

Population

Union County population, as illustrated in Figure 1 has been increasing since the county’s formation 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 and is projected to increase through 2040.

Recent Population Growth

According to the U.S. Census, Union County experienced an 8% population increase (3,323 persons) between 2000 and 2010. This was tied for second highest increase in the entire 11-county SEDA-COG region trailing only Centre County which grew at a faster pace. For comparison the total population in Lycoming County decreased by 3.3% and Northumberland County remained the same during the period. Refer to Figure 2 for a comparison to other counties in the region.

Population Estimates and Projections

The US Census Bureau provides estimates of population by County, the most recent of which were for 2013 and it shows there has been a slight total population decline in Union County since 2010. However this is debatable given the continued growth in housing units and the long-term growth suggested by population projections prepared by the Pennsylvania State Data Center and the Union County Planning Commission. The Pennsylvania State Data Center projects Union County population to increase by 14.9% reaching 51,641 persons by 2040 while the Planning Commission calculations suggest an even greater growth rate of 23% between 2010 and 2040. Even using the most conservative figures population will grow significantly which will impact community resources including greenways and open space.

Figure 1 – Union County Population 1820 to 2040

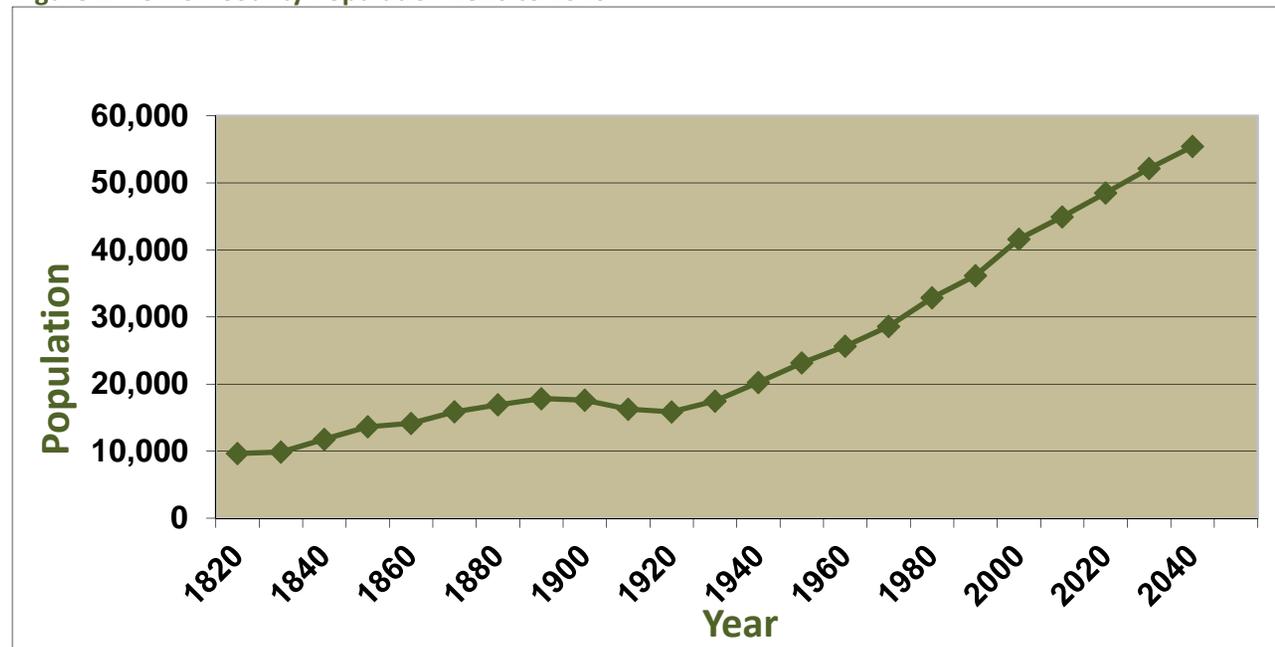
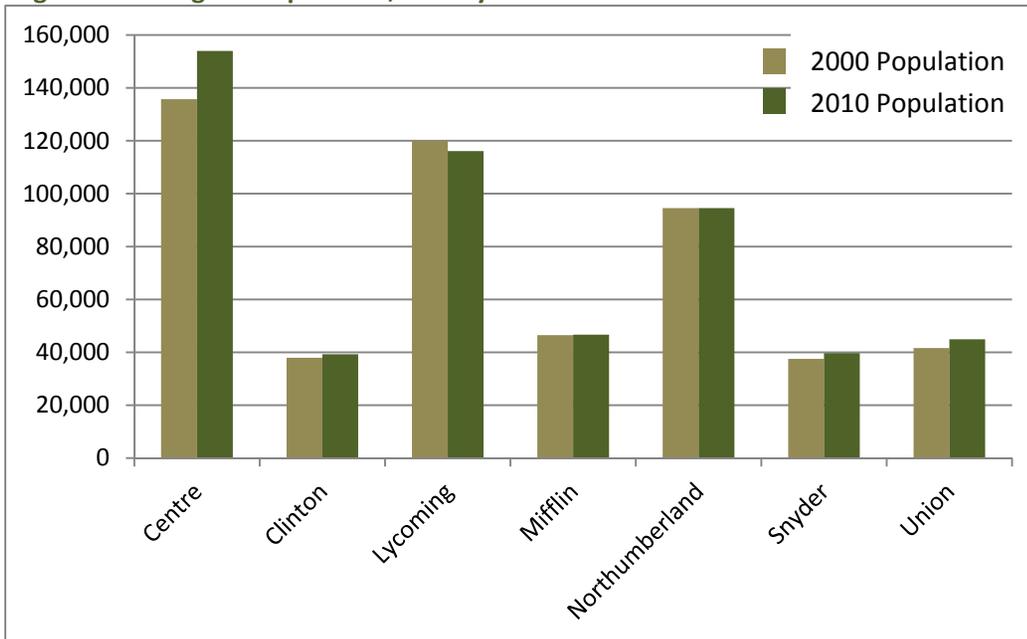


Figure 2 –Change in Population, County 2000-2010



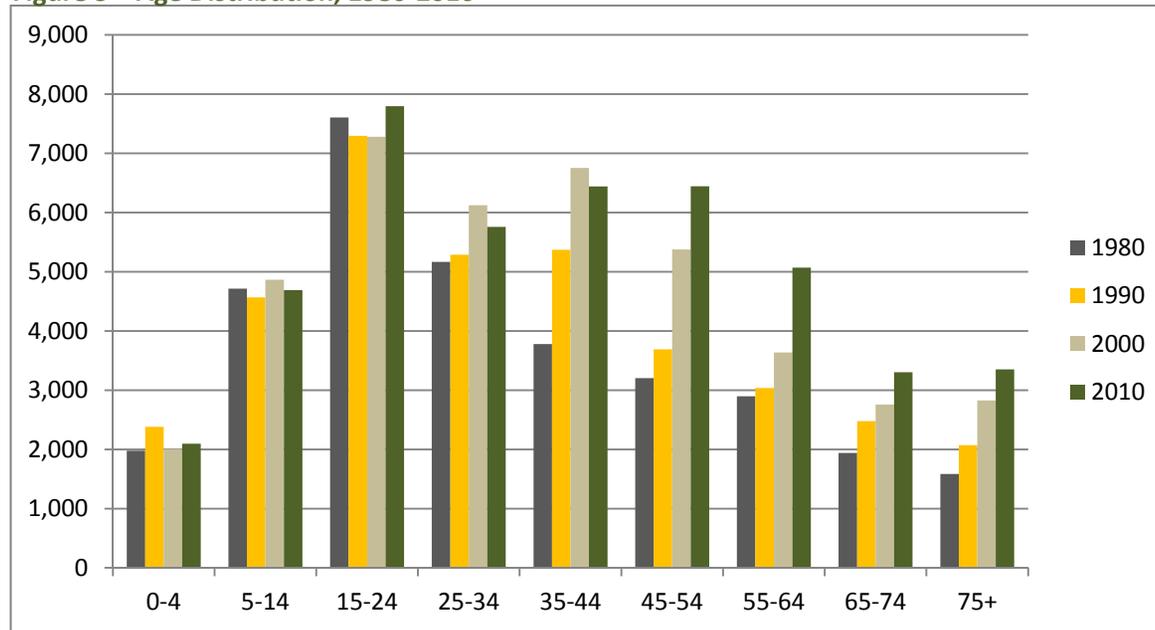
Municipal Change 2000 to 2010

The eastern area of Union County that includes East Buffalo, Kelly, Gregg, Union and White Deer Townships had the largest numerical and percentage increase in total population between 2000 and 2010. Kelly Township led the way with a 22% increase followed by East Buffalo Township at 11.9% and Union Township at 11.4%. It was not unexpected that the area along the US Route 15 corridor saw the most growth. The municipalities in the central part of the county including Buffalo, Limestone, and West Buffalo Townships experienced population increases. The westernmost municipalities of Lewis and Hartley Townships and Hartleton Borough also saw an increase, although this was the slowest growing area of the county. Incidentally of the four boroughs only Mifflinburg lost population between 2000 and 2010 while the other three had cumulative growth of 3.4%.

Population Age Groups

From 2000 to 2010 the county population, like most of Pennsylvania, continued to age. Median age increased from 35.8 to 38.5 during this span and the percentage of older residents increased while the number of younger residents as a percentage of overall population decreased. In 2000 49% of the population was under the age of 35 but by 2010 that dropped to 45%. Conversely in 2000 22% of residents were over age 55 but by 2010 this rose to 26% as more Baby Boomers began to call Union County home. This mimics statewide trends of lower fertility rates and fewer children per household which has multiple public policy implications including for greenways, open space, and public recreation. Figure 3 shows the current age distribution of the population and how the different age groups have changed over the past several decades. Since 1980 the number of residents over age 45 has increased by 88% while overall population during the same period rose by 37%.

Figure 3 – Age Distribution, 1980-2010



Housing

Change in Housing Units

At the time of the 2000 Census there were 14,684 housing units in Union County. By the 2010 Census this grew to 16,997, a 15.8% increase. The Census Bureau in 2012 estimated that 36 more housing units were gained since 2010 bringing the total number of units to 17,033 for an overall growth rate of 16% during the 12 year period. However it should be noted that local data shows zoning and/or building permits were issued for 110 new housing units during 2011 and 2012, three times the Census Bureau estimate.

It is important to highlight that from the 2000 to 2010 time period, housing units grew at a faster rate than population. This trend may be a result of multiple factors, such as an overall decrease in household size, growth in the percentage of older householders, and/or the shrinking percentage of younger households (25-35 year old age bracket) in the County. The Union County Planning Commission projects increases in housing units in all of the municipalities through 2040 with the largest increases in White Deer and East Buffalo Townships. The Planning Commission also projects significant housing growth in Buffalo, Kelly and West Buffalo Townships.

Housing Types

The predominant housing type within the county is the Single Family Dwelling unit which is estimated to be 70% of the housing stock according to the Census Bureau estimates. From 2010 to 2014 Union County Tax Assessment and GIS records indicate 204 residential units were constructed with 92% being single family dwellings and 8% multi-family. The growth in single family detached homes is expected to retract to reflect an aging population as demographics shifts continue, including the trend among millennials to resist home ownership.

Household Composition

In 2000 the US Census reported that 70% of all households were occupied by families and 25% were persons living alone. In 2010 family households dropped to 67% and single person households climbed to 28% with average household size also shrinking from 2.5 to 2.4 persons countywide, which continues a 20 year trend of smaller households.

Economy

Like the rest of Pennsylvania and the United States Union County found itself struggling from late 2007 to 2012 to survive and recover from the nation's worst economic recession since the Great Depression. While conditions proved challenging for residents, employers, and local governments the county was fortunate in that a number local economic sectors remained strong despite national and global struggles. Bucknell University, Evangelical Community Hospital, the Federal Prison System, Riverwoods, Buffalo Valley Lutheran Village, and local manufacturers helped minimize the impacts within the county. Additionally the mortgage foreclosure crisis did not rip through the county as it did in many areas.

Unemployment Rates

The Union County civilian unemployment rate stands at 5.8% according to the Pennsylvania Department of Labor and Industry which is equal to the state average. In recent years the county had one of the lowest unemployment rates in the region but now it is one of the highest. This could be due to the steady loss of good paying manufacturing jobs.

Employment Projections

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. The long-term projections show a growth of 5% or the addition of 289,090 jobs from 2010 to 2020.

The largest net growth in employment in the Central Pennsylvania area is projected to be in Health Care and Social Assistance (6,540), Construction (1,620) and Professional and Technical Services (1,160). The largest decrease in employment is projected to be in non-durable Manufacturing at -7.2%, Finance and Insurance at -5.3% and Government -4.3%.

Median Family & Household Income

According to the 2000 Census Union County had a median family income of \$47,538 and median household income of \$40,336. The American Community Survey 5-Year Estimates of 2012 indicate that median family income and median household income rose to \$55,964 and \$46,737 respectively. However after adjusting for inflation Union County incomes did not keep pace with inflation and residents actually lost ground economically. For example the \$55,964 median family income of 2012 had approximately the same purchasing power as \$41,974 in 2000. It should also be noted the number of people living in poverty increased to 12.6% by 2012, up from 8.8% in 2000.

Land Use & Zoning

Land Use

The land use patterns that are prevalent and valued in Union County – such as farmland, woodlands and open space dotted with small towns and rural villages – mirror the land use patterns in the Central Pennsylvania region. This general pattern of ridges and valleys distinguishes the region

from other places. While Pennsylvania ranks 45th of all states in population growth, it ranks 12th in land developed compared with all states. The long-term development pattern occurring in the region and state is fiscally and environmentally unsustainable.

The existing land use pattern in Union County is shaped by the County’s natural features and agricultural heritage. Figure 4 summarizes the amount of land within each major 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.

Another one percent of county land area is other open space and water resources leaving 10% of the county as development that is primarily in the form of existing towns and villages that include a mix of residential, commercial, institutional, and industrial land uses.

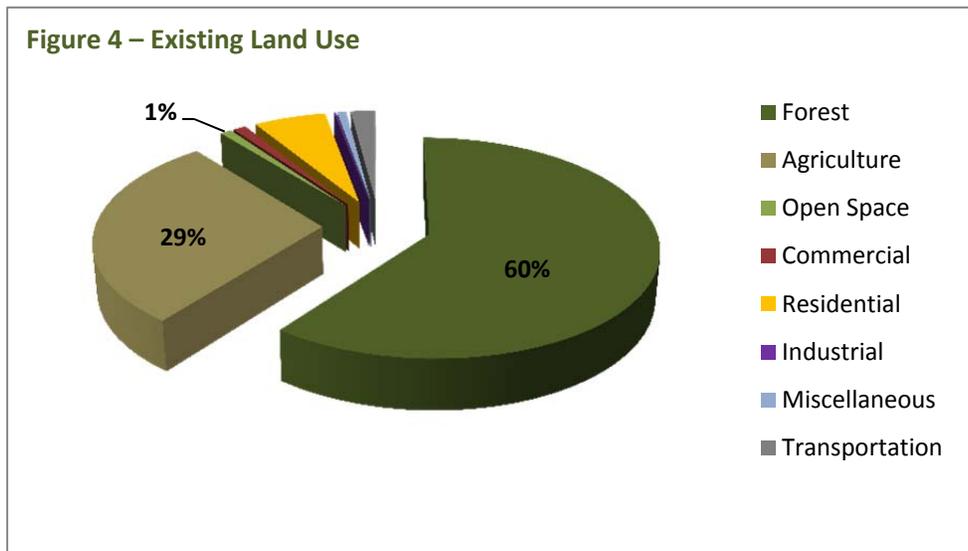
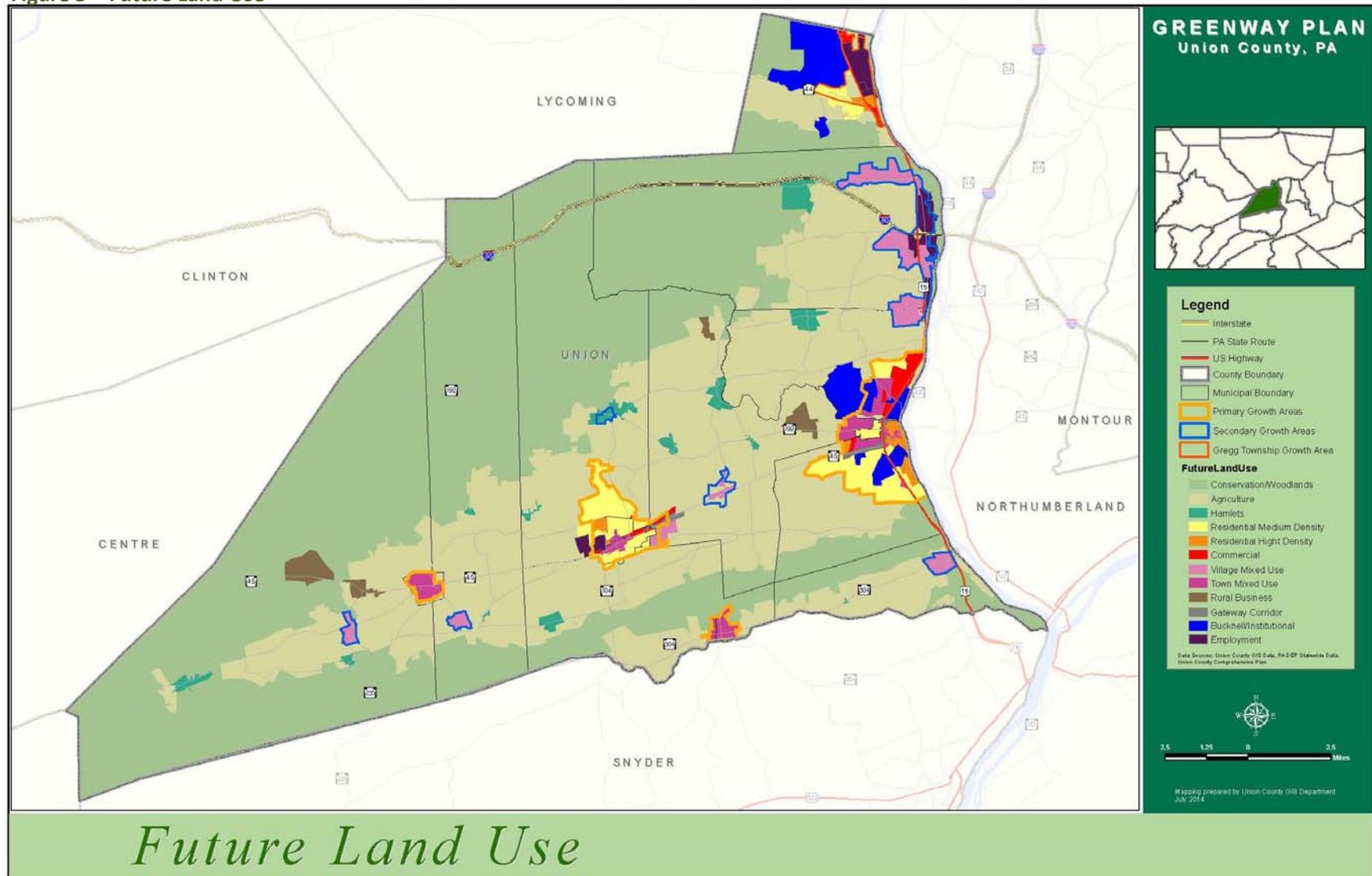


Figure 5 – Future Land Use



Over the past few decades as population growth has occurred in the County, residential, commercial, and employment-based land uses have spread outward from the traditional towns and villages, altering the historic 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. New non-residential development also has extended outside of the historic town centers in Mifflinburg and Lewisburg along Route 45 and Route 15.

The county and multi-municipal comprehensive planning process resulted in the designation of primary and secondary growth areas within the county (See Figure 5) and established a goal that 80% of new development would occur in those areas with the remaining 20% outside of the growth areas. A review of new commercial and residential development between 2010 and 2014 illustrates where recent development has occurred. Based on a visual analysis using GIS data, approximately 44% of this development has been within designated growth areas while 56% has occurred elsewhere, primarily in rural resource areas. It is clear this pattern is not meeting the targets established by the plan.

Zoning

Zoning regulations within Union County's municipalities have a major influence on land use in the County. A significant portion of the County (46%) is zoned for forestry/wildlife preservation with limited residential uses permitted. Further, about 27% 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, representing 8% of the county land area, do not have zoning.

Natural Resources

The county is rich in natural features, including prime agricultural soils, woodlands, high-quality streams, wildlife, and diverse vegetation. Topography consists of mountain ridges and rolling valleys with the valleys of high-quality agricultural soils stretching west from the Susquehanna River. 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 Woodland Resources

Agricultural soils both prime and of statewide importance, are present throughout the valleys of the county. These areas are predominantly working farms that include cropland and grazing for livestock and are enrolled in Agricultural Security Areas (ASAs). A growing number of farms are protected from development by agricultural easements through the county farmland preservation program which has preserved over 7,800 acres. The abundant agricultural resources contribute to the regional economy, culture, rural landscape, and identity of Union County. The number of farms owned by Plain Sect families continues to grow as does the trend of higher prices being paid for farmland. Several farms recently topped the \$1 million mark and brought \$10,000 to \$12,000 per acre at auction. Additionally agricultural economics have improved noticeably in the last five years as commodity prices are up and farmers have enjoyed some of the best return on investment in decades.

The county is somewhat unusual in that the majority of its land use is forest land. The Bald Eagle State Forest stretches across the northern and western 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, with 66,430 acres occupies the majority of public land within the County while a small piece of the Tiadaghton State Forest is in Gregg Township. Within the Bald Eagle State Forest there are three designated natural areas in the county (Halfway Run, The Hook, and Joyce Kilmer) and one wild area (White Mountain). In addition the Pennsylvania Game Commission owns and manages nearly 3,000 acres that varies from open farmland to woodland.

The vast woodlands in the county generally form a green ribbon around the farmland, and are the source of numerous assets, 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. Both agricultural and woodland assets have been identified as a high preservation priority by Union County citizens.

Water Resources

One of the largest continental rivers in the United States, the Susquehanna River's West Branch forms the eastern boundary of the county. Within the 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, Rapid Run, and White Deer Creek. Excellent fishing and recreation opportunities exist along many county streams. Portions of Rapid Run, Buffalo Creek, and Weikert Run are Class A Wild Trout Waters as classified by the Pennsylvania Fish and Boat Commission (PA FBC). 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 according to the PA FBC.

While many of the county's streams are in good to excellent condition, there are a number of impaired (non-attaining) streams 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. When a segment of a stream is not attaining any of its four uses, it is considered impaired. As of the most recent PA DEP assessment report in 2013 there were 53.5 miles of impaired stream segments with a significant proportion impaired in the Buffalo Creek and Penns Creek watersheds due to agricultural impacts. Unfortunately the number of impaired stream miles has grown by 38% or 15 additional miles of impairment since 2009 even though the county Conservation District and watershed associations for Buffalo and Penns Creek have been attempting to implement restoration projects with landowners aimed at reducing non-point source pollution on farms.

Flood Prone Areas & Wetlands

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), the Susquehanna River basin is one of the nation's most flood-prone areas. In total there are 11,034 acres, or 5% of the county land area, designated as 100-year floodplain by the Federal Emergency Management Agency (FEMA) and 2,152 acres of FEMA identified floodway throughout the county. In addition there are approximately another 1,500 acres of Pennsylvania regulated floodplain as measured 50 feet from the top of streambank where FEMA studies have not been done. In terms of percentage of total land area in the floodplain Lewisburg Borough by far leads the way with 72% of the borough having such designation; however, in terms of acreage White Deer Township has the most floodplain but it is only 8% of the municipal land area. With recent Federal reforms to the National Flood Insurance Program

the cost of flood insurance could be a deterrent to developing new and maintaining some existing floodplain properties, thus creating opportunities for restoration and open space conservation.

Wetlands, defined by the United States Fish and Wildlife Service (USFWS) as the transitional areas between terrestrial and aquatic systems that are periodically saturated by groundwater and can support swamps, marshes, or other similar hydrophytic vegetation, are found throughout the county, including within the demarcated floodplains. 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. The National Wetland Inventory (NWI) maps show 2,600 acres of wetlands in the county but some areas, particularly the northern portion of the county, have not been mapped and it is estimated that NWI maps in general underrepresent the actual wetland acreage.

Natural Areas Inventory

The Union County Natural Areas Inventory was originally prepared in 1993 and then 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. 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 original reports. The top five sites for the county are as follows:

- 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)

It should be noted that only two of the five involve private property (Shikellamy Bluffs and Seebold Quarry) and that many of the other priority areas listed in the inventory are on lands owned by the Commonwealth of Pennsylvania.

Land Conservation

The conservation of natural resources, farmland and open space is highly valued by county citizens. There are many conservation areas already in place, including the state forest, state parks, state game lands, and properties preserved through conservation easement by the Merrill W. Linn

Conservancy and the county agricultural preservation program. About 39% of the county is permanently protected, the bulk of it forest land, but even with 7,200 acres of farmland permanently protected the majority of it (over 52,000 acres) is not.

Outdoor Park & Recreation

The Bald Eagle State Forest and three state parks in the county provide excellent opportunities for outdoor recreation such as camping, fishing, hiking, horseback riding, hunting, mountain biking, nature viewing, and winter sports among others. The county also has many high quality streams that provide excellent angling opportunities like Buffalo Creek, Rapid Run, Spring Creek, Spruce Run, White Deer Creek and the nationally recognized Penns Creek. The West Branch Susquehanna River is technically in Northumberland County but is a great regional resource as well for water based recreation like boating, canoeing, kayaking, and fishing.

PA 10 Most Popular Outdoor Activities
Walking
Scenic Driving
Visiting Historic Sites
Picnicking
Swimming
Wildlife Viewing
Visiting Nature Centers
Night Sky Viewing
Bicycling
Bird Watching

The Merrill Linn Conservancy maintains four hiking trails; Dale’s Ridge Trail, Koons Trail, Shamokin Mountain Trail, and the Merrill Linn Trail, for public use while the Buffalo Valley Rail Trail, owned and operated by the Buffalo Valley Recreation Authority, provides a nine mile link between Mifflinburg and the Lewisburg area for non-motorized trail activities.

The municipal park system provides additional close to home recreation opportunities for citizens in Union County as nine of the 14 municipalities have local parks and recreation areas available. Local parks and facilities support more community based recreation such as swimming pools, athletic fields for baseball, softball and soccer, picnic areas, children’s playgrounds, skate parks, and general community green space. Fifty percent of people surveyed in the state indicate that they go to county or local parks the majority of the time.

Lewisburg Borough has the largest municipal park system with 54.5 acres followed by Hartley Township at 37.7 acres and Mifflinburg Borough with 24.5. However using national standards recommended by the National Recreation and Parks Association only Hartley Township has enough local parkland to meet resident needs based on current and projected population. All other municipalities currently have an acreage deficit which will grow over the next several decades without additional park acquisition and development as the population continues to expand. Countywide the deficit currently stands at 217 acres which could increase to 322 acres by 2040 (Federal prison were inmates factored out for this calculation).

There are also several privately owned parks and recreation areas that are either open to the public or to members. The Turtle Creek Dog Park in East Buffalo Township is one example of a privately owned park open to the public while churches and the sportsmen’s clubs have lands and facilities open to members and their guests. The school districts also have a variety of facilities but these are prioritized for team sports and other school functions.

According to data from a statewide survey Pennsylvanians still cite walking, scenic driving, visiting historic sites, and picnicking as the most popular outdoor recreation activities. Among youth, those under age 18, the top five are the same with the exception that visiting playgrounds made the list. The Outdoor Foundation and Outdoor Industry Association report data on participation trends and show kayak related recreation, triathlons, and

adventure racing trending upward while snowshoeing, snowboarding, skiing and rafting are showing decreasing participation. A report from the United States Forest Service notes that what people choose to do now for outdoor recreation is noticeably different from choices that were available to and made by previous generations as the variety and popularity of outdoor activities are more diverse now than at any time in the past.

Traditional outdoor activities like fishing and hunting are declining in participation based on license sales data from the US Fish and Wildlife Service. In Pennsylvania hunting is down 20% and fishing 17% since 1990 but other wildlife related recreation is becoming increasingly popular like wildlife and bird watching and nature photography. Nearly \$3 billion is spent annually in the state on wildlife related recreation.

Trends do point toward overall continued growth in outdoor recreation although changing demographics, lifestyles, technology, economic conditions, globalization, and altered physical landscapes will shape the participation rates and preferred activities. However most agree that public lands will remain critically important to supporting this expansion as private landowners remain concerned about limiting liability exposure.

Transportation

Given the rural nature of the county it is not unexpected that the majority of trips taken, whether for work commute or other purposes are vehicular. According to available data only 918 households in the county do not have a personal vehicle available. Many of these are likely Plain Sect households that rely on horse and buggy and bicycle as primary transport modes. Transportation to work is 87% by car with 8% walking and 1% by bicycle. However in Lewisburg Borough which is more densely developed and has an extensive sidewalk and street network the combined rate of walking and bicycling is near 30%.

Over the past five years it does appear that more people in the county are walking and bicycling both for health and recreation and as a form of transportation. This would mirror a national trend as the US Census Bureau in May 2014 released a report documenting that biking to work increased by 60% over the last decade in the United States. In Union County, according to PennDOT data, vehicle miles traveled (VMT) has decreased in recent years which is another indicator that people are driving less.

The Buffalo Valley Rail Trail opened in November 2011 and Bucknell University faculty and students began collecting data on use the following year. Automated and manual counts show that estimated trail use is 400 persons a day and approximately 80,000 to 100,000 unique visits annually. Based on interviews of trail users we also know people are using the trail for both recreation and transportation purposes.

The implication for greenway and open space planning is that county residents have demonstrated they will use greenways and trails if available. In fact the rail trail on average sees a higher volume of bikers and walkers on a daily basis than many of our rural roads see in traffic volume. Another point is greenways and open space can serve multiple purposes including integration of alternate transportation routes for non-motorized travelers.

Community Health

Union County is fortunate in 2014 to again be ranked as the healthiest county in Pennsylvania according to analysis conducted by the Robert Wood Johnson Foundation. Part of this can be attributed to the high quality health care available to residents in the region along with a variety of positive environmental and socio-economic factors. However even with such a high ranking there is still room for improvement as the diabetes rate (8.1%) and overall obesity rate (26.9%) are just under the state average while the adult obesity rate (30%) is the same as for Pennsylvania. Also the Pennsylvania Department of Health reports heart disease as the number one cause of county deaths.

The cost to employers, the economy, and society from these preventable health conditions is well documented as some sources estimate that more than \$7 billion a year is spent in the state on obesity related ailments. Additionally statewide it is reported that 65% of adults are overweight and 12% of children are now obese. Furthermore 26% of residents report they did not participate in any physical activity during the past month and 31% of children watch three hours or more of television on a school day. And if that is not enough researchers at the Trust for America's Health are projecting that by 2030 over 56% of Pennsylvanians will be obese and associated medial costs will increase by 9%.

Open space and greenways that offer publicly accessible areas for exercise such as parks and trails in proximity to where people live can contribute to healthier lifestyles and improved physical fitness.