA Route 192 and PA Route 45 serve regional traffic, running east/west across the central and southern portions of the County, respectively. U.S. Route 15 provides a north/south connection between the Selinsgrove Bypass (U.S. Route 11/U.S. Route 15 Expressway) and Interstate 80 as it traverses the eastern edge of the County.

Various other state and municipal roadways serve as transportation links between Union County's different municipalities and support inter-county travel. Traffic coming from and going to portions of central Snyder County currently utilizes the PA Route 104, PA Route 204, and PA Route 235 crossings over Penns Creek and New Berlin Mountain Road to access PA Route 45, PA Route 304, and ultimately U.S. Route 15. Access to the east is limited by the crossings over the Susquehanna River, including PA Route 45, PA Route 642, and PA Route 44. Access from the west and north is limited by the mountain ridge in the Bald Eagle State Forest. See Appendix B of Part III - Transportation Technical Report for more detail.



Transportation Overview

- Four major inter-county transportation corridors traverse Union County.
- Union County's roadways are classified into five categories: interstate highways, arterial roads, major collector roads, minor collectors, and local roads.
- Excluding Interstate 80, Route 15 and PA Route 45 carry the highest volumes of traffic and also experience the most significant delays during peak hours.
- The Central Susquehanna Valley Thruway Project (designed to decrease US Route 15 traffic volumes) was slated to begin in 2009. However, due to funding constraints the project has not advanced.
- Low overall population densities limit transit opportunities in the County. Service is available to seniors throughout the county and to college students in Lewisburg through Bucknell University.
- Pedestrian trails are maintained through the Merrill Linn Conservancy and the State Park system. Planning for the Susquehanna Greenway is underway.
- Dedicated bicycle paths/lanes are very limited in Union County.

Functional Classification

This system designates roadways based on the following characteristics:

- Average Daily Traffic Volumes
- Roadway Design
- Relationship to Other Network Roadways
- Function (Access versus Mobility)

Functional classification is also used by federal, state, regional, county, and municipal planners to establish a hierarchy of roadway importance, based on the level of service (LOS) the roads are intended to provide, and to prioritize maintenance and improvements.

The inverse relationship between access and mobility is a principal concept in functional classification. Accessibility refers to the opportunities to enter or exit a roadway from an adjacent property or a surrounding area. Mobility relates to the ability or capacity of the roadway to accommodate traffic flow. Typically, the higher the roadway's capacity to facilitate traffic flow, the lower its ability to provide efficient access to adjacent properties and surrounding areas, and vice versa.

Functional Classification. Functional classification refers to the categorization of roadways according to the function they serve. Functional classification categories, from highest-order to lowest-order, are: highways, arterial roads, collector roads, and local roads. Further categorization (e.g., major/minor, primary/secondary) is often utilized to more appropriately describe a roadway's function and to more precisely apply classification criteria. The Existing Roadway Classification Map (Figure 2-7) displays the existing functional classification of the County's roadways. The functional classification categories shown on the map can be described as follows:

Interstate Highways move large volumes of traffic at relatively high rates or speed, providing both high levels of service as well as inter-county/interstate, long distance travel options with limited access. The one interstate highway in Union County is Interstate 80 with access provided at the U.S. Route 15 and Mile Run Road interchanges in the northern portion of the County.

Arterial Roads service trips of moderate length and typically provide a high degree of mobility, with relatively controlled access points, although greater access to the adjacent roadway network is provided than with interstate highways. U.S. Route 15 is a principal arterial highway on the eastern side of the County, providing

both limited access and full access along various sections. PA Route 45 functions as a minor arterial through the central portion of the County. It is Union County's most prominent and heavily traveled east-west road, connecting Lewisburg (and points east) to Mifflinburg (and points west).

Major Collector Roads typically connect municipalities and major traffic generators. These roads are the major contributors of traffic to arterial roads, and they convey fairly heavy traffic volumes at moderate rates of speed. Access points are usually controlled on collector roads, which often span the entire length of a municipality. Various routes, or segments of routes, function as major collector roads in the County, including but not limited to PA Route 44, Old Route 15, River Road, Crossroads Drive, PA Route 192, Johnson Mill Road, New Berlin Mountain Road, State Route 304, and State Route 235.

Minor Collector Roads serve the same function as major collectors, but convey lower volumes of traffic at lower speeds. These roads collect traffic from various access points and distribute it to other residential and commercial centers. Minor collectors serve mainly local traffic. Various routes, or segments of routes, function as minor collector roads, including but not limited to White Deer Pike, Dyer Road, New Columbia Road, Colonel John Kelly Road, Forest Hill Road, Furnace Road, Weikert Road, and Red Ridge Road.

Local Roads provide the greatest access to adjacent land. They provide for short distance and low speed travel and generally do not carry through trips. Roads in neighborhoods, as well as roads serving farms and businesses, are considered local roads, which provide direct access. Examples of local roads within Union County include County Line Road, Pleasant View Road, Sunrise Road, Church Road, Cold Run Road, Creek Road, and Hassenplug Road.

County and Municipal Traffic Conditions

Existing Traffic Generators. Major traffic generators are located throughout the County. In terms of traffic generation, Lewisburg Borough and Mifflinburg Borough are the major town centers within the County, and Hartleton Borough and New Berlin Borough are smaller town centers.

Within Lewisburg Borough, Bucknell University, with a student enrollment of approximately 3,600 students, is a major traffic generator. Traffic generated by the University consists of both traffic from daily commuters, including students, staff, and employees, as well as on-campus and near-campus housing, which generates both pedestrian traffic as well as vehicular traffic to and from various sites throughout the Lewisburg area. Numerous com-

mercial developments exist along the U.S. Route 15 corridor through the Lewisburg area, and to the north.

Within the central portion of Union County, the Mifflinburg Industrial Park is a major employment center, located along the north side of PA Route 45 on the west side of Mifflinburg Borough. Major tenants include Ritz-Craft Corporation and Yorktowne Cabinetry.

The Bald Eagle State Forest is a major destination. Additionally, the limestone quarry on the north side of PA Route 192 in Buffalo Township generates truck traffic through the Lewisburg area. Another traffic generator is the Great Stream Commons, located along U.S. Route 15 in Gregg Township. A Target Distribution Center is proposed for this site.

Outside of the urban and suburban corridors mentioned above, most of the land uses are rural in nature, comprised mostly of agricultural uses. The traffic generating characteristics of these land uses are much less intense, and traffic volumes along the rural roadways are comparatively lower.



Intersection Capacity. Since traffic volumes do not fully describe traffic conditions or the capacity of the facility to accommodate traffic, operational deficiencies are also analyzed by comparing traffic volumes to the designated capacity of the roadway network. This volume to capacity (v/c) analysis, or the ratio of peak hour traffic volume to roadway/intersection capacity, is an indicator of congestion resulting in a reduction in vehicle speed or an increase in travel delay. Capacities are based on the maximum number of vehicles that can reasonably be expected to pass through a given segment of intersection under normal conditions. Control delay also provides a measure of traffic operations at intersections, which is expressed in terms of seconds of delay per vehicle per lane group and then in terms of a level of service. The standard breakdown of control delay and levels of service are depicted in Tables 2.8 and 2.9 for unsignalized and signalized intersections.

Level of Service. Level of Service is a benchmark that traffic engineers use to describe how well a road or intersection handles traffic. LOS A indicates a road with little or no delay. LOS E indicates periods of long traffic delays, while LOS F indicates a road with very long traffic delays and is considered a “failing” grade.

Table 2.8 Level of Service - Unsignalized Intersections

Description	Control Delay	Per Vehicle (seconds)
A	Little or no delay	< 10.0
B	Short traffic delays	10.1 to 15.0
C	Average traffic delays	15.1 to 25.0
D	Long traffic delays	25.1 to 35.0
E	Very long traffic delays	35.1 to 50.0
F	Demand exceeds capacity of the lane or approach	> 50.0

Table 2.9 Signalized Intersections

Description	Control Delay	Per Vehicle (seconds)
A	Very low delay, high quality flow	< 10.0
B	Low delay, good traffic flow	10.1 to 20.0
C	Average delay, stable traffic flow	20.1 to 35.0
D	Longer delay, approach capacity flow	35.1 to 55.0
E	Limit of acceptable delay, capacity flow	55.1 to 80.0
F	Unacceptable delay, forced flow	> 80.0

Existing Levels of Service. Excluding Interstate 80, both U.S. Route 15 and PA Route 45 currently carry the highest volumes of traffic through the County on a daily basis and during the weekday morning and weekday afternoon peak hours. Accordingly, based on traffic impact studies completed within Union County, as well as field observations of existing conditions, intersections along the U.S. Route 15 and PA Route 45 corridors experience the most significant delays during the peak hours due to lack of capacity resulting from heavy traffic

volumes and/or lack of sufficient traffic control (i.e., traffic signals). Traffic congestion along U.S. Route 15 is partially a result of inefficient signal operations at intersections and lack of coordinated signal progression along portions of these corridors. With U.S. Route 15 and PA Route 45 representing the major routes through Lewisburg and Mifflinburg, respectively, many of the major intersections within the downtown areas of these two boroughs operate with delays during the peak periods. Within Lewisburg Borough, both vehicular and

pedestrian traffic causes congestion in the downtown and around Bucknell University.

Based on current data, several intersections along key road corridors located along the U.S. Route 15 and PA Route 45 corridors have been identified as currently operating with delay. These intersections are shown on the Existing Roadway Deficiency Map (Figure 2-9). Traffic volumes are heavy at key intersections and road segments at various times throughout the day. Typically, however, intersections operate with their highest levels of delay during the weekday commuter peak hours, which usually occur between 7:00 AM and 9:00 AM in the morning and between 4:00 PM and 6:00 PM in the evening. These intersections are presently operating at level-of-service E or F during the peak hour periods. When intersections operate at level-of-service E or F during the peak hours, it is an indication that the intersection may be operating at or beyond its capacity, and traffic improvements may be necessary.

Based on review of available traffic counts within the County and on field observations of existing traffic conditions, the following study intersections are identified as key intersections within the County (See Figure 2-8):

1. U.S. Route 15 and State Route 44
2. U.S. Route 15 and Broad Street (S.R. 1004)
3. Crossroads Drive (S.R. 1004) and JPM Road
4. U.S. Route 15 and Colonel John Kelly Road (S.R. 1002)
5. Colonel John Kelly Road (S.R. 1002) and Hospital Drive (S.R. 005)
6. U.S. Route 15 and Hospital Drive (S.R. 1005)
7. PA Route 192 and Forest Hill Road (S.R. 3007)
8. PA Route 192 and Colonel John Kelly Road (S.R. 1002)
9. PA Route 192 and Johnson Mill Road (S.R. 1001)
10. PA Route 192 and Fairground Road (S.R. 2007)
11. Market Street (PA 45) and 4th Street
12. U.S. Route 15 and Buffalo Road (PA Route 192)
13. Market Street (PA Route 45) and 7th Street
14. Market Street (PA Route 45) and 3rd Street
15. Market Street (PA Route 45) and Water Street
16. Old Turnpike Road (PA Route 45) and Dreisbach Church Road (S.R. 2003)
17. Old Turnpike Road (PA Route 45) and Fairground Road (S.R. 2007)
18. US Route 15 / Market Street (PA Route 45)
19. US Route 15 / River Road
20. Furnace Road (S.R. 2004), New Berlin Mountain Road (S.R. 2003) and Dreisbach Church Road
21. Furnace Road (S.R. 2004) and Old School House Road (S.R. 2007)
22. US Route 15 and State Route 304
23. State Route 304 and Park Road (S.R. 2009)
24. Old Turnpike Road (PA Route 45) and Fairground Road (S.R. 3020)
25. Main Street (PA Route 45) and Laurel Road (S.R. 3002)
26. Chestnut Street (PA Route 45) and 10th Street (PA Route 104)
27. Chestnut Street (PA Route 45) and 8th Street (S.R. 3003)
28. Chestnut Street (PA Route 45) and 4th Street (PA Route 304)
29. Chestnut Street (PA Route 45) and 3rd Street
30. Chestnut Street (PA Route 45) and Forest Hill Road (S.R. 3007)
31. E. Chestnut Street (PA Route 45), Meadow Green Drive, and Mable Street
32. PA Route 104 and Red Ridge Road (S.R. 3004)
33. PA Route 304 and Trails End Road (S.R. 3004)
34. PA Route 304 and Vine Street (S.R. 2003)

As part of this Comprehensive Plan, a short list of key intersections was evaluated for potential roadway improvements.



Crash and Deficiency Locations. The evaluation of crash locations is another measure of the efficiency and safety of the County's roadway network. Although level of service and capacity issues may not exist, geometric deficiencies are of concern along roadways within the County, both in urban and rural locations. Narrow cartways, skewed intersections, restricted sight distance, or other geometric (horizontal/vertical alignment) conditions, including sharp curves and steep grades, are typical deficient conditions along Union County roadways. Based on data available from other traffic studies conducted within the County, several intersections and road segments have been identified as possessing deficiencies such as those described above. These locations are illustrated on the Existing Roadway Deficiency Map (Figure 2-15), with specific attention to those intersections identified as providing limited sight distance.

Central Susquehanna Valley Thruway Gateway Project.

The planned Central Susquehanna Valley Thruway Gateway Project (CSV T) is a 12- to 13-mile four-lane, limited access highway that extends from the existing Selinsgrove Bypass (U.S. Route 11/U.S. Route 15 Expressway) in Snyder County to PA Route 147 just south of the interchange of PA Route 147 and PA Route 45 in Northumberland County. Extensive community involvement occurred from 2004 through 2006 to discuss existing conditions in the area, as well as to plan for the anticipated future impacts. The CSV T will be designed and built as two separate projects. The first project will begin just south of the PA Route 45/PA Route 147 interchange and end south of the proposed new interchange near Winfield along U.S. Route 15 in Union County, just north of the Snyder County border. This project will also include an approximately 4,400 foot bridge over the Susquehanna River. The second project will begin at the new U.S. Route 15 Winfield interchange and end at the northern limit of the existing Selinsgrove Bypass (U.S. Route 11/U.S. Route 15 Expressway). The anticipated letting schedule for the bridge over the Susquehanna River was the spring of 2009, however the project has not advanced due to lack of funding.

The CSV T project and construction of the Winfield interchange will have a significant impact on traffic operations within Union County, namely along the U.S. Route 15 corridor south of Lewisburg Borough. Based on the completed studies, traffic projections for the year 2030 show the CSV T project will decrease the U.S. Route 15 traffic volumes south of PA Route 45 by 14,000 vehicles per day. Under existing conditions, traffic to and from Snyder County, along the US Route 11/US Route 15 Corridor is utilizing U.S. Route 15. With the proposed Winfield interchange, the heavy traffic volumes along U.S. Route 15 in the southern portion of Union County will be alleviated by the parallel route provided by the CSV T project.

Union County Railroads. At one time Union County's freight and passenger rail transportation connected points near and far with such routes as Lewisburg to Bellefonte, White Deer to Loganton, and New Berlin to Winfield among others. Today, however, only 15 miles of track remain and of that total, approximately 13 miles are operational local or short line railroads for moving freight. There is no passenger rail service available. The active rail parallels the West Branch of the Susquehanna River and US Route 15 in the eastern part of the county. It serves Winfield village as the southernmost terminus in the Central Planning Area and travels

north through the Borough of Lewisburg, the villages of West Milton, New Columbia, and White Deer (northern terminus) in the Eastern Planning Area. Ownership varies by segment and includes the Lewisburg and Buffalo Creek Railroad, West Shore Railroad, Central PA Chapter National Railway Historical Society, and the SEDA-COG Joint Rail Authority with the Union County Industrial Railroad as the primary operator. From 2004 through 2008 this line, which serves four county businesses, averaged 1,700 carloads per year.

Prior to 2008 there were 10 miles of rail connecting Lewisburg and Mifflinburg Boroughs, but after years of inactivity and the lack of a freight customer base, West Shore Railroad decommissioned the line. The U.S. Surface Transportation Board has granted approval for railbanking and public trail uses. Rail usage and infrastructure over time has followed the county's economy, as manufacturing and the popularity of truck transport has waxed and waned so has freight rail.

Union County Public Transit. Transit opportunities for Union County residents are limited, but do include service through the Union/Snyder Transportation Alliance (USTA). USTA supplies free public bus service for residents with a current Medical Assistance

Access Card. Seniors (age 65 and over) are eligible for a discounted rate (15% of cost) through the Pennsylvania Lottery's Shared Ride Program. USTA is also open to the public for a fee, however rates are cost-prohibitive for many residents and are expected to increase in the near term.

Additional transit service is provided on a limited basis within Lewisburg. Within the Borough, there is one bus stop that serves Greyhound Lines, located along Market Street (PA Route 45). Taxi service is available in Lewisburg and the surrounding area. Bucknell University offers shuttle service for transportation to both the Harrisburg airport and train/bus station, as well as the Williamsport, JFK and Philadelphia airports during the fall and spring break and at the end of semesters.

Bicycle and Pedestrian Circulation in Union County. Sidewalk networks in and surrounding Union County's boroughs provide pedestrians in these locations with good mobility and access. Outside of these traditional centers, pedestrian pathways are poor and/or not available. River Road and Stein Lane in East Buffalo Township have been identified as difficult areas for pedestrians. Also, sidewalks are located in some commercial areas along Route 15 in Kelly Township and



along Route 45 in Mifflinburg, but lack connections to adjacent development and the area is generally poorly designed for pedestrians.

Bicycling is heavily used for transportation by the Plain Sect community in Union County. This activity occurs mostly in the County's rural areas, but there are growing safety concerns for these bicyclists and the County's other mostly recreational riders along arterial and collector roadways, particularly Route 45. Both Lewisburg Borough and East Buffalo Township have Bicycle/Pedestrian committees. However, there are currently no designated bike routes or paths in Union County. Two projects currently under consideration in the County to expand bike/pedestrian facilities are the Susquehanna Greenway and the Mifflinburg-Lewisburg Rail Trail.

Figure 2-7

Existing Roadway Classification

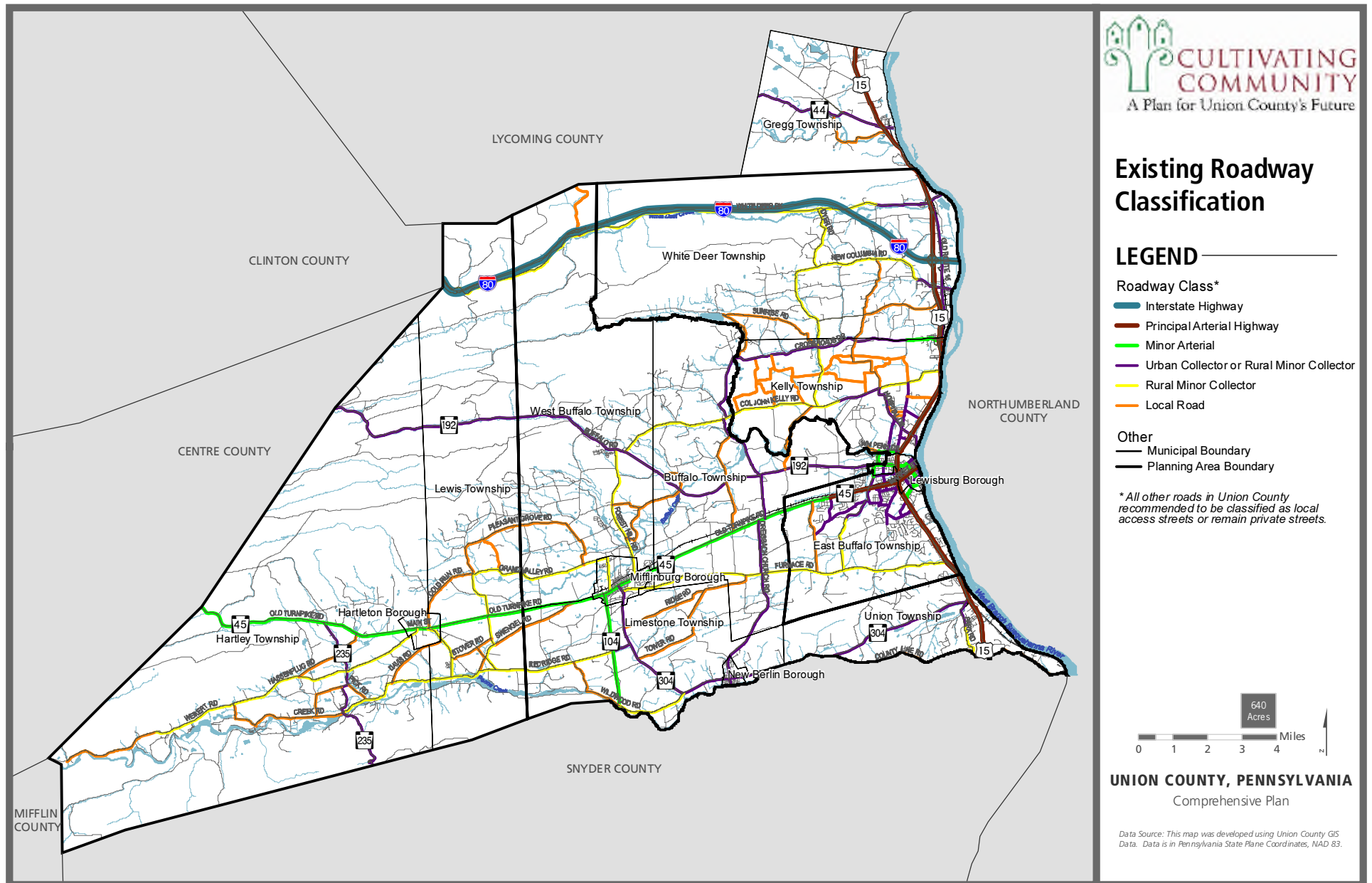


Figure 2-8
Key Intersections

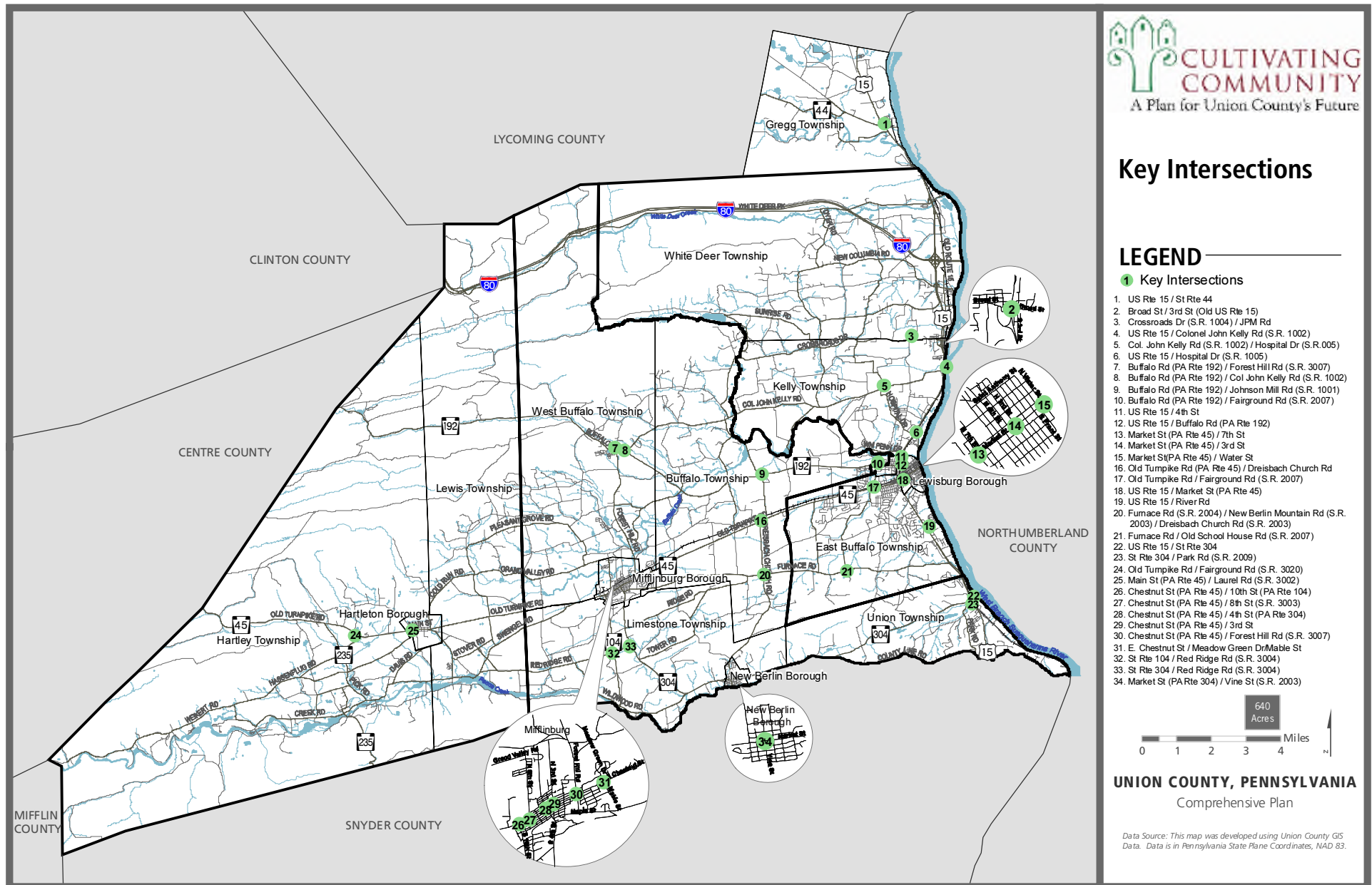
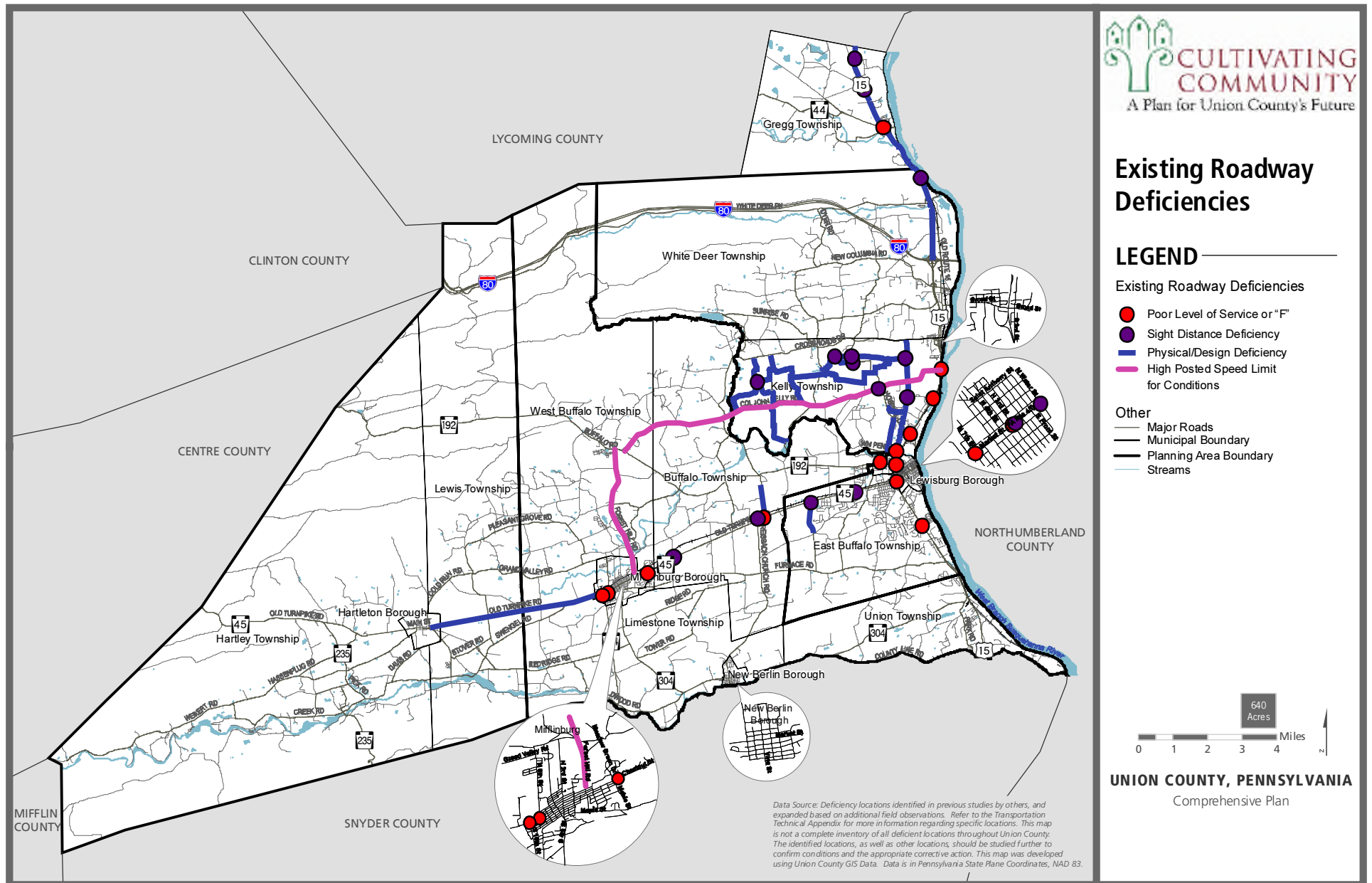


Figure 2-9

Existing Roadway Deficiencies



2.8 Community Services and Utilities

Union County Trends

Union County is served well by many types of community facilities that greatly impact the County's quality of life and safety of its citizens. These community facilities include: healthcare institutions, emergency services, schools, utilities, and recreation services.

Assessing the operations of these community service providers and planning for their future needs as part of the county and multi-municipal planning process provides an important perspective because most of them currently serve more than one municipality in the County. This offers the opportunity for more regional understanding and sharing of resources.

Schools. Public school districts in Union County offer kindergarten, elementary, and secondary education to all of its residents. The County is divided into four school districts shown in Figure 2-6 – Lewisburg, Mifflinburg, Milton and Warrior Run. The Lewisburg Area School District enrolls 1,900 students in two elementary schools and an intermediate, middle, and high school. The Donald H. Eichhorn Middle School received the National Blue Ribbon Award of Excellence from the United States Department of Education in 2002.

The Mifflinburg Area School District enrolls 2,380 students in four elementary schools and an intermediate, middle, and high school. Based in adjacent Northumberland County, the Milton Area School District serves White Deer Township and has one facility in the County, White Deer Elementary School, in New Columbia. Gregg Township is part of the Warrior Run Area School District and all of its facilities are located outside of Union County.

The SUN Area Career & Technology Center (SUN Tech) is a career technology center that draws students from the school districts in Union County as well as from districts in neighboring Snyder and Northumberland Counties. Sun Tech trains approximately 295 high school students in addition to 1,200 adults through adult education programs to become highly-skilled technicians able to compete in a global economy.

Overview of Community Services and Utilities

- Four school districts offer public education to all its residents. The Mifflinburg and Lewisburg Area Districts draw the majority of Union County students.
- SUN Tech draws high school students from Union, Snyder, and Northumberland Counties and adults from the region and provides training in highly-skilled technical fields.
- Bucknell University, located in Lewisburg, is one of the nation's top liberal arts institutions providing post-secondary education.
- The Bald Eagle State Forest and the three state parks in the County provide numerous recreational activities. Nature trails are also provided and maintained by the Merrill Linn Conservancy. The Lewisburg Area Recreation Authority (LARA) oversees a variety of facilities and programs for a wide range of participants.
- Union County's high-quality healthcare system is anchored by an excellent local hospital, Evangelical Community Hospital.
- Fire and emergency services are provided by seven districts located throughout the County. PA State Police force serves the majority of the County. East Buffalo Township and the three boroughs also have separate police districts.



In addition to the public schools, there are a number of private schools throughout the County that serve the Plain Sect and other religious groups.

For citizens in Union County there are also many opportunities for post-secondary education. Bucknell University, one of the nation's top liberal arts institutions, is located in Lewisburg. In addition, the Pennsylvania College of Technology and Lycoming College are located about 18 miles north of Union County in Williamsport, PA. In surrounding counties Susquehanna University, Penn State University and Bloomsburg University offer a wide variety of educational options.

Libraries. There are three public libraries that serve Union County shown in Figure 2-11 — the Public Library for Union County in Lewisburg, Herr Memorial Library in Mifflinburg, and the West End Library in Laurelton, all of which are connected through the Union County Library System. For materials not found in any of the collections of the three libraries in the Union County Library System, patrons may place requests electronically through the Access Pennsylvania Database, a catalog that includes the holdings of over 2,000 Pennsylvania school, public, academic, and special libraries. This database contains approximately 11.7 million titles

and over 50 million items. The Bertrand Library at Bucknell University is also located in Lewisburg.

Recreation. There are approximately 64,400 acres of state forest in Union County that offer numerous outdoor recreation options. Two state parks, R.B. Winter State Park and Sand Bridge State Park, are located in the Bald Eagle State Forest in the northern portion of the County. A third state park, Shikellamy State Park, is on the southern edge of Union Township. These parks are shown in Figure 2-12.

Hiking trails are available for recreational use in two of the three state parks. Trails in the R.B. Winter Park cover 6.3 miles and cross a variety of terrain. Many of these trails connect with backpacking trails in the surrounding Bald Eagle State Forest. The Shikellamy State Park overlooks the West and North branches of the Susquehanna River and provides a one-mile nature trail circling the Shikellamy Overlook. The Merrill Linn Conservancy also maintains four hiking trails; Dale's Ridge Trail, Koons Trail, Shamokin Mountain Trail, and the Merrill Linn Trail, for public use.



Implementation of the Susquehanna Greenway, which will eventually link open space and recreational resources along the 500-mile corridor of the Susquehanna that lies within Pennsylvania, is currently underway. There is also a trail project underway between Lewisburg and Mifflinburg that would reuse an underutilized rail line.

In addition to trails, state forest lands offer opportunities for fishing, hunting, mountain biking, horseback riding, recreational driving, motorcycling, snowmobiling, ATV, etc. The facilities include trailheads, leased campsites, primitive campsites, and picnic areas. The Mid-State Trail and the Central Mountains Shared-Use Trail System are examples of two recreational trails located in the Bald Eagle State Forest. Penn's Creek and its tributaries in Union County are also considered a nationally recognized fishing destination.

A local park system and community recreation programs provide additional recreation opportunities in Union County. (See Figure 2-12) A renovation of the Lewisburg Area Recreation Park by the Lewisburg Area Recreation Authority (see more information on LARA below) offers new facilities in the eastern portion of the County, including a swimming pool, outdoor ice rink, skate park, and other active recreation spaces and equipment. A

municipal complex in the Village of Laurelton and sports fields in Hartley Township and Hartleton Borough serve the western area of the County. In the central portion of the County, Mifflinburg Borough has a swimming pool and community parks are located in Mifflinburg and New Berlin. Ballfields and community parks in East Buffalo, Kelly, and White Deer Townships also provide recreation opportunities.

The Lewisburg Area Recreation Authority (LARA) is a very active recreational organization in the eastern part of the County, overseeing a variety of facilities and programs for participants of all ages. Activities offered range from ice skating, gymnastics, track and field, triathlon training, swimming, tennis, and yoga to cooking, ballroom dancing, and ceramics. The West End Youth Group also serves younger children in the Western portion of the County. In addition, there are many youth and adult sports leagues active across the County for baseball, soccer, and other sport activities. A private, indoor pool complex is also currently planned for the Lewisburg area by the Community Fitness and Aquatics Organization.

Healthcare Services. Union County is fortunate to have a high-quality healthcare system anchored



by an excellent local hospital, Evangelical Community Hospital. Evangelical can accommodate approximately 135 overnight patients and 12 patients in its acute rehabilitation unit. The Hospital offers a full continuum of services, including: diagnostic testing, surgery, a range of treatment programs, outpatient services, and an emergency room. Geisinger Medical Center located in nearby Danville was recently named one of the top hospitals in the United States. It provides high quality, additional medical specialties to address people's health needs in Union County.

Several senior facilities are located in Union County to serve its elderly citizens. Riverwoods and Buffalo Valley Lutheran Village are in the Lewisburg area and Rolling Hills Manor is located in Millmont.

Police. Union County's four boroughs — Hartleton, Mifflinburg, Lewisburg, and New Berlin — as well as East Buffalo Township have their own municipal police services. These services are shown in Figure 2-13. Hartleton has 4 part-time officers. Mifflinburg has 7 full-time and 2 part-time personnel. Lewisburg has 8 full-time and 3 part-time officers. New Berlin has 4 part-time officers. East Buffalo Township has a force of 8 full-time members. A joint police force is under

consideration in Lewisburg and East Buffalo. Pennsylvania State Police Station in Milton provides coverage for the other municipalities in Union County, but due to the 3-county coverage area of the State Police the local police forces provide additional support as needed.

Fire. Union County has seven fire departments that serve multiple municipalities. See Figure 2-14 for their locations. The departments include: New Berlin Fire Company, William Cameron Engine Company (Lewisburg), Mifflinburg Hose Company #1, Warrior Run Area Fire Department, West End Fire Company (Millmont), White Deer Township Fire Company, and Union Township Fire Company. Lewisburg's Company is the only department currently with paid personnel; all of the other departments rely on volunteers. Each company has one station, but Mifflinburg is studying a potential substation in the Village of Mazeppa to service new development in that rural area of the County.

Emergency Services. Union County 9-1-1 provides 9-1-1 and emergency communications service throughout the County, dispatching appropriate police, fire, ambulance, rescue, emergency management, and local government or support services. The 9-1-1 Communications Center is a division of the Union County Department of Public Safety.

Another division of the Department of Public Safety is Union County Emergency Management, an organizational and management structure that uses the National Incident Management System (NIMS) to manage and coordinate resources for pre-disaster to post-disaster mitigation. The division is responsible for such things as: emergency, terrorism, and all hazards planning for public and private facilities.

Other Community Organizations. Religious groups are an important aspect of life in Union County and there are many different churches active across the County. These church groups include: Mennonites, Lutherans, Methodists, Quakers, Baptists, Episcopalians, Catholics, and Independent churches.

Other community facilities include Bethesda Family Service Foundation (a treatment/counseling center for at-risk youth) and White Deer Treatment Center (drug and alcohol rehabilitation facility in Gregg Township). Two other unique community facilities in Union County are the Allenwood Federal Correctional Complex in Gregg Township and the Lewisburg Federal Penitentiary in Kelly Township.

Utilities. Water, sewer, electric, and other utilities offer basic services in Union County. (See Figure 2-15). The Pennsylvania American Water Company provides most of the central water services in the more populated eastern area of the County. Pennsylvania American is the largest public water utility in Pennsylvania. The parts of White Deer Township with public water are served by Pennsylvania American Water Company, which has a supply and treatment plant in the Township along White Deer Creek.

Lewisburg Area Joint Sewer Authority offers centralized sewage treatment facilities for Lewisburg Borough, East Buffalo Township, and a small portion of Buffalo Township. Kelly Township Municipal Authority, White Deer Township Sewer Authority, and Gregg Township Municipal Authority provide sewage services to northeast Union County, including the major commercial centers on Route 15 north of Lewisburg, Allenwood Federal Correctional Complex, and Great Stream Commons Industrial Park.

In central Union County, Buffalo Township operates a sewage treatment facility in Mazeppa serving Mazeppa, Vicksburg and Buffalo Crossroads. Buffalo Township is currently working with Mifflinburg Borough to address

their currently constrained sewage system for the Mifflinburg area. Limestone and West Buffalo Townships are also working with Mifflinburg on a regional authority concept. Also, a centralized sewage system is located in New Berlin Borough. Public water service is provided in Mifflinburg and New Berlin Boroughs.

In the western end of the County, Hartley and Lewis Townships as well as Hartleton Borough have municipal sewer authorities. These authorities have several small facilities that are very constrained. The only central water facilities in the west end are two private systems for Rolling Hills Manor in Millmont and the former Laureilton State Hospital.

Outside of the service areas for the public water and sewer systems detailed above, on-lot wells and septic systems are utilized in Union County. This includes many rural areas across the County and properties in Hartleton Borough currently rely on individual wells for their water supply.

Electric services are provided throughout Union County by two companies. Citizens Electric Company is located in East Buffalo Township or the Lewisburg area and serves parts of the Eastern and Central Planning areas,



specifically Lewisburg Borough, East Buffalo Township, Buffalo Township, and a portion of Kelly Township. The rest of the County is served by PPL Corporation, with the exception of Mifflinburg Borough. Mifflinburg purchases electric power wholesale and resells it to residents.

Figure 2-10

School Districts and Facilities

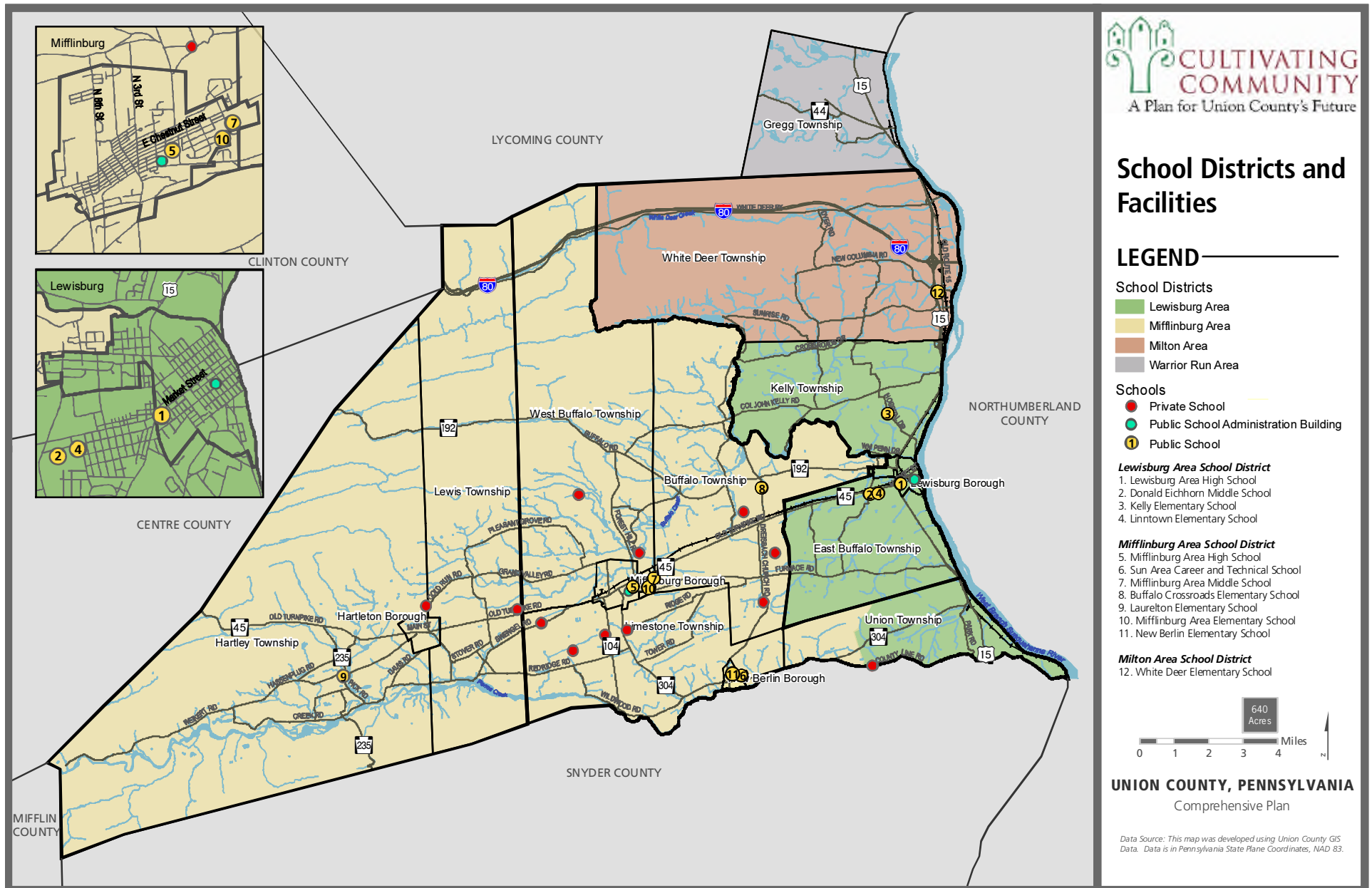


Figure 2-11
Community Facilities

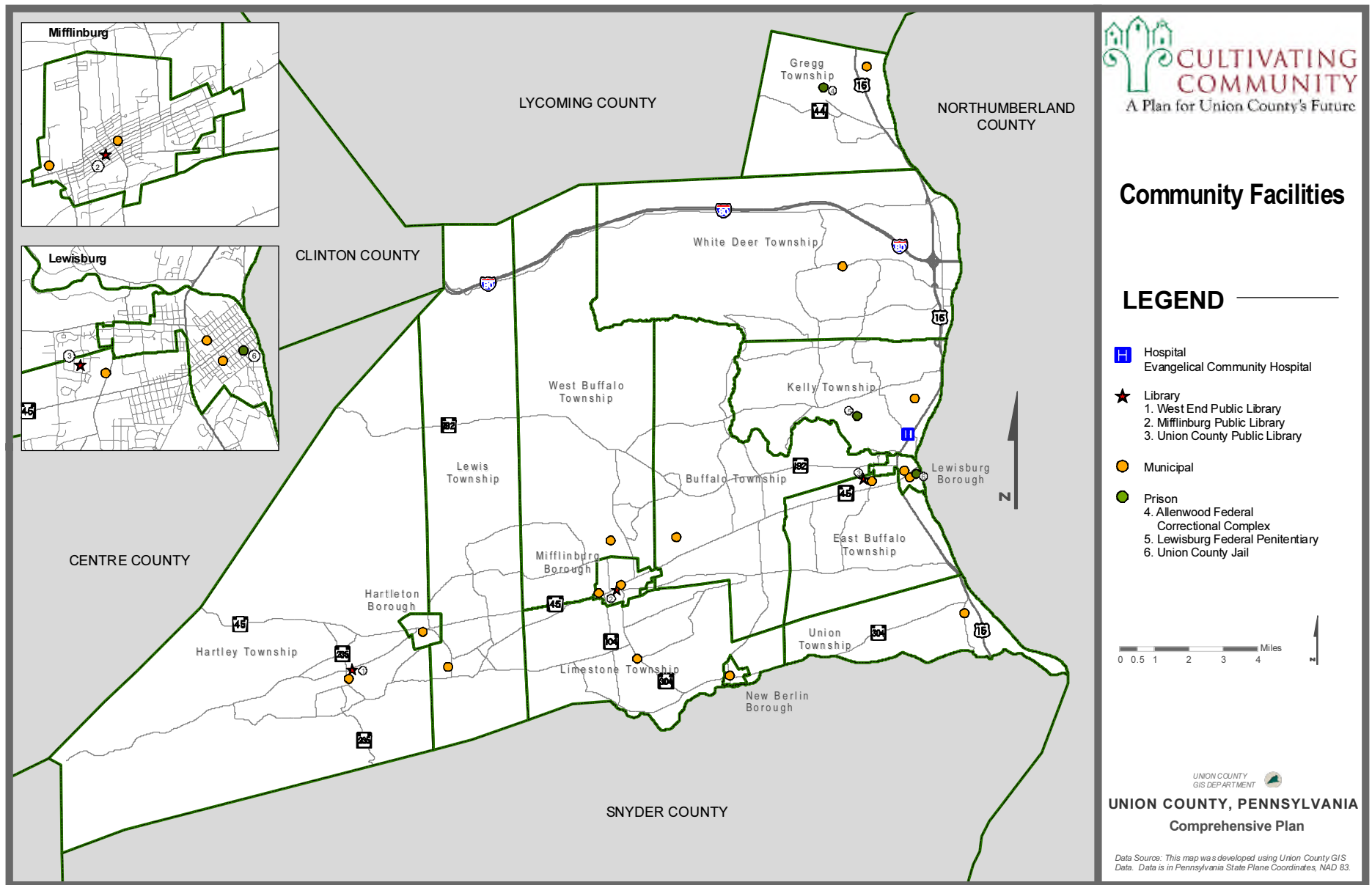


Figure 2-12

Parks, Recreation, and Open Space

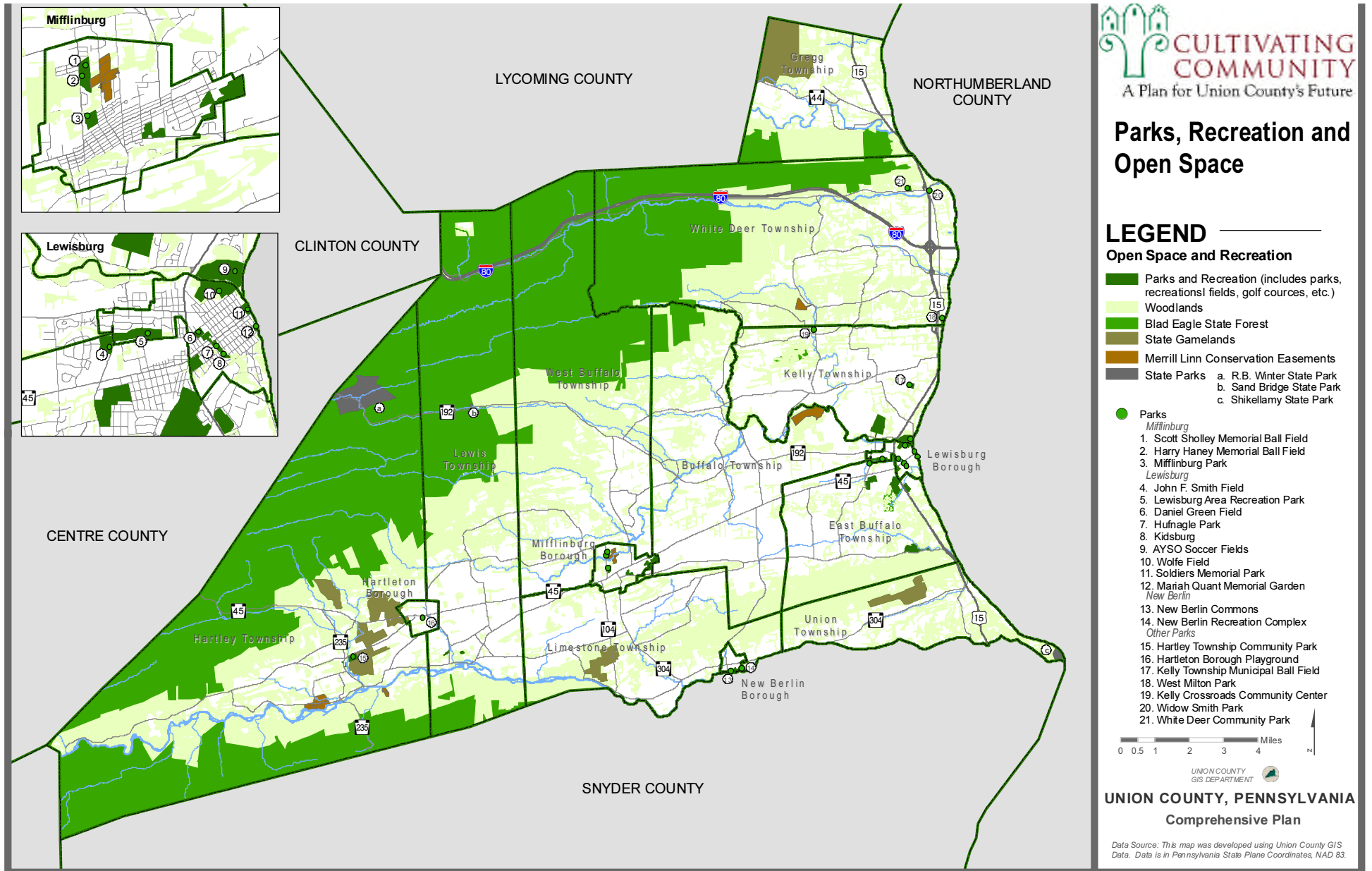


Figure 2-13
Community Protection

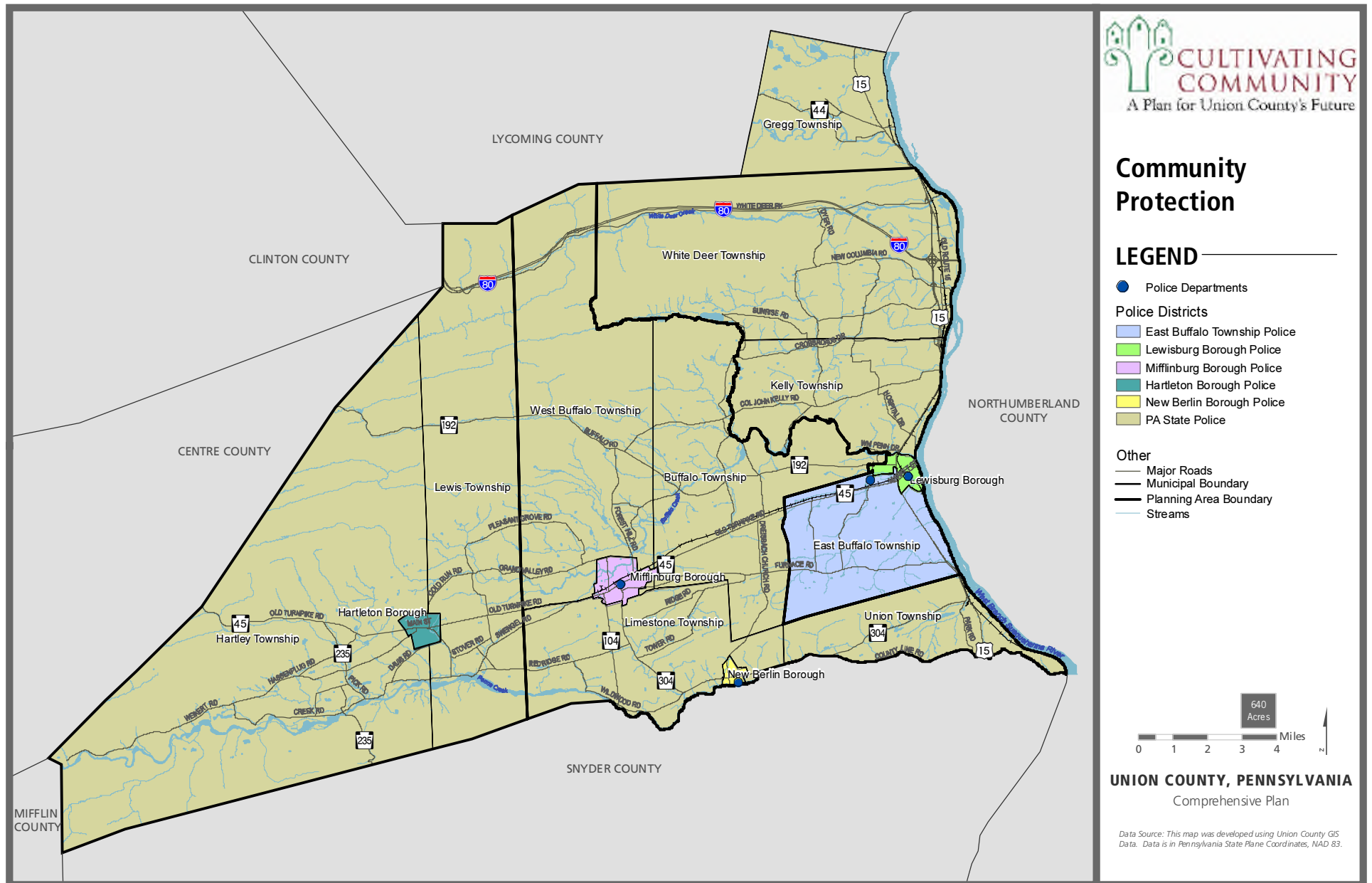


Figure 2-14

Fire and EMS Protection

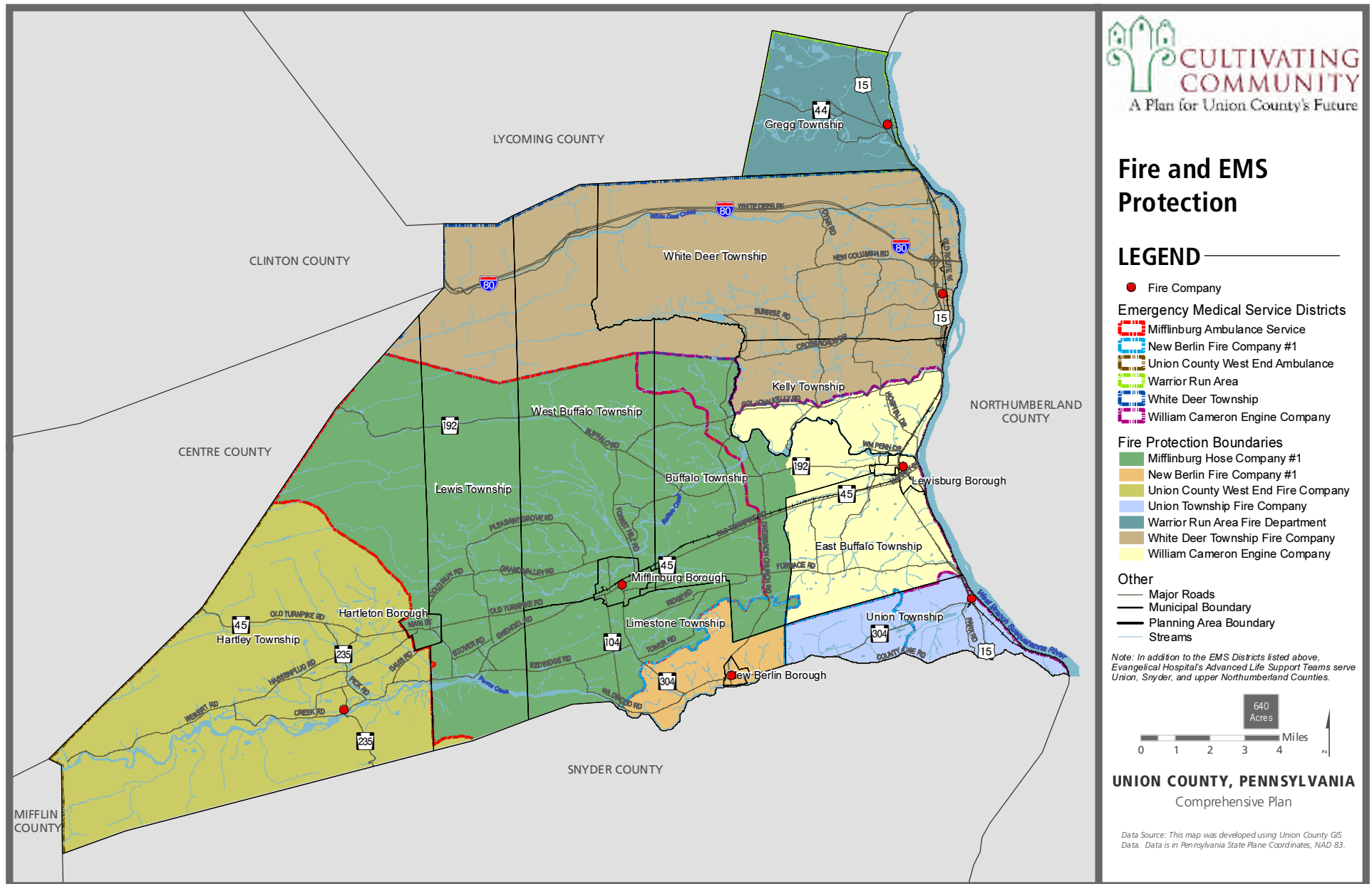
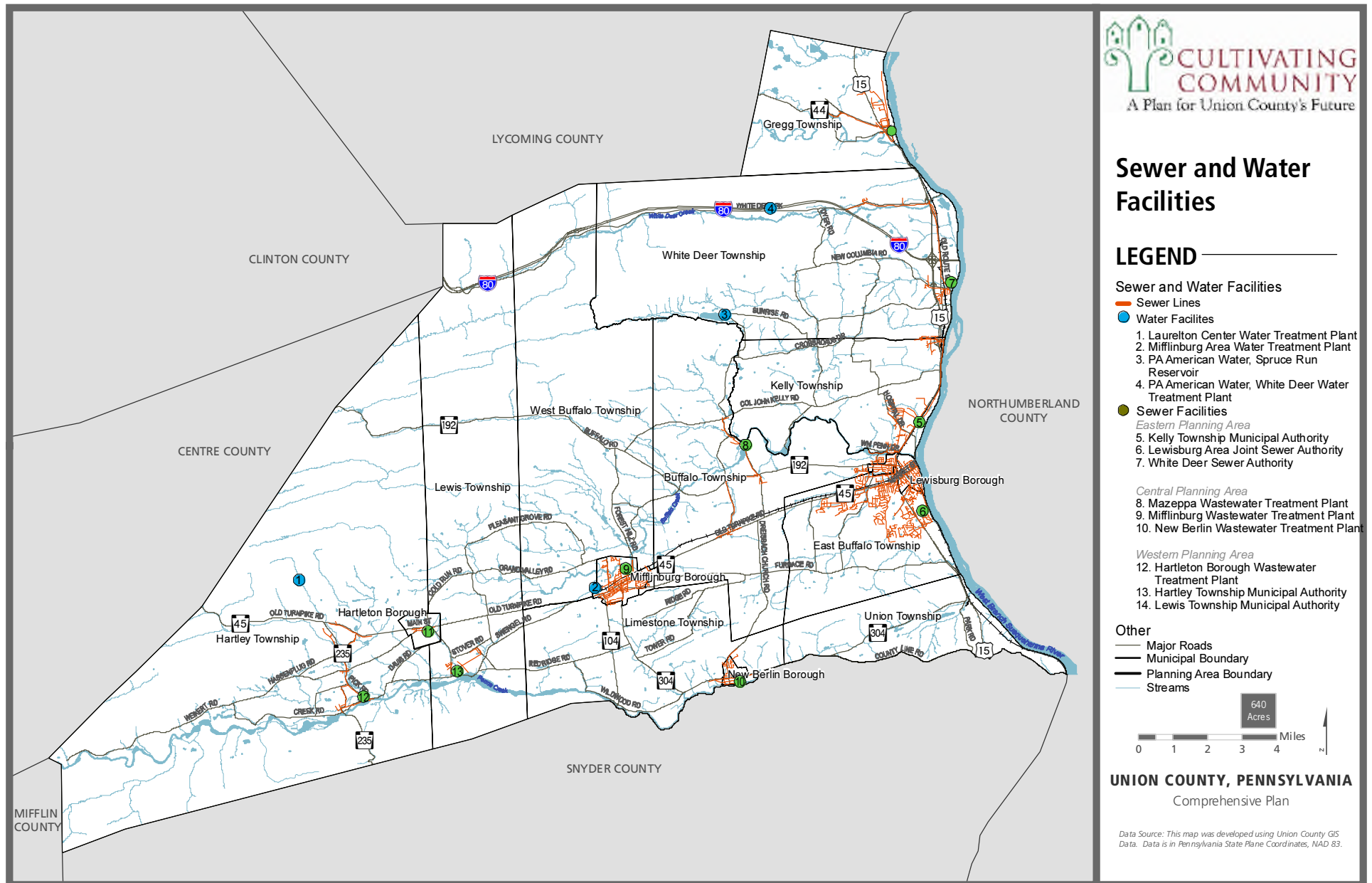


Figure 2-15
Sewer and Water Facilities



3. Sustainable Growth and Preservation Framework

3.1 Introduction

The Union County Comprehensive Plan is intended as a guide for decision-makers in managing future growth, promoting sustainable economic development, and preserving farmland, forestland, and other key resources. This chapter establishes the overall framework to achieve these basic goals. The sustainable growth and preservation framework will influence all aspects of the plan, such as housing, economic development, transportation, natural resources, community facilities, and infrastructure.

The sustainable growth and preservation framework was developed through an open planning process that has provided numerous opportunities for public input, including two series of public meetings that attracted nearly 400 participants, municipal officials' meetings, a random, statistically valid mail/telephone survey of County residents, stakeholder interviews and focus groups, "Meetings in a Box", and website comments. Top priorities for Union County identified through this process include:

- Develop a shared regional vision for Union County.
- Preserve farmland and agriculture.
- Balance growth and economic development with agricultural preservation.
- Create better ordinances and enhance zoning to contain sprawl and reduce land consumption.

- Build close to existing towns; support smart growth and traditional neighborhood development.
- Improve mobility options by installing trails, installing walkways, improving pedestrian, buggy, and bicycle safety, and providing public transportation alternatives.

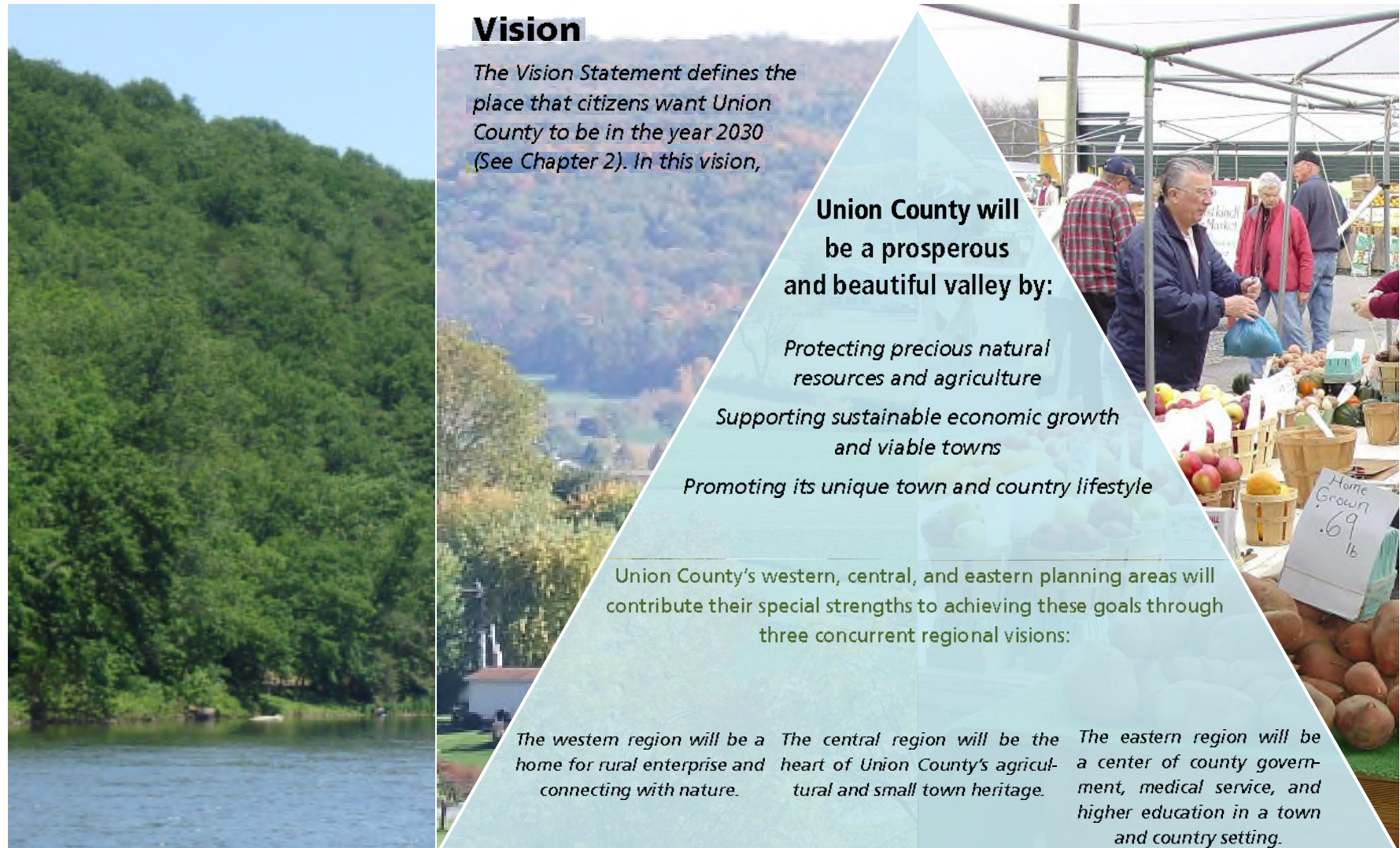
Based on this input, the consultant team, Plan Advisory Team (PAT), and Union County Planning Department worked together to prepare the sustainable growth and preservation framework. It consists of a Vision Statement, sustainable growth principles, and a growth management strategy.

This Vision Statement and supporting sustainable growth principles are presented in Section 3.2. A series of growth scenarios were then developed to highlight choices available to the County in managing projected future development to achieve the vision. Presented in Section 3.3, these scenarios include the baseline scenario – projected growth through 2050 assuming current development trends continue – and three alternatives to the baseline that direct future growth to be more consistent with the vision. The scenarios were evaluated by the PAT and a preferred scenario prepared for presentation and review at a second public meeting series. The results of these meetings indicate broad pub-



lic consensus regarding the vision and preferred growth scenario, which has been developed into the growth management framework presented in Section 3.4.

3.2 Vision Statement and Sustainable Growth Principles



Vision

The Vision Statement defines the place that citizens want Union County to be in the year 2030 (See Chapter 2). In this vision,

Union County will be a prosperous and beautiful valley by:

- Protecting precious natural resources and agriculture*
- Supporting sustainable economic growth and viable towns*
- Promoting its unique town and country lifestyle*

Union County's western, central, and eastern planning areas will contribute their special strengths to achieving these goals through three concurrent regional visions:

<i>The western region will be a home for rural enterprise and connecting with nature.</i>	<i>The central region will be the heart of Union County's agricultural and small town heritage.</i>	<i>The eastern region will be a center of county government, medical service, and higher education in a town and country setting.</i>
---	---	---

It is evident from input received throughout the planning process that citizens care deeply about Union County and wish to see its special attributes retained in the future, as reflected in the Vision Statement. Achieving this vision will require that growth be managed to conserve resources for future generations in accordance with the most commonly accepted definition of sustainable development:

...development that meets the needs of the present without compromising the ability of future generations to meet their own needs. (Brundtland Commission, 1987)

A series of principles have been defined to provide direction for achieving sustainable future growth in Union County. These principles address a primary theme of the Vision Statement – maintaining the County's town and country heritage – as well as two priority issues identified in the citizen survey – the need to conserve energy and control taxes.

These principles informed development of the growth scenarios and growth management framework presented in the next sections (3.3 and 3.4).

The sustainability principles are:

1. Focus new development in and around established communities

- Promote reinvestment in existing towns and villages
- Develop in proximity to existing infrastructure

2. Preserve rural resources

- Maintain prime farmland soils and limit the impact of new development on agriculture
- Preserve sensitive natural features and scenic views

3. Conserve energy

- Decrease fossil fuel consumption
- Reduce automobile use / promote transportation alternatives

4. Conserve fiscal resources

- Limit the negative impacts of new development on municipal budgets
- Limit the negative impacts of new development on community services (police, fire, EMS, etc.)



3.3 Growth Scenarios



To highlight choices in managing future growth, a baseline scenario and three alternative growth scenarios were created and reviewed with the PAT. The baseline scenario illustrates existing developed land (residential, commercial, institutional, etc.) and the land area needed to accommodate projected future residential growth through 2050 at an overall density of 1 net dwelling unit (DU)/acre, the average for new development in the County between 2001 and 2006. The average density accounts for land needed for road rights-of-way and utilities. In this scenario 60% of new residential development will occur next to existing towns and villages and 40% will occur in rural areas, reflecting the pattern of new development over the past six years.

Union County has a choice in how it will grow in the future. The purpose of developing three growth scenarios is to present distinct alternatives to the pattern of sprawl development represented by the baseline scenario, consistent with the direction set by the Vision Statement and sustainable growth principles. The alternatives are conceptual in nature but account for the general land area needed to accommodate projected future housing growth (which will consume the vast majority of land needed for future development in the County) and for the preservation of important resource areas. More detail on future land use is provided in Chapter 6 – Land Use.

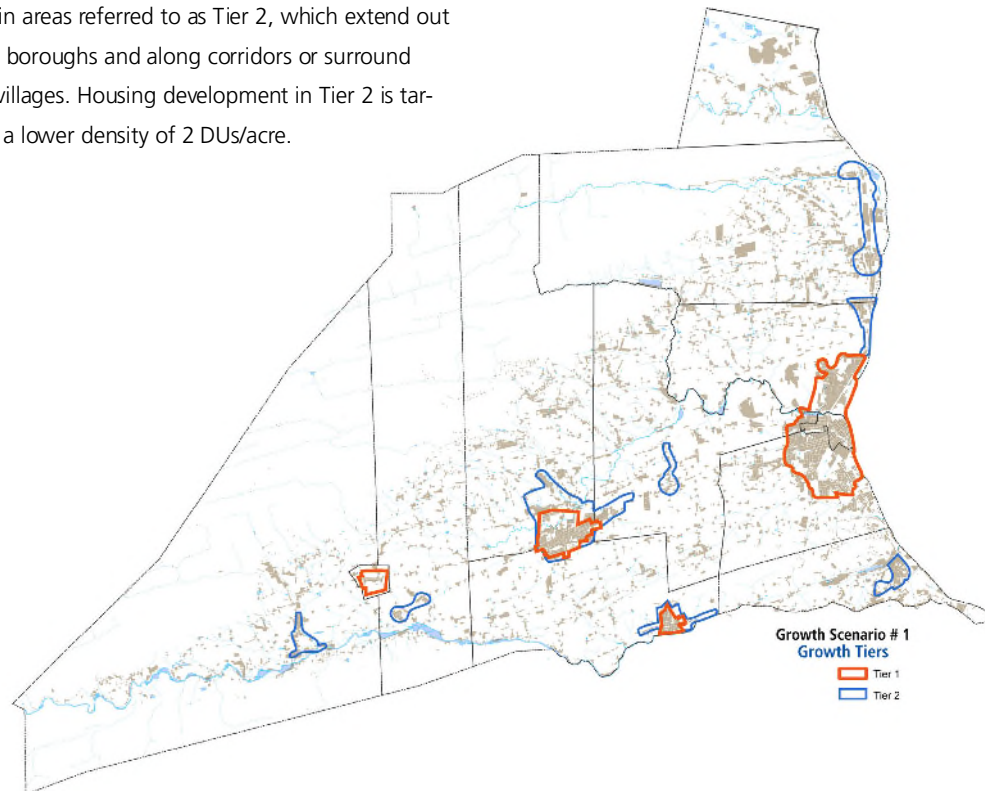
Each scenario shares the underlying premise that prime farmlands and major woodlands will be preserved from development, but is differentiated by its development pattern. In Scenario One, growth is focused in and around towns and villages closely following major roadways and existing utilities. Scenario Two directs new growth into compact town and village centers and places the most importance on a traditional pattern of development that limits expansion into prime farmland and natural areas. Scenario Three reduces the need to develop farmland and woodlands compared to the baseline scenario by locating some development in existing town and village centers and some development in rural neighborhoods.

Growth Scenario Assumptions

1. Each scenario illustrates the approximate amount of land needed to accommodate future growth projections through 2050. Currently developed land is excluded from this calculation.
2. Housing projections through 2050 were prepared by the Union County Planning Commission using the linear regression method.
3. Rural resource areas were delineated based on existing agricultural and woodland zoning districts and County GIS data.
4. All scenarios accommodate 80% of projected housing growth and all major non-agricultural commercial (retail and employment) development in designated growth areas. The remaining 20% of housing growth is assumed to occur outside of the growth areas.
5. Rights-of-way and utilities are accounted for in the growth area calculations of the land needed for new development. Land preserved as open space in rural neighborhoods is also accounted for in Scenario 3.

Scenario One: Growth Tiers. This scenario assumes that growth will continue to occur in and around existing towns and villages and follow public utilities and major roadways. It concentrates the majority of growth in areas referred to as Tier 1 and sets a target of 3.5 net DU/acres for residential growth. The four boroughs (Lewisburg, Mifflinburg, Hartleton, and New Berlin) are classified as Tier 1 areas. Lesser amounts of growth are focused in areas referred to as Tier 2, which extend out from the boroughs and along corridors or surround existing villages. Housing development in Tier 2 is targeted at a lower density of 2 DUs/acre.

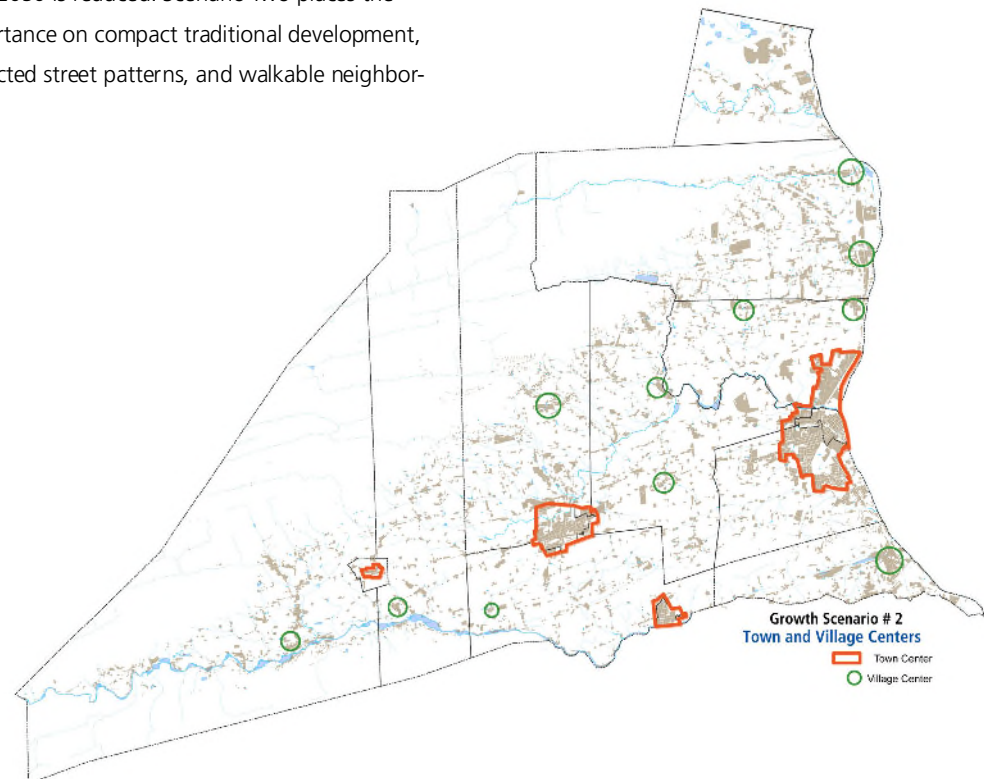
In addition to setting growth tiers, Scenario One designates Rural Resource Areas that include prime farmland, woodlands, and environmentally sensitive areas. It places importance on the efficient use of infrastructure but requires some development in agricultural areas. The map below illustrates this concept and the approximate amount of land area needed to accommodate future growth projections through 2050.





Scenario Two: Town and Village Centers. In Scenario Two, the focus is on directing the majority of new development into compact Town Centers at an average of 6 DU/acre and secondary amounts of growth into Village Centers at an average of 2.5 DU/acre. In this scenario, because densities are higher than in Scenario One, the land area needed to accommodate projected growth to 2050 is reduced. Scenario Two places the most importance on compact traditional development, interconnected street patterns, and walkable neighborhoods.

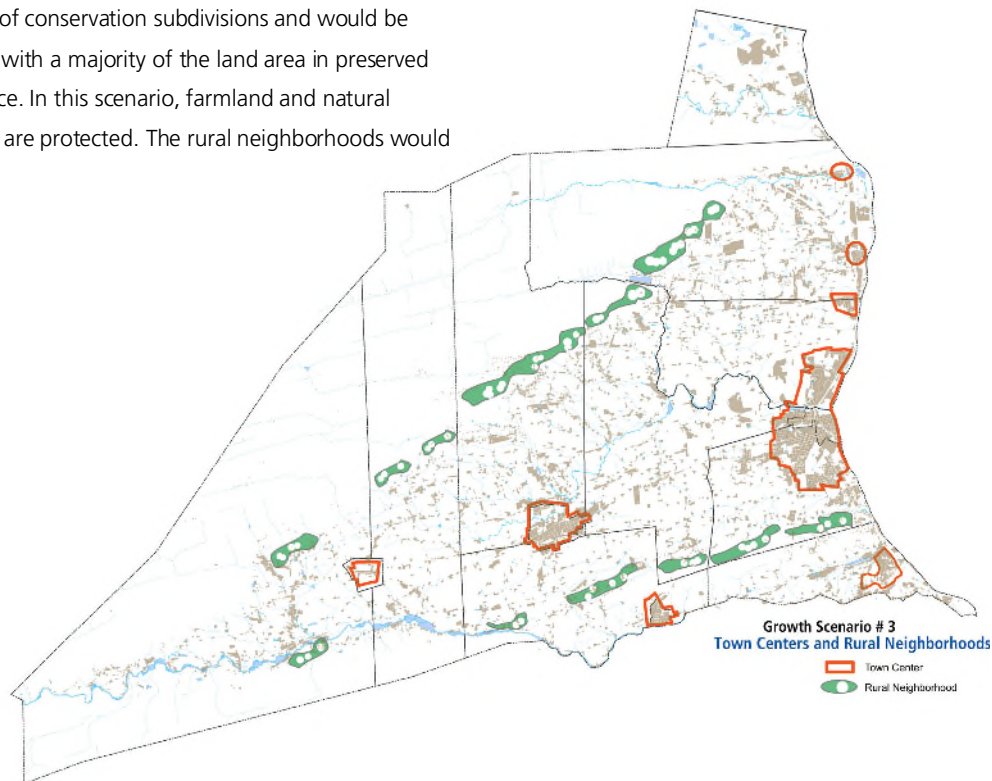
This scenario designates Rural Resource Areas, including prime farmland and woodlands, for preservation and would limit development of these areas. The map below illustrates this concept and the approximate amount of land area needed to accommodate future growth projections through 2050.



Scenario Three: Town Centers and Rural Neighborhoods. The third scenario directs relatively equal amounts of growth into either existing town centers or rural neighborhoods. Town center development would occur on available land in or adjacent to existing towns and villages at a target density of 3.5 DU/Acre.

Development in the rural neighborhoods would be in the form of conservation subdivisions and would be designed with a majority of the land area in preserved open space. In this scenario, farmland and natural resources are protected. The rural neighborhoods would

be located away from prime agricultural land and clustered in a manner that preserves woodlands and open space. While intended to preserve prime resources, rural neighborhoods would place demands on infrastructure and require increased public services given their location. The map below illustrates this concept and the approximate amount of land area needed to accommodate future growth projections through 2050.



3.4 Growth Management Strategy



The Growth Management Strategy was developed based on the vision and sustainable growth principles outlined in Section 3.2 and review of the growth scenarios described in Section 3.3 by the County's Plan Advisory Team (PAT) and the Multi-Municipal PATs. The results of a questionnaire administered at the second public meeting series confirmed that this strategy reflects a broad consensus of the Union County community. While most similar to Scenario Two, the framework includes elements of each of the alternatives. The Growth Management Strategy was developed using current population, land use, and zoning characteristics and trends as a reference point (see Chapter 2 for further detail).



The Growth Management Strategy is designed to support the sustainability principles set forth in Section 3.2. It is intended to provide a framework for development that efficiently uses existing infrastructure, adds economic value, and preserves the rich natural and agricultural resources of the County (see Figure 3-1 – Growth Management Framework).

The Growth Management Strategy includes two parallel components: a Town Policy and a Rural Policy. Similar to the growth scenarios, it sets targets of 80% of

new residential development to occur in growth areas designated in and around existing towns and villages and 20% to occur in rural areas. The following descriptions give an overview of the two policies; more detail is provided in Section 5.3 Future Land Use.

Town Policy

In the Town Policy growth is directed to Primary Growth Areas focused on the four existing boroughs: Hartleton in the Western Planning Area, Mifflinburg and New Berlin in the Central Planning Area, and Lewisburg in the Eastern Planning Area. In addition, a growth area was designated in Gregg Township by the US 15 South Comprehensive Plan and is shown on Figure 3-1 (Growth Management Strategy).

A Traditional Neighborhood Development (TND) pattern is encouraged for new and infill residential areas. In this pattern, neighborhoods are centered on a ¼ to ½ mile walking radius from a central place – such as a mixed use town center or school. The street network is connected to the town center and accessible to pedestrians, bikers, and motorists.

The Town Policy calls for all major new commercial (retail and employment) development to be located in

Primary Growth Areas or in designated employment centers. In keeping with TND principles, commercial areas should have a mixed-use core and include retail, office, and employment land uses. In some of the Primary Growth Areas, employment uses can be concentrated near highly accessible roadways and incorporate a mix of uses. Provision of parks and recreational space to serve residents' needs is another key component of the Town Policy. To create a clear edge between town and country, a "greenbelt" buffer is envisioned along the edge of the Primary Growth Area boundary. Farms preserved through the County's agricultural preservation program and conservation subdivisions that establish transitional open space between the town pattern and the surrounding agricultural landscape can be used to help delineate the buffer.



Example of Conservation Subdivision (© Randall J. Arendt. *Conservation Design for Subdivisions: A Practical Guide to Creating Open Space Networks*. (Washington, DC: Island Press, 1996).

Rural Policy

The Rural Policy calls for development located outside of Primary Growth Areas to be focused on villages (referred to as Secondary Growth Areas). Smaller in scale than towns, villages generally include a main street and a surrounding neighborhood. Growth in the villages is also envisioned to occur in a traditional neighborhood pattern, with a ¼ mile walking radius from the village center or crossroads. Village greens, bicycle paths, and other recreational uses are important components of the Rural Policy.

Development in the Secondary Growth Areas is similar in concept to the Primary Growth Areas, but is projected to occur at a lower density in villages than in towns. Additionally, a higher percentage of growth will be directed to the towns than to the villages.

A second component of the Rural Policy is the designation of Rural Resource Areas. These areas include agricultural and natural areas that should be preserved from development, due to their prime farmland soils or other natural factors such as presence of steep slopes or woodland habitat.



The third component of the Rural Policy is the creation of Rural Development Areas. As indicated above, a target of 20% of development which would otherwise occur outside of the Primary and Secondary Growth Areas is directed into Rural Development Areas, including Rural Neighborhoods, Rural Business Centers, and “on-farm” development.

In Rural Neighborhoods, conservation subdivision design is encouraged with the majority of the land area preserved as permanent open space. These neighborhoods should be developed away from Rural Resource Areas – particularly prime agricultural land – but will contribute to overall protection of sensitive environmental resources through the permanent dedication of open space. In most instances, the Rural Neighborhoods will not be connected to public sewer and water. Rural Business Centers are areas where agricultural support services, mining, or light industrial uses occur. Located near existing farms or industrial uses in rural areas, these areas should maintain separation between rural businesses that may create noise or noxious odors and residential neighborhoods.

On-farm development refers to activities that do not involve agricultural use of the land, including businesses unrelated to farming and creation of residential lots. These activities are addressed in other chapters of the Plan.

GROWTH MANAGEMENT STRATEGY SUMMARY

1. 80% of new residential development is targeted to occur in Primary and Secondary Growth Areas focused on existing towns (boroughs) and villages, respectively, and 20% is targeted to occur in rural areas (see Table 3.1).
2. All major new commercial (retail and employment) development is to be located in Primary Growth Areas or in designated employment centers.
3. Rural Resource Areas – agricultural lands, woodlands, and other natural resource areas – are designated for preservation outside of Primary and Secondary Growth Areas.
4. Traditional Neighborhood Development (TND) is the preferred form of development in Primary and Secondary Growth Areas.
5. Residential development in rural areas should be located away from Rural Resource Areas. Conservation subdivisions are the preferred form of development for these areas with the majority of the land area preserved as permanent open space.
6. Some commercial development (agricultural support services, mining, or light industry) is to occur in Rural Business Centers located near existing farms or industrial uses in rural areas.

Table 3.1 Growth Area Capacity by Planning Area

Planning Area	New housing units projected in planning area 2006-2050 ¹	80% of housing units projected ²	Total units that can be accommodated at target densities ³	Difference in units (columns 3 and 4) ⁴	Remaining developable acres ⁵
Eastern	3,653	2,922	4,880	+ 1,958	336 Acres
Central	3,854	3,083	3,361	+ 278	75 Acres
Western	1,178	942	1,591	+ 649	181 Acres
Union County (excludes Gregg Township)	8,685	6,948	9,832	+ 2,884	592 Acres

1. Housing units projected is the difference between total units projected in 2050 by the Union County Planning Commission using linear regression and the number of housing units estimated in 2006 for each planning area.
2. 80% of the new housing units projected in 2050.
3. Target densities are 6 DU/Acre in the Primary Growth Areas and 2.5 DU/Acre in the Secondary Growth Areas. Units that can be accommodated are calculated using developable land (excludes floodplain, steep slopes over 15%, and developed land) and multiplied by the target density. ROW and utilities are accounted for in the future acreage needs.
4. Difference between units that could be accommodated and units projected (this number does not assume area for non-residential uses, i.e. commercial, industrial, recreational land use).
5. Remaining acres that could be developed for non-residential uses (e.g., commercial, recreation, institutional, employment, etc.) in the growth areas.

Figure 3-1
Growth Management Strategy

