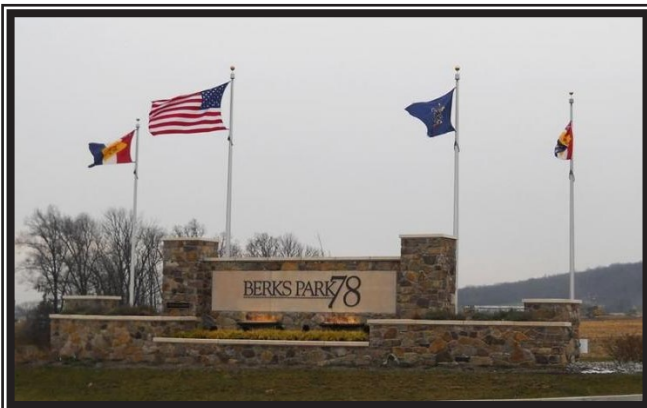


# *Berks County Comprehensive Plan 2030 Update*



Adopted January 23, 2020





RESOLUTION NO. 21-2020

A Resolution of the Board of Commissioners of Berks County adopting the *Berks County Comprehensive Plan – 2030 Update*.

**WHEREAS** the Pennsylvania Municipalities Planning Code (Act of 1968, P.L. 805, No. 247, as reenacted and amended) specifies that each County within the Commonwealth shall prepare and adopt a County Comprehensive Plan; and

**WHEREAS** the Berks County Planning Commission has prepared the Berks County Comprehensive Plan – 2030 Update (the “Plan”), which is intended to guide the future growth and development of Berks County; and

**WHEREAS**, this *Plan* contains goals and policies that seek to build livable communities, provide economic development, revitalizes our urban centers, and promote efficient use of infrastructure; and

**WHEREAS**, this *Plan* contains goals and policies that will encourage a land use pattern that is less consumptive and more protective of our natural resources; and

**WHEREAS**, this *Plan* contains goals and policies that seek to protect productive farmland and conserve environmentally sensitive natural resources; and

**WHEREAS**, the *Plan* recognizes that all levels of government, as well as the private and non-profit sectors play an important role in implementing the goals and policies of the comprehensive plan; and

**WHEREAS**, the *Plan* promotes continued intergovernmental cooperation and regional planning initiatives; and

**WHEREAS**, the Berks County Planning Commission has conducted a public survey, held public meetings and regional municipal workshops to obtain input into the development and review of the *Plan*; and

**WHEREAS**, the Berks County Planning Commission modified the draft *Plan* in light of public comments and a public meeting as follows:


1. Change to Future Land Use: Figure 18-Berks County Future Land Use and Figure 19-Hawk Mountain Region Future Land Use, and any and all related maps.
2. Modify landfill language in the first three paragraphs of Chapter 10G entitled Solid Waste.


**WHEREAS**, the Berks County Planning Commission transmitted the *Plan* to the Board of Commissioners of Berks County, and the Board of Commissioners conducted a public hearing on the Plan on January 23, 2020.

**NOW, THEREFORE BE IT RESOLVED** that the Board of Commissioners of Berks County hereby adopts the *Berks County Comprehensive Plan – 2030 Update* in accordance with the provisions of the Pennsylvania Municipalities Planning Code.

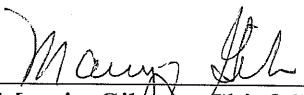
ADOPTED THIS 23rd DAY OF JANUARY, 2020.


COUNTY OF BERKS

  
Christian Y. Leinbach, Chair

  
Kevin S. Barnhardt, Commissioner

Attest:

  
Maryjo Gibson, Chief Clerk

  
Michael S. Rivera, Commissioner

**Berks County Planning Commission  
Resolution No. 01-2020**

**General Consistency Policy  
Of Municipal Comprehensive Plans and the  
County Comprehensive Plan**

**WHEREAS**, Section 301.4(a) of the Pennsylvania Municipalities Planning Code, as amended (the “MPC”), provides, “Municipal comprehensive plans which are adopted shall be generally consistent with the adopted county comprehensive plan”; and

**WHEREAS**, Section 301.4(b) of the MPC further provides, “County planning commissions shall publish advisory guidelines to promote general consistency with the adopted county comprehensive plan. These guidelines shall promote uniformity with respect to local planning and zoning terminology and common types of municipal land use regulations”; and

**WHEREAS**, the Berks County Planning Commission (“Commission”) serves as the official county planning commission for the County of Berks and in that capacity intends to comply with the requirements of the MPC; and

**WHEREAS**, the County of Berks has adopted the Berks County Comprehensive Plan Update 2030 (“County Comprehensive Plan”).

**NOW, THEREFORE BE IT RESOLVED**, and it is hereby resolved, that the Commission hereby adopts the following guidelines to promote general consistency with the County Comprehensive Plan.

**Advisory guidelines for determining general consistency with the  
County Comprehensive Plan**

In order to be considered generally consistent with the County Comprehensive Plan, municipal plans shall meet the following guidelines:

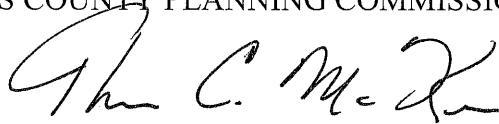
1. The amount, location, density, intensity, character and timing of future land uses proposed in the text, tables or maps in any municipal plan or amendment thereto shall be in accord with the recommendations in the County Comprehensive Plan pertaining to these features;
2. Goals and policies relating to natural and historic resources such as wetlands, water quality, woodlands, steep slopes, prime agricultural land, geology, flood plains, unique natural areas, historic sites and other historic, natural or environmental features shall be compatible with the goals, policies and maps in the County Comprehensive Plan or supplemental studies adopted by the Commission;
3. The housing element of the proposed municipal comprehensive plan or amendment thereto shall provide adequate housing opportunities to meet the needs of present and future residents in accord with guidelines pertaining to housing type and density as prescribed in the Future Land Use Plan within the County Comprehensive Plan;
4. The location, timing and character of transportation facilities, community facilities, water, sewer, stormwater management, and other utilities contained in applicable

- elements of the proposed municipal comprehensive plan or amendment(s) thereto shall be in accord with the policies of the County Comprehensive Plan, or supplemental studies adopted by the Commission;
5. The proposed municipal comprehensive plan or amendment shall provide for adequate opportunities for the growth and retention of future and existing businesses in accord with the economic policies of the County Comprehensive Plan including supplemental studies adopted by the Commission;
  6. The proposed municipal comprehensive plan or amendment shall provide for the protection of existing agricultural lands and agri-businesses that promote the long-term viability of the agricultural economy and minimize land use conflicts in agricultural areas as stated in the policies of the County Comprehensive Plan;
  7. The goals and policies in the proposed municipal plan or amendment thereto shall be in accord with the goals and policies of the County Comprehensive Plan. It is recognized that municipal plans may incorporate issues that are important locally but are not relevant to the goals and policies of the County Comprehensive Plan. Accordingly, the Commission will make a determination that such matters are of local concern only, on a case-by-case basis.
  8. Any finding of general consistency with the County Comprehensive Plan shall be based on finding consistency for each of the seven items listed above. In reviewing municipal plans for general consistency with the County Comprehensive Plan, the Commission staff is directed to specify those items that are inconsistent, missing, or incomplete and make recommendations to the local municipality on actions that should be taken to create consistency between the municipal and county plans. Should the planning staff determine that the County Comprehensive Plan should be updated, a recommendation will be made to the Commission and decisions will be made on a case-by-case basis. Upon determination that an update is necessary, the Commission will forward its recommendations to the Berks County Board of Commissioners for the amendment process as regulated by the MPC.
  9. Additionally, should a municipality submit an amendment to a municipal ordinance, regulation, subdivision or land development plan, or other project/plan to the Commission for review and the proposed amendment, plan or project is not consistent with the County Comprehensive Plan, a letter of inconsistency or non-support will be issued based upon this policy.

ADOPTED this 12<sup>th</sup> day of February, 2020.

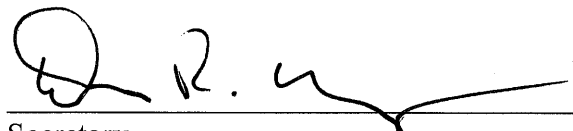
BERKS COUNTY PLANNING COMMISSION

By:



Chairman

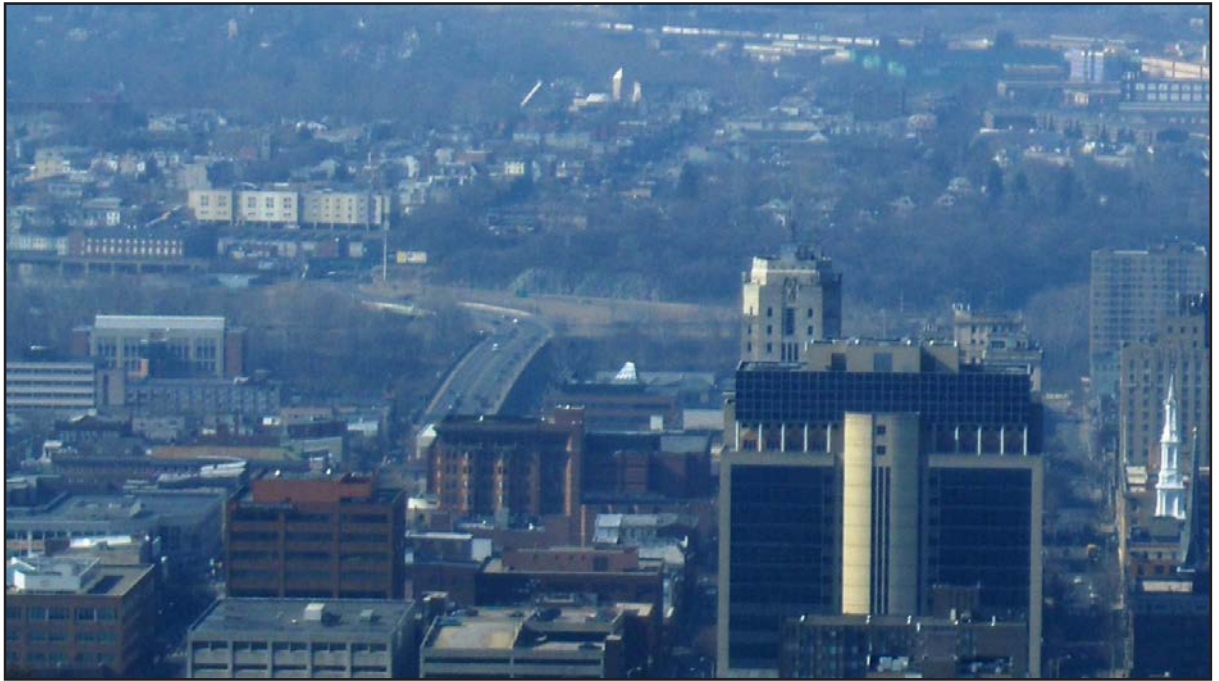
Attest:



Secretary



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## PREFACE

### A. Purpose

The purpose of the Berks County Comprehensive Plan update (the Plan) is to revise certain aspects of the Comprehensive Plan of 2013, and subsequent Plan documents. This revision serves as a set of recommendations rather than a regulatory document. It acts as a guide to growth and development and assists the Berks County Planning Commission in evaluating various development proposals and requests for financial assistance by local agencies to County, State, and Federal agencies. This Plan is a general guide and does not reflect in detail the location for all future development nor the precise boundary of such development. This revision is not a fixed or rigid document, but will be modified by the Commission when changes in the development of Berks County indicate the need to alter the Plan. The Plan, unless otherwise noted, supersedes the Comprehensive Plan of 2013. The target year for this Plan is 2030.

The Plan recognizes that the *Greenway, Parks and Recreation Plan of 2007* and the *Long Range Transportation Plan and the Transportation Improvement Plan of 2016* are also elements of the Berks County Comprehensive Plan.

### B. Vision Statement

Berks County will take full advantage of its geographic location along major roadways that connect Berks County to the Philadelphia Region, Lehigh Valley, New York/New Jersey Metro Region, Lancaster, and Baltimore/Washington Metro Region to create jobs and new economic opportunities.

Berks County will continue to protect its rich agricultural land and heritage, expand its parks and trail systems, and promote the settlement of its population in a reinvigorated City of Reading and in boroughs and townships planned to emphasize higher density and more intimate walking-biking friendly communities. The county and its local communities will work together to promote smart growth policies and practices that accomplish these end results.

Berks County will continue to expand its use of new technology to link the county's economic, educational, and social institutions and continue to emphasize its already recognized policy of cooperation among municipal and county government agencies, to create a highly interactive county environment that serves all of its citizens more efficiently.

### C. MPC Requirements

One of the most important powers of local government is the ability to plan for and to control land use. The *Pennsylvania Municipalities Planning Code* (MPC), otherwise known as Act 247 of 1968, P.L. 805, provides the enabling legislation to accomplish this task. Since its inception, the legislation has been amended numerous times. However, the first comprehensive update of the MPC was adopted in December of 1988. These amendments to the MPC, known as Act 170 of 1988, standardized procedures, changed time limits, definitions, jurisdictional matters and enforcement powers. Act 67 and 68 of 2000 made substantial amendments to the MPC. The amendments provided for increased intergovernmental cooperation, implementation agreements, and other new requirements for the County Comprehensive Plan. New land use designations such as "Designated Growth Areas", and "Rural Resource Areas" (called Rural Conservation Areas in Berks Vision) were added, as well as additional requirements for agriculture, water resources, mining, timbering, and historic preservation. Acts 67 and 68 provided increased authority to the County Comprehensive Plan by stressing consistency between county and municipal plans, and making it a key criteria for State funding eligibility. The MPC mandates that the comprehensive plan contains certain elements. The elements are as follows:

- A statement of objectives concerning the location, character and timing of future development, that may serve as a statement of community development objectives.
- A land use plan, now expanded to include a plan to meet the housing needs of present residents and those anticipated to reside in the future, in different dwelling types at appropriate densities for households of all income levels.
- A plan for community facilities and utilities.

## Preface

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- A plan for transportation
- A statement of the interrelationships among the various plan components.
- A discussion of short and long-range plan implementation strategies.
- A statement indicating the relationship to the plans in contiguous municipalities and to regional trends.
- A plan for the protection of natural and historic resources.
- Identify important natural resources and appropriate utilization of existing minerals.
- Identify current and proposed land uses which have a regional impact and significance.
- A plan for the preservation and enhancement of prime agricultural land.
- A plan for historic preservation.
- A plan for the reliable supply of water.

In preparing the comprehensive plan, the Act requires that the Planning Commission make careful surveys, studies and analyses of housing, demographic, economic characteristics and trends. The Commission must also consider amount, type, general location and interrelationships of the various land uses; general location and extent of transportation and community facilities; natural features affecting development; natural, historic and cultural resources; and the prospects for future growth in the county. Based on our files and data resources, with consideration of the community development objectives, the future plans for land use, transportation, and community facilities can be prepared.

### D. Smart Growth Principles

The policies and recommendations contained in this plan are guided by the principles of smart growth. Smart growth principles encourage well-planned development, with a range of housing and transportation choices that also preserves community resources, farmland and open space.

At the community level, smart growth principles provide for sound design and redevelopment practices that result in communities that are enjoyable places to live and work. On a regional level, smart growth fosters a more efficient use of a land by encouraging a larger share of regional growth to occur within the urbanized areas and areas already serviced by infrastructure. Smart growth reduces the percentage of growth on open areas, farmland, and on environmentally sensitive areas.

As a founding member of the Smart Growth Alliance of Berks County, the Planning Commission has worked hard to instill the principles of smart growth into the plans and actions of a range of community groups and trade associations throughout Berks County. Our smart growth principles are as follows:

- Create a Range of Housing Opportunities and Choices – Providing quality housing for all households is a key component of a healthy community.
- Create Walkable Neighborhoods – Walkable communities are desirable places to live and work, and therefore a key component of smart growth.
- Encourage Community and Stakeholder Collaboration – Growth can create great places to live, work, and play-if it follows a community’s own sense of how and where it wants to grow.
- Foster Distinctive, Attractive Communities with a Strong Sense of Place – Smart growth encourages communities to craft a vision and set standards for designs and construction that blend with community architecture and creates an authentic environment.

- **Make Development Decisions Predictable, Fair and Cost Effective** – For a community to be successful in implementing smart growth, it must be embraced by the private sector.
- **Mix Land Uses** – Smart growth supports the integration of land uses to provide jobs and services that are necessary for a quality community.
- **Preserve Open Space, Farmland, Natural Beauty and Critical Environmental Areas** – Open space preservation complements communities and local economies by preserving sensitive areas, protecting water supplies, air quality, and food supply.
- **Provide a Variety of Transportation Choices** – High quality communities provide residents with a range of transportation choices to connect home, work and shopping.
- **Strengthen and Direct Development Towards Existing Communities** – Smart growth directs development towards existing communities already served by infrastructure, seeking to use resources that existing neighborhoods offer, and conserve open space and irreplaceable natural resources on the urban fringe.
- **Take Advantage of Compact Building Design** – Smart growth provides a means for communities to incorporate more compact building design as an alternative to conventional, land consumptive development.

If we use these principles as a guide, our communities will reinforce our distinct historic, agricultural, recreational and economic values. Well planned communities will consume less land, attract new businesses and skilled workers, provide affordable housing, and lead to more community participation and civic life.





# Chapter 1 - Introduction



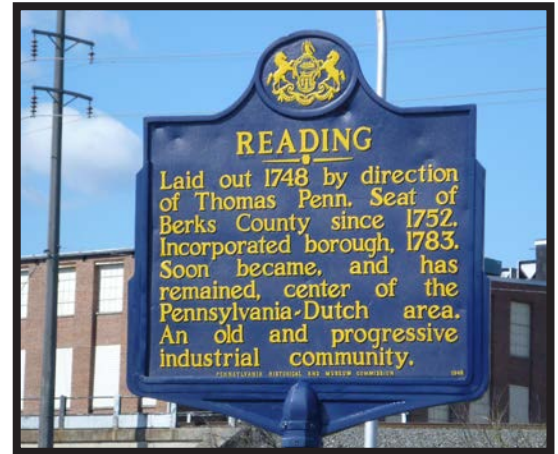
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GOVERNMENT (COUNTY AND LOCAL) .....	10



## INTRODUCTION

### A. History

At the start of the Eighteenth Century, the mild climate, fertile soil, and the Schuylkill River combined to attract European immigrants to Berks County. While Berks County was inhabited by the Lenni Lenape, the area was settled by Swedes in 1701, followed by Germans, English, Welsh, and French Huguenots. Most of the county's eastern section was settled by people migrating inland from the Philadelphia area. In 1752, Berks County was incorporated from parts of Lancaster, Chester, and Philadelphia Counties. In 1772, Berks gave up territory for the formation of Northumberland County, and again in 1811, for the formation of Schuylkill County. Berks County was named for Berkshire, England, home of William Penn's family. Likewise, Reading was named after the main town in Berkshire, England. In 1790, the first Federal Census of the county reported 30,189 residents, 22,345 of whom were of German descent. Reading Town, the only sizeable settlement, had 2,225 residents.



Reading's early growth was largely influenced by the Schuylkill River which was navigable by flat-bottom boats that carried products, mainly agricultural, to the markets of Philadelphia, and later by the county's early lead in steam railroad growth. Reading's industrial complex attracted a considerable amount of immigrant labor during the late 19th and early 20th centuries, an era of great industrial growth for Berks County. At one time, the county was the largest manufacturer of full-fashioned hosiery in the world.

Since 1900, the county's population has nearly tripled, with concentrated development in the City, its urban area, and the larger rural boroughs. In 1951, Berks County became a third class county. The development pattern reflects continued suburban growth outward from Reading, as well as development in rural land beyond the suburban areas in the direction of Philadelphia, Allentown, and Lancaster. Growth trends in the past several decades indicate that the county should continue to grow at a moderate rate. It is the county's goal to promote a more consolidated development pattern instead of the scattered pattern occurring now. New growth is encouraged to occur within natural service areas of existing and proposed public water and sewer systems, where higher densities and greater variety can be provided.

Today, the City of Reading is still the county's largest municipality, with a 2015 US Census American Community Survey (ACS) estimate of 87,879 persons. Other municipalities include 28 boroughs (not including a small part of Adamstown Borough that extends into Berks) and 44 townships. About half of these boroughs lie within the Reading Urbanized Area, and the other half are spread throughout the county. On July 1, 2016, Strausstown Borough merged with Upper Tulpehocken Township and as of 2018, there are now 27 boroughs.

### B. Location and Setting

Berks County is an urban area consisting of 415,271 persons situated in southeastern Pennsylvania. The county is a diamond-shaped area of 864 square miles (Figure 2.1). The county seat, which is the City of Reading, is 56 miles northwest of Philadelphia. Berks County is bordered by Schuylkill County to the north, to the west by Lebanon and Lancaster Counties, to the east by Lehigh County, and to the south by Chester and Montgomery Counties. Despite its closeness to the Philadelphia Metropolitan Area, it is considered part of Pennsylvania's Dutch Country (Berks County Pennsylvania, Economic Resource Profile). Through numerous Federal and State highways and turnpikes, the county is linked to other major cities such as New York (125 miles) and Baltimore (97 miles). Sections of the Blue and South Mountains, which are ridges of the Appalachian Mountain chain, form its northern and southern boundaries with elevations averaging about 640 feet above sea level. The mean annual temperature is 52.3 degrees Fahrenheit. The average rainfall is 47.2 inches and the average annual snowfall is 21.3 inches.

### Physical Geography

Berks County is rich in historical, scenic and natural resources. These assets are a result of the diverse physiographic regions that are present in the area, as visible on the Physiographic Provinces Map (Figure 02). These regions support a variety of topography, soils, vegetation, wildlife, water resources, and scenery.

## **Chapter 1 - Introduction**

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Sections of the Blue and South Mountains, which are ridges of the Appalachian Mountain chain, form Berks County's northern and southern boundaries. The Blue Mountain, also known as the Kittatinny Ridge, forms the northern boundary of the County reaching elevations over 1,600 feet above sea level. This ridgeline is pierced by the Schuylkill River and Route 61 at Schuylkill Gap above Hamburg and is crossed by only four other roads. The South Mountain ridge reaches elevations between 800 and 1200 feet above sea level. It enters the county from the west, south of U.S. 422, and extends in two directions through Berks County. The primary ridge encircles Reading, including Neversink Mountain and Mount Penn and then extends northeast into Lehigh County, forming the Reading Prong. The secondary ridge extends southeast along the south side of the Schuylkill River. Extending the entire width of the county, between the Blue and South Mountains, is the Great Valley Region. This limestone section is predominantly rolling farmland, containing rich agricultural soil with elevations of 200 – 500 feet above sea level. The shale section of the Great Valley, occupying higher elevations between 400 – 800 feet above sea level, is located next to the Blue Mountain. The Lowlands are located in the southernmost part of the county and are comprised of lower mountains and rolling hills. It is, however, crossed by the Schuylkill River as it flows toward the Delaware River.

### **C. Government (County and Local)**

#### **County:**

Berks County is made up 72 municipalities. Each municipal entity has jurisdiction over its own area within the county. There is no formal county oversight with regards to general government. This is the typical arrangement throughout the Commonwealth of PA. County government provides the residents of Berks County with different types of assistance on a daily basis. These can include law enforcement, and judicial administration. Elections are also handled at the county level. Berks County Government also oversees property assessment, and redevelopment efforts. Some of the welfare functions that are performed by Berks County Government include caring for those with mental handicaps as well as physical handicaps, care for those aged and in the Berks County Nursing Facility, local college assistance, and lastly, support of the Berks County Library System.

Berks County is at the leading edge of the Commonwealth in regards to joint planning. It has one of the highest percentages of municipalities involved in joint planning. The benefits of this practice have been supported by recent revisions to the PA MPC that promote joint planning.

#### **Local:**

Berks County has four types of local government present within its boundaries. Reading is the only city in Berks County. It is a Third Class city and has a population of 87,879 persons. This municipality has a mayor that is elected as well as a city council. It provides a full range of services to its residents including police and fire protection, as well as garbage collection. Virtually all of Reading has public water and sewer service.

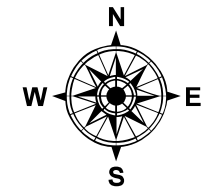
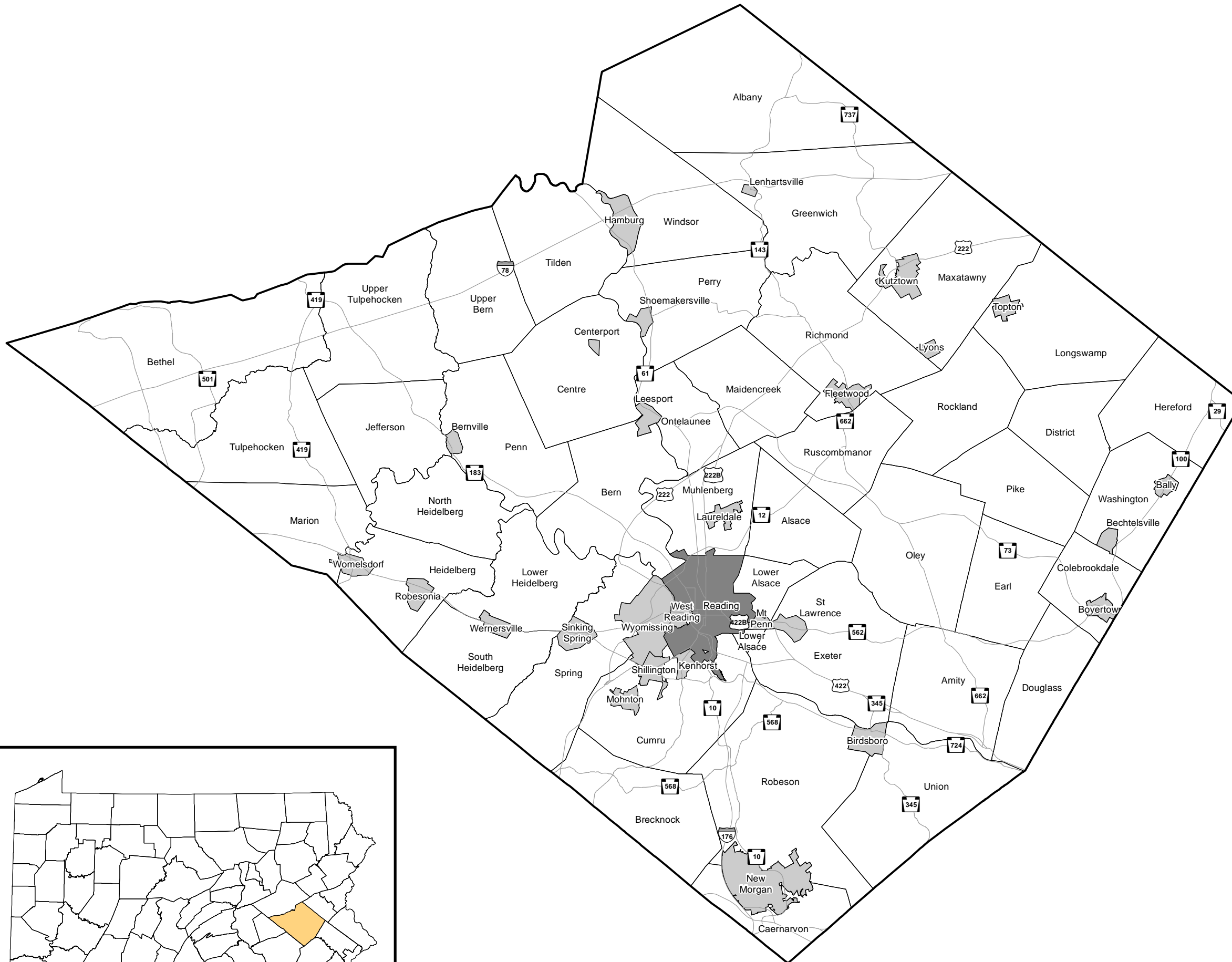
The majority of local governments within Berks County are townships. Nearly all of these townships are of the Second Class. The exceptions to these are Muhlenberg, Colebrookdale and Cumru Townships which are First Class townships. Many townships provide police and fire protection. In many cases, these services are handled by multi municipal organizations that have jurisdiction in whatever municipalities are involved in the agreement.

The last type of governmental entity within Berks is the borough. These are not classified like townships and cities are classified. These typically have a mayor and a borough council that is elected as opposed to a board of supervisors like a township has. Like the townships, it is typical for each borough to provide for basic police and fire protection. As stated earlier, there are multi municipal agreements to provide these services between neighboring townships and boroughs.

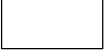


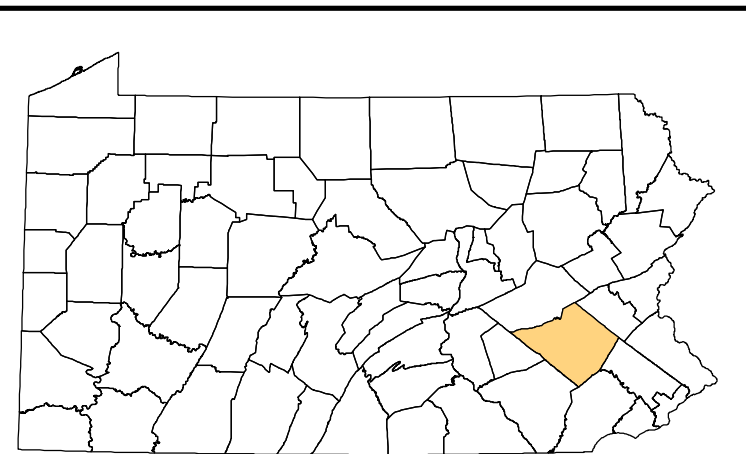
Berks County Comprehensive Plan Update  
Adopted: January 23, 2020

# Municipal Boundaries Berks County, Pennsylvania



## Legend

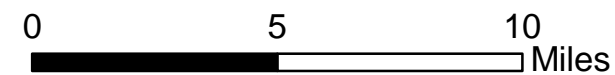
-  Berks County Boundary
-  Township
-  Borough
-  City
-  Major Roads



Source: Berks County Planning Commission, Berks County GIS, Berks County Mapping, Berks County Department of Emergency Services

Published by the Berks County Planning Commission

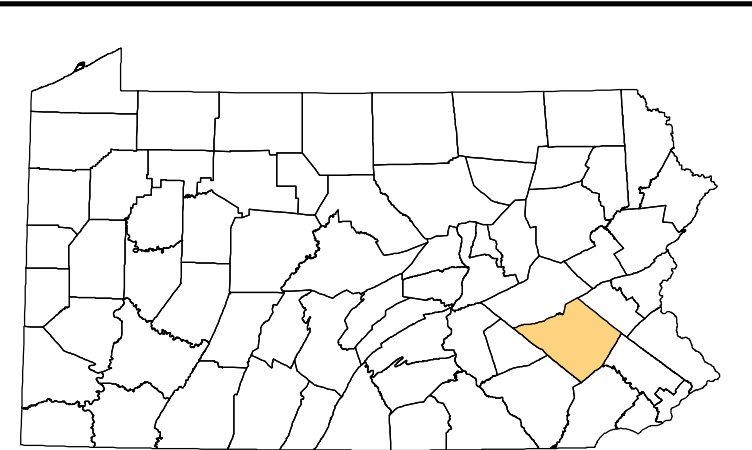
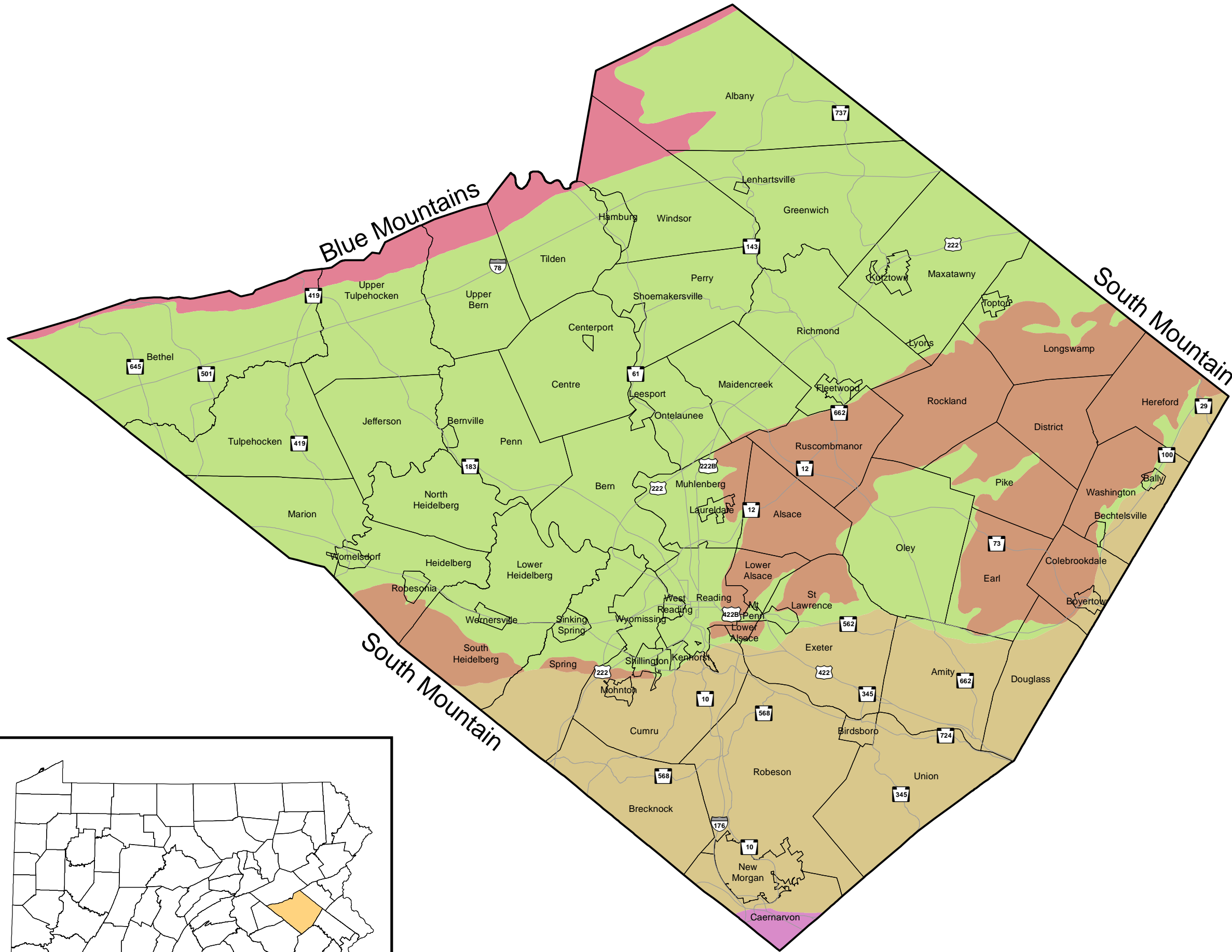
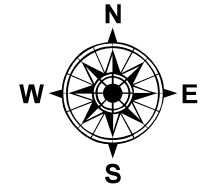
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Berks County Comprehensive Plan Update  
Adopted: January 23, 2020

# Physiographic Provinces Berks County, Pennsylvania



### Legend

- Berks County Boundary
- Municipal Boundaries
- Major Roads

### Ridge and Valley Province

- Appalachian Mountain Section
- Great Valley Section

### New England Province

- Reading Prong Section

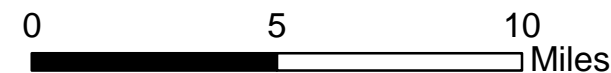
### Piedmont Province

- Gettysburg-Newark Lowland Section
- Piedmont Lowland Section

Source: Berks County Planning Commission, Berks County GIS, Berks County Mapping, Pennsylvania Bureau of Topographic and Geologic Survey, Department of Conservation and Natural Resources

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# Chapter 2 - Demographics



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## DEMOGRAPHICS

A concise analysis of population data is of paramount importance to any comprehensive plan since most of the Plan's elements, such as the Future Land Use Plan and Community Facilities, are predicated on population assumptions.

### A. Historic Population

The table below illustrates the county's population growth since 1900. From 1900 to 2010, the county's total population has more than doubled. With the end of World War II and the beginning of economic resurgence, the number of new families and births rose tremendously. This was the beginning of a period popularly referred to as the Baby Boom. During the 1970's it became apparent that the children of the Baby Boom intended to postpone marriage, childbearing or both in order to pursue educational and career goals. Demographically, the 1970's are referred to as the Baby Bust and generated its own set of consequences such as anticipated labor shortages and concern for the growing percentage of elderly within the total population.

Historic Total Population, Berks County: 1900-2015			
Year	Population	Increase	% Change
1900	159,615	-----	-----
1910	183,222	23,607	9.6
1920	200,854	17,632	9.6
1930	231,717	30,863	15.4
1940	241,884	10,167	4.4
1950	255,740	13,856	5.7
1960	275,414	19,674	7.7
1970	296,382	20,964	7.6
1980	312,509	16,131	5.4
1990	336,523	21,012	6.2
2000	373,638	37,115	9.9
2010	411,442	37,504	10.0
2015 Estimate	415,271 (A)	3,829	0.9

Note: (A) 2015 Estimate, Compiled by U.S. Bureau of the Census, American Community Survey (ACS); includes residual population not specifically counted in the estimate

Source: U.S. Bureau of the Census, Decennial Census counts and 2015 1-year ACS

### B. Regional Comparison

In order to understand the growth patterns of the county, it is necessary to compare growth rates and trends with counties surrounding Berks and the State of Pennsylvania as a whole. The table below shows the overall population changes that have occurred within the region since 1980. As shown, the counties adjacent to and surrounding Berks County grew from 2,176,427 persons in 1980 to an estimated 2,929,440 in 2015, an increase of 34.6 percent.

Total Population of Surrounding Counties: 1980-2015						
County	1980	1990	2000	2010	2015 Estimate	Percent Change, 1980 – 2010
Berks	312,509	336,523	373,638	411,442	415,271	32.9
Chester	316,660	376,396	433,501	498,886	515,939	62.9
Lancaster	362,346	422,822	570,658	519,445	536,624	48.1
Lebanon	108,582	113,744	120,327	133,568	137,067	26.2
Lehigh	272,349	291,130	312,090	349,497	360,685	32.4
Montgomery	643,621	678,111	750,097	799,874	819,264	27.3
Schuylkill	160,360	152,585	150,336	148,289	144,590	-9.8

Source: U.S. Bureau of the Census, Decennial Census counts and 2015 1-year ACS

## Chapter 2 - Demographics

The table above shows counties in our region and their respective growth rates. As shown, all of the counties along the southern and eastern boundaries of Berks are areas of high population growth. The table illustrates, initially, that the outward growth from the Philadelphia and Baltimore areas has played a role in the growth trends of Berks County. However, in reviewing the estimated growth of only the last five years (2010-2015), the large growth trends in Berks have shown a decline, to the point where Berks has seen only 0.9 percent growth in a span of time when, historically, between 3 and 5 percent were common. These issues have been reviewed and, while the annual trends seem to be consistent since approximately 2006, no definitive conclusions can be drawn as to what sparked this decline in growth. Counties surrounding Berks (except Schuylkill) appear to still be growing at moderate rates.

### C. Components of Population Change - Natural Increase and Migration

Population growth is chiefly dependent upon two primary factors: natural increase and net migration. Natural increase refers to the net difference between the number of births and the number of deaths. Berks County has historically had positive net natural increase. The figures for 2000 – 2015 are shown below.

Migration is the other major component of population change. Net migration refers to the total of all persons moving into and out of a specific community. A growing community will demonstrate a positive number of net migrations while a declining community will show a gradual slowdown or actual loss of persons. Net migration is computed by figuring the difference between census-year enumerated populations and subtracting the corresponding natural increase for that same time period. The result reflects the number of persons moving into the county. It should be noted that census-year populations are enumerated on April 1 of that year while ten-year natural increase includes all births/deaths from January 1 to December 31 of the corresponding year. The table below shows the net migration from 2000 to 2015. For the first time, Census estimates from 2010 – 2015 show a net negative migration, meaning more people are leaving Berks County than coming in. The causes of this phenomenon are not fully known. Potential influencing factors include the effects of the 2008 recession and associated employment decline. These are a concern to county officials as population loss causes negative effects on community stability, work force maintenance and tax income.

Natural Increase and Net Migration, Berks County: 2000-2015				
Year	Population	Natural Increase	Net Migration	Migration Rate
2000	373,638	6,413	9,419	59.5%
2010	411,442	13,842	19,645	58.7%
2015	415,271	6,156	-1,904	-44.8%

Source: U.S. Bureau of the Census, and PA State Health Data Center

### D. Age

Berks is an increasingly older county. From 2000 to 2015, the median age has increased from 37.4 years to 39.8 years. This is further borne out in reviewing individual age groupings. The under-18 age group represented 24.6 percent of the total population in 2000 and has dwindled to 22.7 percent in 2015, while the 65-and-over group has gone from 15.0 percent in 2000 to 16.2 percent in 2015. The 18-64 year age group – the work force – represented 60.4 percent in 2000, up to 61.7 percent in 2010, but has shown a decrease to 61.1 percent in 2015.

### E. Race and Origin

Reflecting the growing diversity of our nation, approximately 88 percent of the Berks County population classified themselves as White on the 2015 Census estimates, as displayed in the following table. Although this is an increase from the 83.2 percent shown in 2010, caution must be used as this is an estimate subject to sampling error, as opposed to the 2000 and 2010 Decennial counts. All of the non-caucasian race groups counted in the Census showed increases in their proportion of the population, and those increases continued over the time period. Proportionally, African Americans comprised 6.8 percent of the population, Asians made up 1.6 percent, American Indian & Alaska Natives were 0.8 percent, and Native Hawaiian & Other Pacific Islanders were approximately 0.2 percent of the county. It should be noted that, with the 2015 ACS, the “Other Race” category was not reported; those individuals were incorporated into the other categories. Starting with the 2000 Census, persons could list more than one race category for themselves. Roughly 2.3 percent of county residents listed themselves as having more than one racial component in their heritage.

Race, Berks County: 2000-2015							
	White	African American	American Indian / Alaska Native	Asian	Native Hawaiian / Other Pacific Islander	Other Race	2 or More Races
2000	329,460 (88.2%)	13,778 (3.7%)	611 (0.2%)	3,785 (1.0%)	77 (0.0%)	20,317 (5.4%)	5,610 (1.5%)
2010	342,148 (83.2%)	20,143 (4.9%)	1,285 (0.3%)	5,385 (1.3%)	128 (0.0%)	32,101 (7.8%)	10,252 (2.5%)
2015 (A)	366,345 (88.2%)	28,438 (6.8%)	3,215 (0.8%)	6,512 (1.6%)	693 (0.2%)	n/a	9,432 (2.3%)

(A) Notes: The "Other Race" category was not reported in 2015 ACS products; those persons are included in the other reported categories.

(B) Percentages may not add to 100% due to rounding.

(C) Numbers for 2015 may not add to total population due to margins-of-error

Source: U.S. Bureau of the Census, 2000 and 2010 Decennial Census' and 2015 1-year ACS

The growth of the Latino community in Berks has become evident in the last three decades. For the first time Latinos now comprise the largest ethnic group in Berks County, exceeding German, the next highest ethnic group, and their proportion countywide has almost doubled every decennial Census since 1980. Their individual cultures, spending habits and family characteristics will have a greater impact throughout Berks. The table below shows the growth of the Latino community since 2000.

Hispanic / Latino Origin, Berks County: 2000-2015		
Year	Total Population	Number / Percent Hispanic / Latino
2000	373,638	36,357 (9.7%)
2010	411,442	67,355 (16.4%)
2015 Est.	415,271	80,581 (19.4%)

Source: U.S. Bureau of the Census, 2000 and 2010 Decennial Census' and 2015 1-year ACS

Another emerging community in Berks is the Lesbian, Gay, Bisexual, and Transgender (LGBT). Currently, the U.S. Bureau of Census and ACS do not track this demographic. The 2020 Decennial Census proposes to include questions regarding this demographic.

### F. Educational Attainment

Berks County has, overall, become increasingly educated during the new millennium. As the total population has increased, so too has the proportion of persons with advanced educational levels. The following table shows that, while the proportion of those aged 25 and over that have not completed high school has decreased, all of the other educational attainment categories have increased. Higher educational levels often translate into a more prepared work force, higher salaries, and overall better economic conditions as people earn more. Higher salaries translate into more local spending in the community and higher income tax revenues for governments.

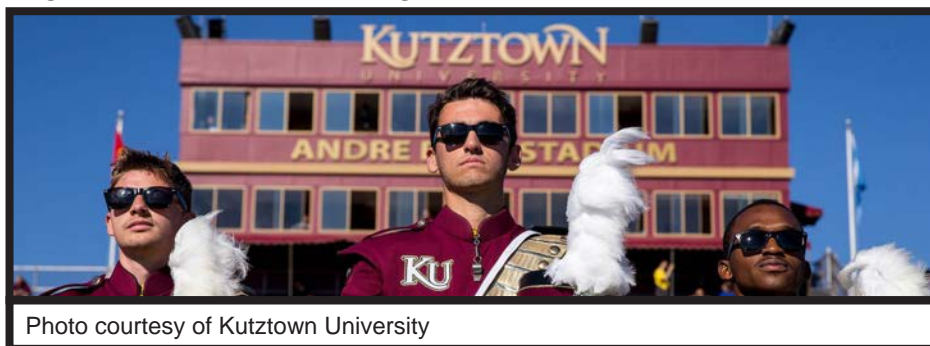


Photo courtesy of Kutztown University

## Chapter 2 - Demographics

<b>Educational Attainment, Berks County: 2000-2015</b>			
<b>Year</b>	<b>2000</b>	<b>2010 Est.</b>	<b>2015 Est.</b>
Population 25+	248,864	272,584	280,020
<9 <sup>th</sup> Grade	7.7%	5.9%	4.8%
9-12 <sup>th</sup> Grade, No Diploma	14.3%	9.5%	8.3%
High School Diploma / GED	39.4%	38.9%	37.7%
Some College, No Degree	14.5%	15.6%	16.3%
Associates Degree	5.7%	7.4%	8.6%
Bachelor's Degree	12.0%	15.1%	15.9%
Graduate Degree	6.5%	7.7%	8.5%
High School Graduate or Higher	78.0%	84.6%	86.9%
Bachelor's Degree or Higher	18.5%	22.8%	24.4%

Source: U.S. Bureau of the Census, 2000 Decennial Census, 2010 and 2015 1-year ACS

### G. Households and Families

The decline in the average household size has been occurring since before the 1970's throughout the nation, including Berks County. As seen in the following table, however, that trend has been reversing since 2000. Between 2000 and 2015, the average number of persons per household in the United States has moved from 2.59 persons to 2.65 persons, or an increase of 2.3 percent. Much of the increase in occupied housing in the later decades of the 1990's was a reflection of decreased household size. A decline in household size tends to increase the number of households. The long-term changes in household size result not only from economic influence, but also from fundamental changes in the marriage relationships, living arrangements and family dynamics. While major contributors to shrinking household size includes the increase in the number of single persons choosing to live alone, especially young adults, and also the elderly population, increases in household size are brought about by multigenerational households and increases in non-married persons sharing living arrangements.

<b>Household Size (Average Persons Per Household), Berks County &amp; United States: 2000-2015</b>		
<b>Year</b>	<b>Berks County</b>	<b>United States</b>
2000	2.55	2.59
2010	2.59	2.58
2015 Est.	2.64	2.65

Source: U.S. Bureau of the Census, 2000 and 2010 Decennial Census' and 2015 1-year ACS

Accordingly, changes in the type of household is another important component. The Census defines three basic types of households: a Married-Couple Family Household; an Other Family Household (family headed by either a male or female without a spouse); and a Non-Family Household, which is an individual living alone or multiple non-relatives sharing a household. The table below shows the changes among these types of households since 2000. Declines in the proportion of Married-Couple families is evident along with the related growth in other family and non-family households.

<b>Household Growth by Type, Number and Percent, Berks County: 2000-2015</b>				
<b>Year</b>	<b>Total Households</b>	<b>Married-Couple Family Households</b>	<b>Other Family Households</b>	<b>Non-Family Households</b>
2000	141,570	78,517 (55.6%)	19,946 (14.1%)	43,107 (30.4%)
2010	154,536	80,417 (52.1%)	26,115 (16.9%)	47,824 (31.0%)
2015 Est.	151,792	75,327 (49.6%)	27,822 (18.3%)	48,643 (32.0%)

Source: U.S. Bureau of the Census, 2000 and 2010 Decennial Census' and 2015 1-year ACS

## H. Income and Poverty

Two measures of an area's prosperity are the income of its residents and, conversely, the proportion of those in poverty. The following table shows that, while Median Household and Median Family incomes have all grown since 2000, the 'purchasing power' of those incomes has actually shrunk, based on inflation. Using the Consumer Price Index to adjust for inflation, converting the annual income information to 2015-equivalent dollars shows that income does not have the same value in 2015 as it did in 2000.

Median Household and Family Incomes (Dollars), Berks County: 2000-2015				
Year	Median Household Income	Med. HH Income Adjusted for 2015	Median Family Income	Med. Family Income Adjusted for 2015
2000	44,714	61,759	52,997	73,199
2010 Est.	51,759	56,172	62,493	67,822
2015 Est.	56,122	56,122	68,232	68,232

Note: The CPI inflation calculator uses the [Consumer Price Index](#) for All Urban Consumers (CPI-U) U.S. city average series for all items, not seasonally adjusted. [This data](#) represents changes in the prices of all goods and services purchased for consumption by urban households. Source: U.S. Bureau of the Census, 2000 Decennial Summary File 3, 2010 1-year ACS, and 2015 1-year ACS; and U.S. Bureau of Labor Statistics *CPI Inflation Calculator* ([https://www.bls.gov/data/inflation\\_calculator.htm](https://www.bls.gov/data/inflation_calculator.htm))

Poverty levels in Berks County have followed national trends brought about by the recession that began in 2008. Those rates rose significantly in 2010 and have been slowly receding as the regional economy improves, as shown in the following table.

Percent of Persons and Families in Poverty, Berks County: 2000-2015		
Year	Persons Below Poverty Level	Families Below Poverty Level
2000	9.4	6.3
2010 Est.	14.1	10.9
2015 Est.	12.8	9.0

Source: U.S. Bureau of the Census, 2000 Decennial Summary File 3, 2010 1-year ACS, and 2015 1-year ACS

## I. Population Projections

County population projections were adopted by the Berks County Planning Commission in February, 2016. Projecting the population is necessary to ensure that the Future Land Use Plan includes enough land for housing and business growth, while the Transportation and Community Facilities plans also include appropriate recommendations for facilities to accommodate that growth as well.

There are numerous ways to create population projections. None is necessarily 'right' or 'wrong', and each method has its own benefits and pitfalls. Some are better for large-area forecasts, others are better for smaller areas, and still others are better depending on available data. These projections were developed using the FORECAST function contained in Microsoft Excel. This function employs a least-squares trending/regression curve, and works well when consistently spaced 'anchor points' are available. In our case, given the recent slowdown in population growth, we used more recent anchor points within the FORECAST function. By having a 1:2:2 weighting on more recent years (2005, 2010, 2010, 2015, 2015), projections are more realistic. The steps used include:

1. Using a straight line interpolation, create 2015 estimate based on 2010-2014 annual estimates;
2. Employ FORECAST function to create a 2020 projection, then
3. Employ the same methodology for five-year intervals out to 2040.

Shown in the following table are the results of this method. These projections reflect a subdued 10.9% growth over the projection term, closely reflecting current trends.



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Population Projections, Berks County: 2020-2040	
Year	Persons
Census 2010 Count	411,442
2020 Projection	425,447
2030 Projection	440,656
2040 Projection	456,409

Source: Berks County Planning Commission

### J. Municipal Populations

In 2015, Berks County encompassed 73 municipalities, (plus a part of Adamstown Borough which is mostly in Lancaster County), each with a unique set of characteristics including physical size, governmental structure, and population. There are four (4) types of municipalities in Berks:

- Boroughs, which typically are older, denser settlements which have smaller populations and a Mayor/elected Council form of government. There are 28 boroughs, containing 78,749 persons, or 19.0 percent of the county's total population;
- Second Class Townships, which range from very rural to suburban or urban, tend to have larger populations and an elected three person Board of Supervisors. There are 41 Second Class Townships containing 208,111 persons, or 50.1 percent of the county's total population;
- First Class Townships, of which there are three, are distinguished mainly by having a population density of over 1,000 persons per square mile (very dense). These townships have a five-person elected Board of Commissioners. Our three First Class Townships have 40,532 persons, or 9.8 percent of the county's total population; and
- Third Class City, that being Reading, containing 87,879 persons or 21.2 percent of the county's population. Reading is the most densely populated municipality and is governed by an elected Mayor and seven-member Council.

Between 2000 and 2015, the boroughs grew by only 2,515 persons, while the second-class townships added 27,305 persons, the first class townships added 5,141 persons and the City of Reading added only 6,672 persons. Populations for each municipality can be seen in the following table. It should be noted that, effective July 1, 2016, Strausstown Borough was merged into Upper Tulpehocken Township and no longer exists. For statistical purposes, however, it is still included in the following chart.



Municipal Populations, Berks County: 2000-2015					
Municipality	2000	2010	2015 Est.	Change 2000 - 2015	
				Number	Percent
<b>Berks County</b>	<b>373,638</b>	<b>411,442</b>	<b>415,271</b>	<b>41,633</b>	<b>10.1%</b>
Adamstown Borough*	2	17	14	12	70.6%
Albany Township	1,662	1,724	1,732	70	4.1%
Alsace Township	3,689	3,751	3,794	105	2.8%
Amity Township	8,867	12,583	12,836	3,969	31.5%
Bally Borough	1,062	1,090	1,103	41	3.8%
Bechtelsville Borough	931	942	941	10	1.1%
Bern Township	6,758	6,797	6,945	187	2.8%
Bernville Borough	865	955	951	86	9.0%
Bethel Township	4,166	4,112	4,132	-34	-0.8%
Birdsboro Borough	5,064	5,163	5,159	95	1.8%
Boyertown Borough	3,940	4,055	4,046	106	2.6%
Brecknock Township	4,459	4,585	4,628	169	3.7%
Caernarvon Township	2,312	4,006	4,065	1,753	43.8%
Centerport Borough	327	387	398	71	18.3%
Centre Township	3,631	4,036	4,061	430	10.7%
Colebrookdale Township	5,270	5,078	5,066	-204	-4.0%
Cumru Township	13,816	15,147	15,370	1,554	10.3%
District Township	1,449	1,337	1,408	-41	-3.1%
Douglass Township	3,327	3,306	3,538	211	6.4%
Earl Township	3,050	3,195	3,231	181	5.7%
Exeter Township	21,161	25,550	25,874	4,713	18.4%
Fleetwood Borough	4,018	4,085	4,085	67	1.6%
Greenwich Township	3,386	3,725	3,724	338	9.1%
Hamburg Borough	4,114	4,289	4,398	284	6.6%
Heidelberg Township	1,636	1,724	1,737	101	5.9%
Hereford Township	3,174	2,997	2,925	-249	-8.3%
Jefferson Township	1,604	1,977	2,012	408	20.6%
Kenhorst Borough	2,679	2,877	2,867	188	6.5%
Kutztown Borough	5,067	5,012	5,028	-39	-0.8%
Laureldale Borough	3,759	3,911	3,883	124	3.2%
Leesport Borough	1,805	1,918	1,883	78	4.1%
Lenhartsville Borough	173	165	167	-6	-3.6%
Longswamp Township	5,608	5,679	5,694	86	1.5%
Lower Alsace Township	4,478	4,475	4,468	-10	-0.2%
Lower Heidelberg Township	4,150	5,513	5,959	1,809	32.8%
Lyons Borough	504	478	472	-32	-6.7%
Maidencreek Township	6,553	9,126	9,424	2,871	31.5%



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Municipal Populations, Berks County: 2000-2015					
Municipality				Change 2000 - 2015	
	2000	2010	2015 Est.	Number	Percent
Marion Township	1,573	1,688	1,809	236	14.0%
Maxatawny Township	5,982	7,906	7,433	1,451	18.4%
Mohnton Borough	2,963	3,043	3,036	73	2.4%
Mount Penn Borough	3,016	3,106	3,165	149	4.8%
Muhlenberg Township	16,305	19,628	20,096	3,791	19.3%
New Morgan Borough	35	71	74	39	54.9%
North Heidelberg Township	1,325	1,214	1,225	-100	-8.2%
Oley Township	3,583	3,620	3,717	134	3.7%
Ontelaunee Township	1,217	1,646	1,827	610	37.1%
Penn Township	1,993	1,949	2,035	42	2.2%
Perry Township	2,517	2,417	2,430	-87	-3.6%
Pike Township	1,677	1,723	1,752	75	4.4%
Reading City	81,207	88,082	87,879	6,672	7.6%
Richmond Township	3,500	3,397	3,479	-21	-0.6%
Robeson Township	6,869	7,216	7,360	491	6.8%
Robesonia Borough	2,036	2,061	2,064	28	1.4%
Rockland Township	3,765	3,778	3,803	38	1.0%
Ruscombmanor Township	3,776	4,112	4,150	374	9.1%
St. Lawrence Borough	1,812	1,809	1,814	2	0.1%
Shillington Borough	5,059	5,273	5,265	206	3.9%
Shoemakersville Borough	2,124	1,378	1,369	-755	-54.8%
Sinking Spring Borough	2,639	4,008	4,101	1,462	36.5%
South Heidelberg Township	5,491	7,271	7,374	1,883	25.9%
Spring Township	23,402	27,119	27,438	4,036	14.9%
Strausstown Borough	339	342	345	6	1.8%
Tilden Township	3,553	3,597	3,592	39	1.1%
Topton Borough	1,948	2,069	2,062	114	5.5%
Tulpehocken Township	3,290	3,274	3,304	14	0.4%
Union Township	3,453	3,503	3,563	110	3.1%
Upper Bern Township	1,479	1,734	1,741	262	15.1%
Upper Tulpehocken Township	1,495	1,575	1,568	73	4.6%
Washington Township	3,354	3,810	3,990	636	16.7%
Wernersville Borough	2,150	2,494	2,540	390	15.6%
West Reading Borough	4,049	4,212	4,191	142	3.4%
Windsor Township	2,392	2,279	2,334	-58	-2.5%
Womelsdorf Borough	2,599	2,810	2,859	260	9.3%
Wyomissing Borough	11,155	10,461	10,469	-686	-6.6%

Source: U.S. Bureau of the Census, 2000 and 2010 Decennial Census' and 2015 1-year ACS

\*NOTE: Includes only that portion of Adamstown Borough located in Berks County

# Chapter 3 - Environment



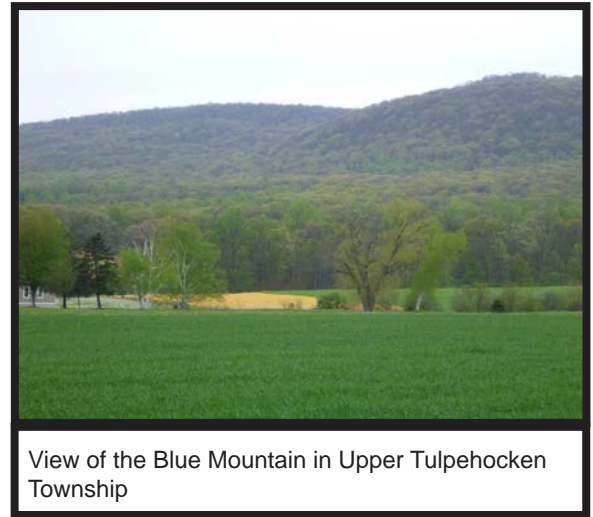
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## ENVIRONMENT

### A. Steep Slopes

A slope is considered to be steep when it has a slope of 25% or greater with respect to a horizontal plane. The steep slopes of Berks County are depicted on the Steep Slopes map (Figure 03). Steep slopes are scattered throughout the county, with the greatest concentrations being found in the extreme northern portion associated with the Blue Mountain along the Kittatinny Ridge, the southern portions comprised of the rolling hills of the Lowlands, and the eastern portions of the Reading Prong. Most of the steep slopes are heavily-wooded, and are a prominent element of the landscape. These forested slopes, hills and mountain ridgelines help define our scenic views, and are an essential source of the county's drinking water, wildlife habitat and recreational opportunities. The Kittatinny Ridge is a world-renown migration flyway used by raptors and other birds, and is home to Hawk Mountain Sanctuary, an international center for raptor conservation, education, observation and research.



View of the Blue Mountain in Upper Tulpehocken Township

Problems associated with steep slopes are numerous and need special consideration. It is important that steep slopes be protected from erosion, pollution, and development. The most common problem associated with steep slopes is the hazard of erosion, particularly if the slope is disturbed. In the most severe cases, slopes will erode so rapidly that they form destructive landslides. When steep slopes are disturbed, they can produce heavy soil erosion and sediment loading in streams. This, in turn can trigger a cycle of erosion and deposition all the way down to the stream mouth. When rain strikes a steep slope, it runs off rapidly. Excessive erosion and sedimentation has indirect impacts as it can damage aquatic habitats in streams and lakes and it can dramatically reduce reservoir storage capacity. Since steep slopes serve as the headwaters for our streams, they play an important role in the quality of our drinking water supply.

The hazard of erosion can be natural but much of the time it is caused by human influence. Construction on a steep slope requires extensive grading and therefore, the disturbance of the soil and vegetative cover protecting the slope increases the erosion hazard. Development also results in the alteration of natural drainage patterns and the formation of impervious surfaces. Impervious surfaces greatly magnify surface runoff. Topographic constraints often result in roads that are steep, winding, and narrow. These types of roads can pose safety problems with blind curves and steep driveways creating accessibility issues for visitors, residents, and emergency service vehicles. Septic systems for on-lot sewage disposal are impractical on steep slopes due to the rapid downhill flow of improperly treated effluent. Therefore, construction on steep slopes is often difficult, costly, and not a sound planning practice.

The topographic and geological qualities of steep slope areas often create a variety of unique vegetative communities and wildlife habitats. For these ecological reasons steep slope areas require protection in order to preserve biodiversity. Undisturbed steep slopes and their ridgelines have general aesthetic values to many communities due to their visibility. They create a sense of spatial enclosure, contribute to a community's sense of identity, and provide recreational opportunities.

Moderate slopes, between 15% and 25%, can also yield heavy soil erosion and sediment loading of streams. Therefore, many of the same concerns outlined for steep slopes apply to moderate slopes. Moderate slopes are unsuitable for intensive development, and require special design restrictions for the construction of structures, roads, stormwater management facilities, and sewage disposal systems.

### B. Woodlands

The Forested Areas map (Figure 04) identifies those areas of forest cover which are of significant size. One of the most prominent, contiguous areas of forest cover in the county is the Blue Mountain Region, which is found along the northern boundary of the county, and includes a portion of the Weiser State Forest. Deciduous trees are the most prevalent types found in this area and in the rest of Berks County. The most common deciduous species in Berks County are the Maple, Beech, Oak and Hickory. Coniferous species in the county, an example being the Hemlock, often favor stream valleys in

## Chapter 3 - Environment

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mountainous and hilly areas. Another prominent area of forest land is the Hopewell Big Woods (HBW). HBW is in the vicinity of French Creek State Park, which is located in the southeastern portion of the county. Forested land in District, Pike and Rockland Townships, commonly referred to as the Oley Hills is also a large forested area that is home to five pristine watersheds. However, the wooded areas in these two regions have been fragmented by low density development and agricultural activities.

Among the many uses and functions of a forest, perhaps its greatest benefits, are its ability to filter pollution, purify, and cool the air in the summer. Woodlands also help stabilize slopes, reduce erosion, provide riparian buffers, muffle noise, absorb odors, and serve as land use buffers. Forests are also extremely important areas for native vegetation, bird and wildlife habitats, and provide recreational opportunities. There are also the economic benefits of forests associated with commercial timbering, provided proper forest management principles are implemented.

### C. Geology

The geology of Berks is both unique and fairly complex. This is visible on the Geology Map (Figure 05). Underlying Berks County are formations that developed millions of years ago and in various geological time periods. The chronology includes the Precambrian Era and the Cambrian, Ordovician, Silurian, Triassic, and Jurassic Periods. The Cambrian, Ordovician, and Silurian Periods are from the Paleozoic Era, while the Triassic and Jurassic Periods are from the Mesozoic Era. Formations in the Jurassic Period are those which developed most recently while formations in the Precambrian Era developed earlier in Earth's history.

The oldest formations in Berks County derive from the Precambrian Era. Formations from the Precambrian are comprised of various types of Gneiss and occur throughout the eastern central portion of the county, with a smaller area found in the western central region, south of Robesonia and Wernersville Boroughs. Formations in the Precambrian are fairly poor aquifers due to the dependency of secondary openings in the parent material.

Formations from the Cambrian Period are found in a band traversing Berks County from the central west border to the central northeast border. This band is thin in the central western portion and thicker in the central eastern portion of Berks County. They are also found sporadically throughout the eastern central region of the county and along the extreme southern border. Formations in the Cambrian Period comprise the majority of the limestone areas of the county. The majority of the formations are composed of various gray limestone and dolomites. A few formations are mainly composed of quartzite. These are some of the best groundwater yielding areas in Berks County, especially the Allentown Formation which is one of the best water yielding limestone in the area.

The most distinguishing characteristic of the formations in the Cambrian Period is the abundance of surface depressions and solution cavities. Due to the relative purity of the limestone that comprises the formations, and the fact that this limestone is soluble in water, it is susceptible to being dissolved by the action of percolating water. Once water enters the soil and reaches the limestone, the calcium carbonate in the limestone will be dissolved. This dissolving of calcium carbonate rock creates a sinkhole. Caves can also occur when large amounts of rock are dissolved.

Berks County has many caves around the northeast portion of the county. Some of the more famous caves of the county are Crystal Cave, Onyx Cave, Schofer's Cave, Temple Cave, Hobo Cave, Dragon Cave, Dreibelbis Cave, and Pinnacle Cave. Some of these caves such as Dragon Cave have a rich background of folk and Indian lore. Most of the caves listed above have been closed due to safety issues. However, Crystal Cave is still commercially open. Onyx Cave is privately owned and is accessible for educationally oriented visits.

The most abundant formations in Berks County are found in the Ordovician Period. These formations comprise the majority of the northern portion and extend into the northern central portion of the county. Sporadic areas are found in the south central and eastern central portions of the county. They are mainly composed of shales and limestones, with some sandstone present. The materials are mostly gray in color, with some appearing almost black. Formations from the Ordovician Period, such as the Martinsburg Formation, are considered to be moderate suppliers of groundwater. The Beekmantown Group and Hershey and Myerstown Formations, made up of limestone and dolomite, can produce large amounts of groundwater if a channel or fracture in the rock is found.



Formations from the Silurian Period occupy the extreme northern border of Berks County. These formations underlie and give rise to the Blue Mountains-Kittatinny Ridge. Formations from this period are composed predominantly of sandstones and shales. These rocks are gray and tan in appearance and are often exposed on the surface.

Formations from the Triassic Period are found predominantly in the southern portion of Berks County. Additional areas exist along the extreme eastern boundary of the county which includes portions of Colebrookdale Township through Hereford Township. Formations from this time period are comprised predominantly of quartz conglomerate, sandstones, mudstones, limestones, and shale. A few of the formations found in the Triassic Period include the Brunswick Formation, Hammer Creek Formation and conglomerate, and Stockton Formation. These materials often appear red and gray in color, explaining the reddish hue to the soils found in these areas. The formations from the Triassic generally yield relatively good amounts of groundwater.

The Jurassic Period for Berks County includes two formations. The two formations found are Diabase and Sedimentary strata at Jacksonwald and Aspers. The main geologic composition for this period is diabase and sandstone. The Jurassic Period formations are found in various small, scattered bands throughout the Triassic Period.

The various formations discussed all represent the composition of the county below the soil surface which is visible on the land surface. For instance, the northern edge of the County is made up of the Blue Mountains that are underlain by formations from the Silurian Period. Conversely, many of the rich agricultural valleys, such as those in the eastern portions of the county, are underlain by limestone, which gives the soil its agriculturally productive characteristics.

The highest point (1690 ft.) in Berks County is located in Bethel Township, in the extreme northwest portion of the county, and is part of the Blue Mountain-Kittatinny Ridge. This peak is just to the west of where SR 183 crosses the Blue Mountain. The most prominent geologic feature in the county is known as the Pinnacle, located along the Kittatinny Ridge in Albany Township. The elevation at the top of this sandstone ridge is 1,615 feet above sea level and is a scenic overlook. The Appalachian National Scenic Trail passes closely by both of these high points, as it traverses 29 miles along the spine of the Kittatinny Ridge in Berks County. Another geologic feature found in the vicinity of the Pinnacle is the Blue Rocks. These are large sandstone boulders that have moved down the sides of the mountains above, forming a glacier of rock.

Due to the complexities of the geologic formations of Berks County, it is difficult to predict what the potential groundwater yield is on a site specific basis. However, each type of geology has an average potential groundwater yield, measured in gallons per minute (gpm) associated with it.

Essentially, all of the rocks within the county have openings that contain and transmit water. However, few have primary openings (i.e. voids as a result of original deposition) that are great enough to store and transmit large quantities of water. Secondary openings, (joints, bedding planes, fault planes or zones, schistosity) especially those which have been subsequently enlarged by erosion, which have occurred after the rock was deposited, will account for most of the high yield wells in the county. The more secondary structures transgressed by a well, the better opportunity for large quantities of water.

### D. Soils

Soil is the unconsolidated mineral material on the earth's surface, which has been subjected to physical and chemical action over time. Soils are mostly derived from the parent material that underlies them. This parent material gives the soil its specific characteristics. These characteristics may, for example, consist of deep well-drained limestone based soils, or thin poorly drained soils produced from gneiss.

A soil may have moved from its original place of formation through various forces. A soil that has been deposited by the flow of a river or stream is called an alluvial soil. These soils often consist of silt and gravel and will accumulate in depth over time as the river or stream continually deposits material. The force of gravity can also cause a soil to move. Soils that have moved down the sides of hills or mountains in this manner are called colluvial soils. As the material on the higher and steeper slopes of a hill or mountain becomes weathered into soil, it will accumulate and slowly (or occasionally quite rapidly) move toward the base of the mountain. Another force that can move soil is wind. This is particularly evident in very dry regions. This soil, called loess, consists of very fine particles that become airborne due to dry, windy conditions and lack of vegetative cover.

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Soils with similar characteristics are grouped into a soil series. There are 44 soil series within Berks County that are described in the *Soil Survey of Berks County, Pennsylvania* which is completed by the National Resources Conservation Service and the National Cooperative Soil Survey, in coordination with the Berks County Conservation District. Soils are also broken down by class. There are eight classes in all, beginning with I and ending with VIII. Class I soils have few limitations that restrict their uses while Class VIII soils are limited in their uses to such things as recreation, wildlife habitat and aesthetic purposes due to hazards such as steep slopes and erodibility. There are no Class V soils in Berks County.

Berks County has both good and poor soils. A large portion of the County consists of agriculturally productive soils, Class I through IV, as evident on the Agricultural Soils map (Figure 06). The limestone belt found across Berks and the area of limestone concentrated in the eastern central portion of the county, primarily in Oley Township, yield the greatest amounts of Class I soil. The Oley Valley is one of the most productive agricultural areas in the county. The soils of the Oley Valley are derived from the underlying limestone. The reason these soils are so productive is due partly to the geologic characteristics of limestone. Limestone allows soil to percolate water rather rapidly, preventing flooding and excessively high water tables.

Limestone soils are generally deep and the limestone rock allows a soil derived from it to maintain a fairly neutral pH level. This is due to limestone's basic composition of calcium carbonate. Calcium carbonate tends to neutralize acids which provide the soils derived from it a natural buffer against acidic infiltration. Another benefit of a good soil is its ability to filter percolating water, and provide clean, sub-surface aquifers. This process of recharging groundwater supplies is best achieved on Class I and II soils.

Even though a soil may be considered as Class I, it may still have problems that limit its use. The limestone soils, while being one of the most productive agriculturally, can be very hazardous if used inappropriately.

There is a band of sinkhole-prone areas traversing the county that overlies the limestone band. There is also an area of sinkhole-prone soils in and around Oley Township. A sinkhole is the common name given to a depression in a limestone soil surface. These depressions can vary in size and may open in the bottom exposing cavities in the bedrock below. A sinkhole develops when underground channels and cavities, formed by water percolating through the soluble limestone bedrock, collapse allowing the soil lying above to fall into them. The development of a sinkhole is usually gradual but can be fairly rapid. A heavy rain may expose an underground cavity in a matter of hours, causing soil to occupy the void and leave a depression or sinkhole.

A sinkhole can be a problem for on-lot septic systems. Since a sinkhole allows for very rapid percolation of water and functions as a direct link to underground water supplies, a sinkhole located in the vicinity of a septic system may allow for the flow of untreated wastes into an underground water supply. Any material (garbage, chemicals, etc.) when deposited in or near a sinkhole may eventually find its way to groundwater supplies.

Another problem with soils in Berks County is the infiltration and percolation of water. Soils that are wet, shallow, or on steep slopes need to be studied carefully before being used. Unfortunately, development on unsuitable soils occurs and the results can be disastrous. A housing development started on a soil, which at first seems to be appropriate, could, due to the soil association and class (as described above), become inundated with excess runoff. This scenario could be avoided by better knowledge of soil characteristics.

### E. Mineral Resources

Historically, iron-ore, which occurs as magnetite, limonite (brown hematite), and red hematite, is the most important of the county's abundant mineral resources. Magnetite, averaging 50% iron, was mined throughout the eastern portion of the county, and was used extensively by the many early iron furnaces. Considerable resources still exist in the vicinity of Boyertown, where the State's first iron furnace was established in 1720. The Bethlehem Steel Company had large-scale magnetite mining operations near the southern tip of the county around the Morgantown area. Limonite, which is more abundant than magnetite, was mined in numerous locations. Red hematite has also been found in scattered locations, but none in mineable quantity.

Trap rock and limestone are quarried extensively and crushed for use as concrete aggregate and railroad ballast. The



principal trap rock quarry is near Douglassville, while limestone is quarried near Kutztown, Temple, Leesport, Oley, and Evansville. Stone from the latter two locations is used for manufacturing Portland cement at Evansville. Quarry locations are depicted on the Quarries map (Figure 07).

Mining of materials has proven itself vital to Berks County. In the future, it is likely that this industry will continue to be a very valuable part of the county. The table below illustrates the annual yield of surface mined materials for 2015.

Municipality	Site Name	Tonnage	Mineral	Permitted Acres
Alsace	Highway Materials Temple Quarry	157,592	Sandstone	190
Colebrookdale	Martin Stone Bechtelsville Quarry	1,488,631	Sandstone	349
District	Rolling Rock Building Stone Quarry	7,033,823	Limestone	427
Douglass	Haines and Kibblehouse Douglassville Quarry	676,745	Diabase, Hornfels	244
Lower Heidelberg	Glen-Gery Lower Heidelberg Quarry	548	Shale	181.6
Maidencreek	Lehigh Cement Evansville Pit and Quarry	828,730	Limestone, Other Sedimentary	329.9
Maxatawny	Berks Products Kutztown Quarry	600	Limestone	38
Maxatawny	Eastern Industries Kutztown E Quarry	731,400	Limestone, Shale	47
Maxatawny	Eastern Industries Kutztown Quarry	15,000	Limestone	205
Oley	Lehigh Cement Oley 1 Quarry	735	Limestone	91.1
Oley	Lehigh Cement Oley 2 Quarry	735	Limestone, Other Sedimentary	180.2
Oley	Lehigh Cement Oley West Quarry	686	Limestone, Other Sedimentary	160.8
Oley	Eastern Industries Oley Quarry	32,900	Limestone	675
Ontelaunee	Berks Products Ontelaunee Quarry	774,226	Limestone, Topsoil	351
Perry	Shoemakersville 1 Quarry	74,381	Shale	115
Perry	Shoemakersville 2 Quarry	62,589	Shale	225
Perry	Shoemakersville 3 Quarry	507	Clay, Shale	184
Richmond	Lehigh Cement 5 Quarry	1,416	Limestone	202.1
Robeson	Dyer Quarry	527,577	Diabase, Subsoil, Topsoil	323
Robeson	Haines and Kibblehouse Birdsboro Quarry	1,571,386	Diabase, Sandstone, Shale, Topsoil	289.6
Washington	Martin Stone Gabel Quarry	82,480	Gneiss, Other Sedimentary, Topsoil	96

Source: PA Department of Environmental Protection

## F. Water Resources/Features

Berks County has numerous water resources within its borders. This resource has been very important in the county's past and will continue to be important in the county's future. This invaluable resource has many benefits for the whole of Berks County.

Surface water is comprised of rivers, streams, ponds, and lakes. These waterways and surface impoundments provide for water withdrawals which are used for domestic, industrial and agricultural purposes. Surface water also provides habitat for aquatic plant and animal life; attracts migratory waterfowl; provides recreation in the forms of boating, fishing, swimming and aesthetic appreciation of nature; and the absorption of treated waste water effluent. Surface water occupies 6,467 acres or approximately 1% of the county's total land area.

Berks County is divided into thirteen Act 167 state-designated watershed drainage basins as shown on Water Resources map (Figure 08). A drainage basin is an area that surrounds a particular stream or river and delivers its surface water runoff and groundwater flow to that stream or river. The Schuylkill River drains the majority of the county and eventually empties into the Delaware River and Delaware Bay. Other streams in northwestern and southwestern Berks County drain into the Susquehanna River and Chesapeake Bay.

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The county is drained by a network of streams, the majority of which empty into the Schuylkill River and eventually drain to the Delaware River. In addition to the Schuylkill River Watershed, two and one-half percent of the county land area also drains to the Delaware River, but via the Little Lehigh Watershed and Lehigh River. The Delaware River Basin Commission (DRBC) manages the water resources within these two sub-watersheds. DRBC programs include water quality protection, water supply allocation, regulatory review, water conservation initiatives, watershed planning, drought management, flood loss reduction, and recreation. Approximately 10% of the county land area drains into the Susquehanna River, and eventually the Chesapeake Bay, through the Swatara, Conestoga and Cocalico Watersheds. The Susquehanna River Basin Commission manages the water resources in these watersheds much like DRBC.

The major watercourse in the county is the Schuylkill River. The Schuylkill River enters Berks County through the Blue Mountain Gap near Hamburg Borough and traverses centrally through the county in a south and southeasterly direction before exiting the county near Douglassville.

Two major tributaries to the Schuylkill River, the Tulpehocken Creek and the Maiden Creek, are dammed and used as public water supplies. The Tulpehocken Creek Watershed drains over 140,000 acres and has 19 named streams which contribute water flow to the Schuylkill River.

The Maiden Creek Watershed drains over 138,000 acres and also has numerous named streams which contribute water flow to the Schuylkill River. Other major tributaries to the Schuylkill River include the Allegheny, Hay, Antietam, Irish and Monocacy Creeks.

### G. Important County Water Bodies



Berks County contains two lakes of significant size. Lake Ontelaunee, formed by a dam on the Maiden Creek, is found in the northern central portion of the county, lying in Ontelaunee and Maiden Creek Townships. Lake Ontelaunee is a 1,082 acre man-made lake. This reservoir was developed in 1926 by the City of Reading for water supply, but is also a popular venue for fishing, hiking and other passive recreational activities.

Blue Marsh Lake, formed by a dam on the Tulpehocken Creek, is located in the central western portion of the county. Completed in 1979, Blue Marsh is a 1,150 acre lake built and maintained by the U.S. Army Corps of Engineers. The dam was authorized by Congress for flood control, water supply, water quality and recreation. Blue Marsh Lake is the major water supply for the suburbs located west of the City of Reading. The reservoirs' water control practices benefit downstream communities including Reading, Birdsboro, Pottstown and Philadelphia.

There are a vast number of streams and springs that traverse Berks County in a "branching pattern". The Schuylkill River provides the major source of drainage in the area. The various streams drain small areas of the county but most eventually empty into the Schuylkill, contributing to its overall flow.

Of the various other water features in Berks, the Maiden Creek and Tulpehocken Creek are two of the most prominent. Both creeks provide important sources of drainage in the county, and provide sources of recreation and species habitat. The majority of the Berks County Parks System lies along the Tulpehocken Creek. The Tulpehocken is a widely recognized trout stream, supporting a variety of these and other fresh water species.

The Commonwealth of Pennsylvania has classified all surface waters according to water uses and water quality criteria which need to be maintained to prevent water quality degradation as defined by federal regulations. This classification system is known as Pennsylvania's Water Quality Standards and is implemented through the Pennsylvania Code, Chapter 93 and Chapter 95. Streams with excellent water quality have been designated by the state as High Quality waters (HQ) or Exceptional Value waters (EV). These streams or watersheds require special water quality protection. Berks County

is fortunate to have numerous HQ and EV streams, and the list continues to grow. While HQ and EV streams are found throughout Berks County, higher concentrations are found in the Oley Hills, South Mountain, Hopewell Big Woods, and Kittatinny Ridge regions due to the abundance of undeveloped wooded areas. An up-to-date list of the classified streams for Berks County can be found on the Department of Environmental protections eMapPa system at: <http://www.depgis.state.pa.us/emappa/>

### H. Floodplains

A floodplain is a relatively flat or low land area which is subject to partial or complete inundation from an adjoining or nearby stream, or watercourse: and/or any area subject to the unusual and rapid accumulation of surface waters from any source. This land consists primarily of alluvial soils. These soils may be wet a portion of the year, but can still be extremely productive for the growth of vegetation. This vegetation can help filter sediment from surface runoff, stabilize streambanks, reduce soil erosion, and protect water quality. Floodplains provide a natural barrier that protects the stream or river's flow. They can absorb and store large amounts of water and provide aquifer recharge. They also provide excellent areas for species habitat and diversity.

The floodplains of Berks County are indicated on the Water Resources map (Figure 08). The most prominent floodplain in the county is that of the Schuylkill River. It traverses Berks in a north-to-south direction and is joined by many other streams in its journey. Other fairly prominent floodplain regions of the county include those associated with the Maiden Creek, Manatawny Creek, Saucony Creek, and the Tulpehocken Creek.



Flooding at Dreibelbis Mill, Perry Township, in 2011  
*Photo courtesy of Melissa Rozetar*

Regulation of floodplains can help minimize the threat to human life and property due to flooding. Restricting certain types of land uses within a floodplain is an important step in assuring its protection. All municipalities are required by the Federal Emergency Management Agency (FEMA) and the Commonwealth to have ordinances that deal with the use of land within a floodplain. The types of floodplains identified are the 1- and 0.2-percent-annual-chance floodplains. A 1-percent-annual-chance floodplain is an area that is expected to be covered by water once in every 100 years. The 0.2-percent-annual-chance floodplain is an area that is expected to be covered by water once every 500 years. Further discussion on goals and policies regarding floodplains and environmental hazard areas can be found in Chapter 8 Landuse.

### I. Wetlands

A wetland is an area that exists as a swamp-like region at some point due to poor soils and underlying geology. Wetlands are usually found in lowland areas where the underlying water tables are closer to the soil surface. The area may be quite large in scale or be only a few feet across. A wetland is often associated with a lake, stream or spring, but may exist in a fairly isolated region away from these water features. Many wetlands follow the path of streams and rivers.

Wetland areas are unique environments that perform a variety of biological and physical functions. They can be extremely rich areas for plant growth and animal habitat. Wetlands often serve as breeding places for many organisms and are consequently rich in species diversity. However, a wetland does more than simply provide a home and a source of food for organisms. Wetlands protect water sources and can actually help to keep these sources of water clean. They act as natural filters in removing pollutants such as bacteria and sediment from water. This is achieved because the plants growing in and around a wetland will help to trap these pollutants, which are then consumed as food by organisms living in the wetland. The soils found in a wetland are often acidic, and consequently, the plants growing in a wetland are predominantly acid tolerant species. This allows a wetland to receive acidic infiltrations and remain relatively unaffected. Wetlands also retain stormwater runoff and floodwaters, and can facilitate groundwater recharge.

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Given the uses and functions of wetlands, it is important that they be preserved in their natural state and protected from destruction. The knowledge of wetland characteristics is important to allow even the most unnoticeable wetland areas to be identified. Most municipalities enact various land use regulations; federal and state regulations also apply to protect the local wetlands. These regulations include buffering the wetlands so that the proper function of the wetland is preserved.

### J. Threats to County Water Resources

Many individuals see air and water pollution as being the most harmful influences to the natural world. These factors have certainly been felt in Berks County but they are only a small part of the pollution problem. Pollution exists in many forms: air, water, noise, and thermal. The misuse and excessive development of land can even be considered pollution. When one considers pollution in its broadest sense, the problems become increasingly obvious. Berks County has its share of these problems. Pollution can be divided into two basic categories: point sources and non-point sources. Point sources are those which have easily identifiable origins, such as the discharges from a specific industry. Non-point sources exist on a much broader scale and often cannot be pinpointed, such as increased sedimentation in a river or stream. Some pollutants are difficult to classify as to whether they are point or non-point in origin.

The sources that are blamed for the majority of the Earth's pollution are point sources. In Berks County, as elsewhere, one of the most common types of point source pollution is industry. Industries are not necessarily heavy manufacturing plants. They can consist of a variety of different types of industries from very light manufacturing or processing to very large steel mills. Most industries, commercial buildings and businesses generate some type of identifiable waste. However, some of these generate waste that needs to be discharged either into neighboring water bodies (streams, rivers) or into the air. To discharge wastes in these manners requires that a permit(s) be obtained, typically from the Pennsylvania Department of Environmental Protection (DEP).

Agricultural operations can sometimes affect water quality. The use of Best Management Practices including riparian buffers, Conservation Plans, and Nutrient Management Plans can help to control these affects.

Another type of pollution source in Berks County is septic effluent. When sewage is disposed of improperly due to poor soils and underlying geology, it may reach groundwater or surface water supplies and become a pollution source.

Septic effluent can be considered both a point and non-point source of pollution. Sewage treatment plants discharge effluent into streams or rivers often. In this way, the effluent has an identifiable source. However, it is more difficult to determine whether the homes in a development, or even if one house, is polluting water supplies with septic wastes. A stream that flows near a home or development may be high in bacteria such as coliform, which is associated with septic effluent but it may be very difficult to determine which home, if any, is the actual source of pollution.

Other non-point pollution sources in Berks County are attributed to homeowner landscaping applications carried away by stormwater. Homeowner and landscaping applications of herbicides, pesticides and nutrients are normally applied in excess of the needs of soil and plant conditions. Appropriate testing should occur prior to application. Once soil erodes from an area, surface water, groundwater or wind will carry it away. This soil, once it enters a stream, will become sediment and have detrimental effects on the stream's ecosystem. Generally, the precise source of sediment in a stream will be identifiable. Even though sediment is a natural material that is usually found in a stream, the abuse of the surrounding soils will often cause undesirable levels to accumulate to the point of it becoming a pollutant. It is important that riparian buffers are created and maintained to protect and reclaim waterways as they reduce the impact of stormwater runoff.

### K. Water Quantity and Quality Problems in Berks County

Water is evaluated by quality and quantity. While quantity problems can be severe, rarely do we hear of instances in Berks County where water is totally unavailable for an area. Quality problems however, can cause entire water systems to shut down and affect the health of all individuals who rely on the system. The Pennsylvania Department of Environmental Protection has established guidelines for potable water. Public water systems that fail to meet these guidelines face fines and penalties. Formal penalties, however, are of little comfort to residents who justly expect to receive uncontaminated water.

When a water quality problem affects public water systems, certain steps are taken. First, a clean source of water is obtained for customers. Second, the cause of the problem is determined. Finally, the necessary measures are taken to correct the problem.



Pollution of on-lot water wells can occur in a variety of ways. Septic tank malfunction is the most common, particularly in areas with poor soils. In Berks County, septic tanks in limestone soils can malfunction, allowing untreated wastewater to enter underground aquifers. Extremely wet or dry soils can also cause on-lot sewage systems to malfunction thus polluting groundwater. Industrial pollution and intensive agricultural activity can also cause groundwater pollution. Commercial agriculture production may impact both the quality and quantity of water supply sources. Lawful activities such as extraction of minerals impact water supply sources and such activities are governed by statutes regulating mineral extraction that specify replacement and restoration of water supplies affected by such activities. Although providing public water service is generally not as costly as providing public sewer service, correcting groundwater pollution is extremely difficult and expensive.

A decline in the amount of available groundwater accounts for most problems regarding on-lot water wells. Groundwater supplies fluctuate with weather conditions, increased withdrawals, and decreases in re-charge. It is rare that a single residential well will deplete an underground aquifer. However, large developments where each individual lot owner has his own well can burden underground water supplies and cause quantity problems. It is imperative that municipalities enforce stormwater management and water quality regulations.

### L. Stormwater Management

When it rains in urban and suburban areas, rainwater washes pollutants such as nutrients, chemicals, and heavy metals off impervious surfaces, lawns, or bare soils into storm drains that lead to streams and rivers. With increased amounts of impervious surfaces, larger quantities of rainwater reach the streams quickly causing flash flooding, stream bank scouring, and sedimentation of streambeds. Because of stream damage, litter, and pollution, stormwater has become a major concern in Pennsylvania impairing 4,170 miles of streams and accounting for one third of the problems facing our waterways.

The development of land, without adequate stormwater regulations, can create excess stormwater runoff, inadequate stormwater drainage, and reduced water quality.



Oil residue being carried into the stormdrain system by falling rain.

Under the 1987 Clean Water Act Amendments, the U.S. EPA developed new stormwater regulations to address stormwater that might impact water quality. These new regulations were set up in two Phases depending upon population. Phase I affected Allentown and Philadelphia and the Phase II portion of the regulation applied to about 1,000 municipalities in Pennsylvania. Those municipalities that are located within an “urbanized area” as defined by the 1990 Census and the 2000 Census were required to apply for a National Pollutant Discharge Elimination System (NPDES) permit to discharge stormwater from their municipal separate storm sewer system (MS4s).

Municipalities that are designated MS4 communities (Municipal Separate Storm Sewer Systems) by the EPA and DEP are required to control stormwater runoff through six minimum control measures. An MS4 is defined as: A state, city, town, borough, county, parish, district, association, or other public body which has a drainage system which conveys only stormwater (i.e. curbs, gutters, basins, storm pipes, ditches, swales, municipal streets).

The MS4 does not include pipes that convey sanitary sewage nor does it include the stormwater entering the system that receives treatment prior to entering local waterways.

The six minimum control measures (MCMs) are: 1. Public Education, 2. Public Participation, 3. Illicit Discharge Detection and Elimination, 4. Construction Site Storm Water Runoff Control, 5. Post-Construction Storm Water Management in New Development and Redevelopment, and 6. Pollution Prevention/Good Housekeeping for Municipal Operations Maintenance.

In addition to the six minimum control measures, permittees must have an Act 167 Stormwater Management Ordinance as well as Pollution Reduction Plan (PRP) or Total Maximum Daily Load Plan (TMDL) for impaired streams.

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## M. Loss of Sensitive Flora and Fauna

The most environmentally significant areas often support populations of extremely sensitive flora and fauna. Unfortunately, these areas due to their natural beauty and unique features attract development as well.

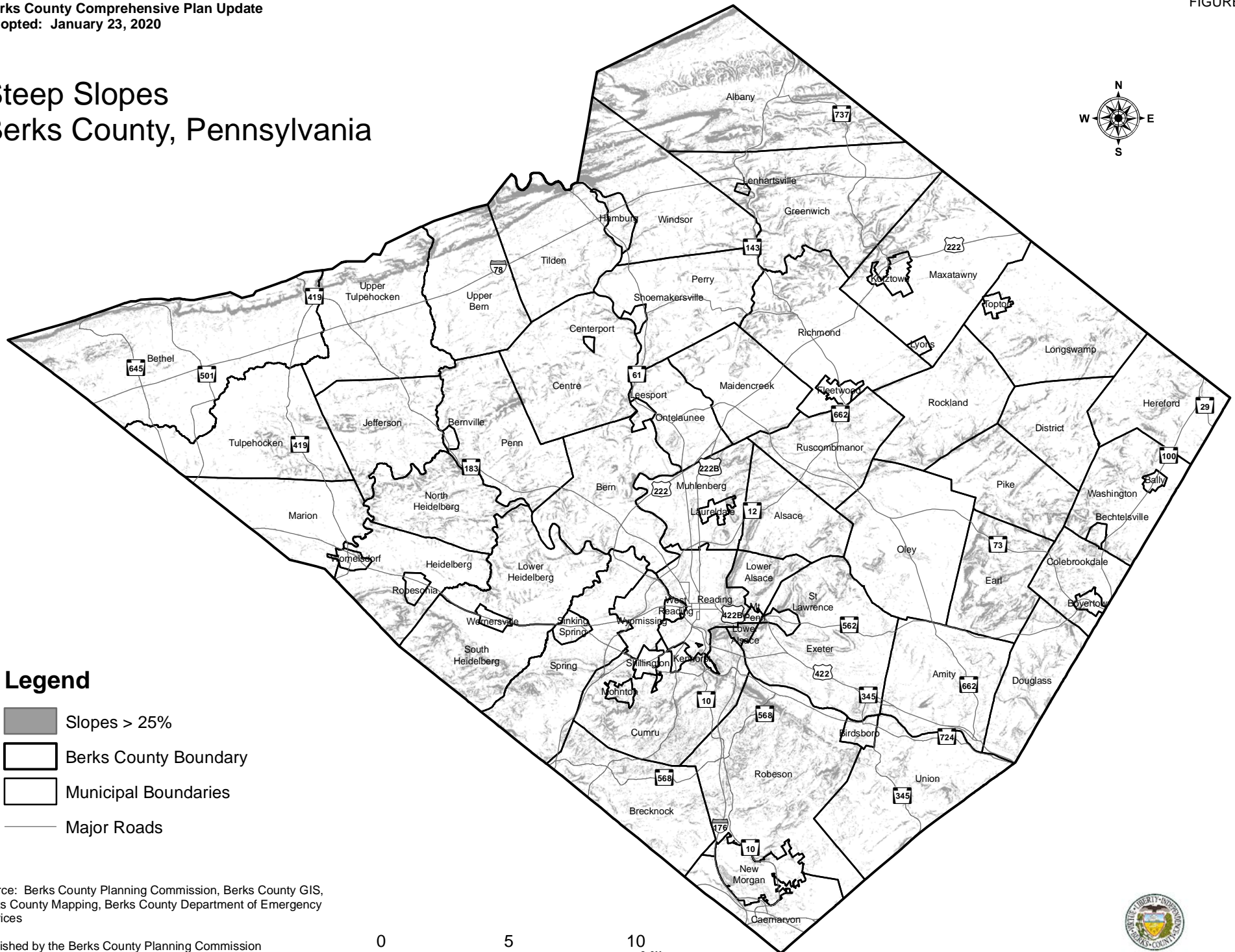
In Berks County environmentally sensitive regions exist in a number of forms accounting for the majority of the non-agricultural open land remaining in the County. Bogs, swamps, marshes, meadows, grasslands, open fields, deciduous and evergreen forests, mountains, streams, lakes and even caverns are all environmentally sensitive areas within Berks County. These areas are environmentally significant because they provide habitat for threatened or endangered plants or animals. These species and the environmentally significant areas are found in the Berks County Natural Heritage Inventory. The inventory was compiled by the Pennsylvania Natural Heritage Program, Western Pennsylvania Conservancy. The most recent update was in 2014. The inventory can be viewed at <http://www.naturalheritage.state.pa.us/CNHI.aspx> .

Developers of environmentally significant land are required to do an environmental review of their site prior to construction. The review provides conservation information on biological diversity, protected lands, streams and other natural resources for planning purposes and also allows developers to screen a project area for potential impacts to threatened, endangered, and special concern species. Conservation measures and avoidance measures are reported for species identified in the review.









# Steep Slopes Berks County, Pennsylvania

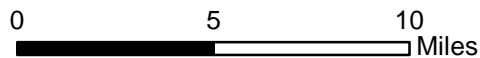


## Legend

-  Slopes > 25%
-  Berks County Boundary
-  Municipal Boundaries
-  Major Roads

Source: Berks County Planning Commission, Berks County GIS, Berks County Mapping, Berks County Department of Emergency Services

Published by the Berks County Planning Commission

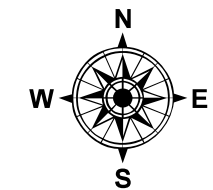
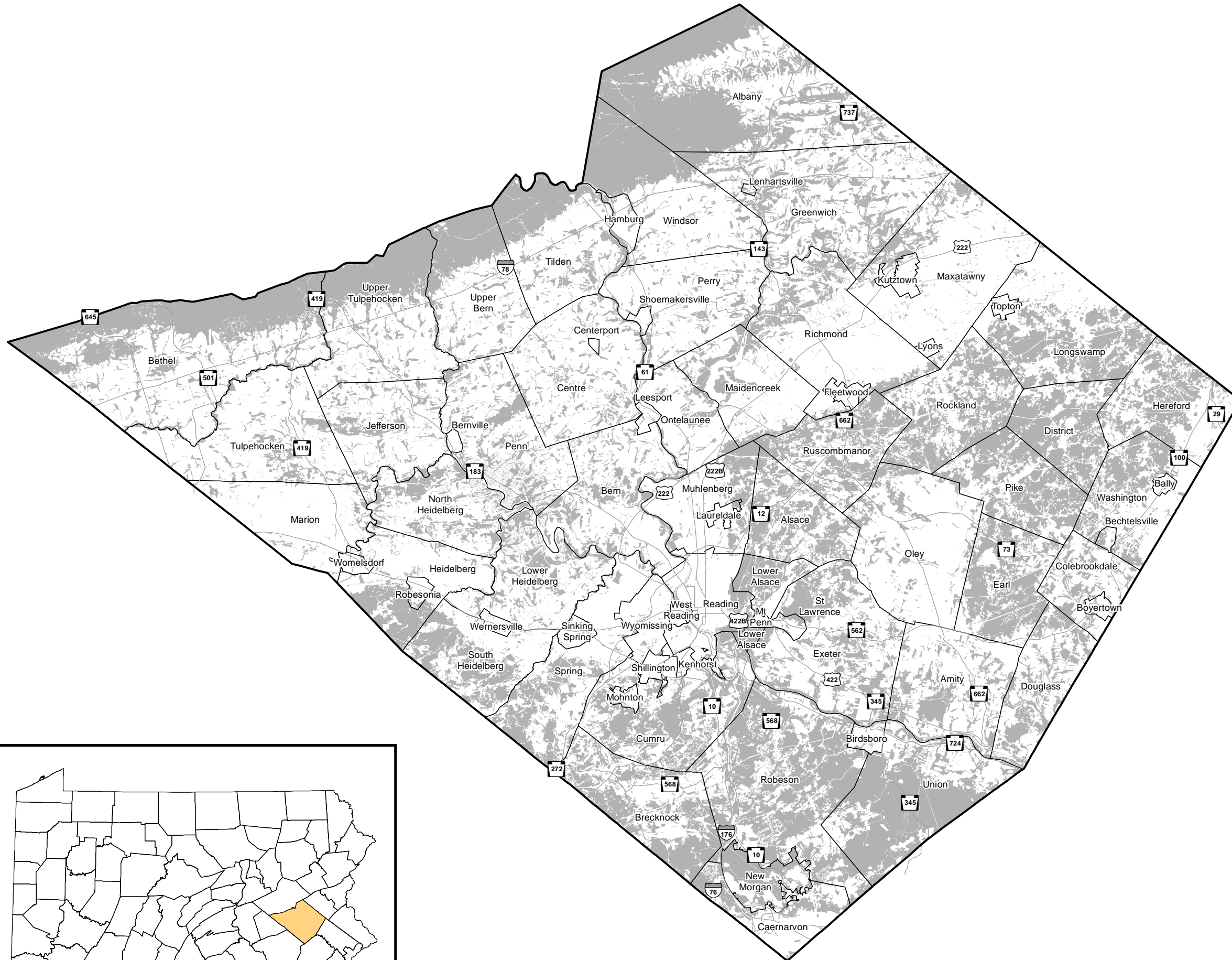






Berks County Comprehensive Plan Update  
Adopted: January 23, 2020

# Forested Areas Berks County, Pennsylvania

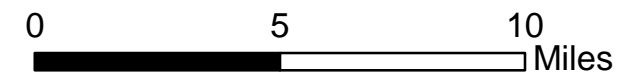
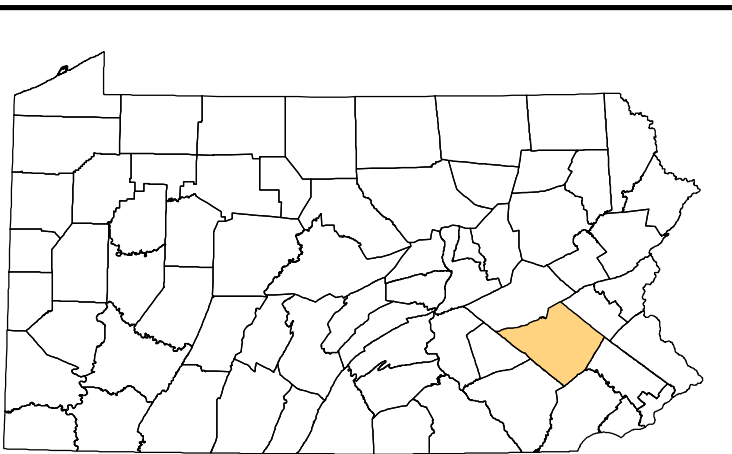


## Legend

-  Forested Areas
-  Berks County Boundary
-  Municipal Boundaries
-  Major Roads

Source: Berks County Planning Commission, Berks County GIS,  
Berks County Mapping, Berks County Department of Emergency Services  
Published by the Berks County Planning Commission

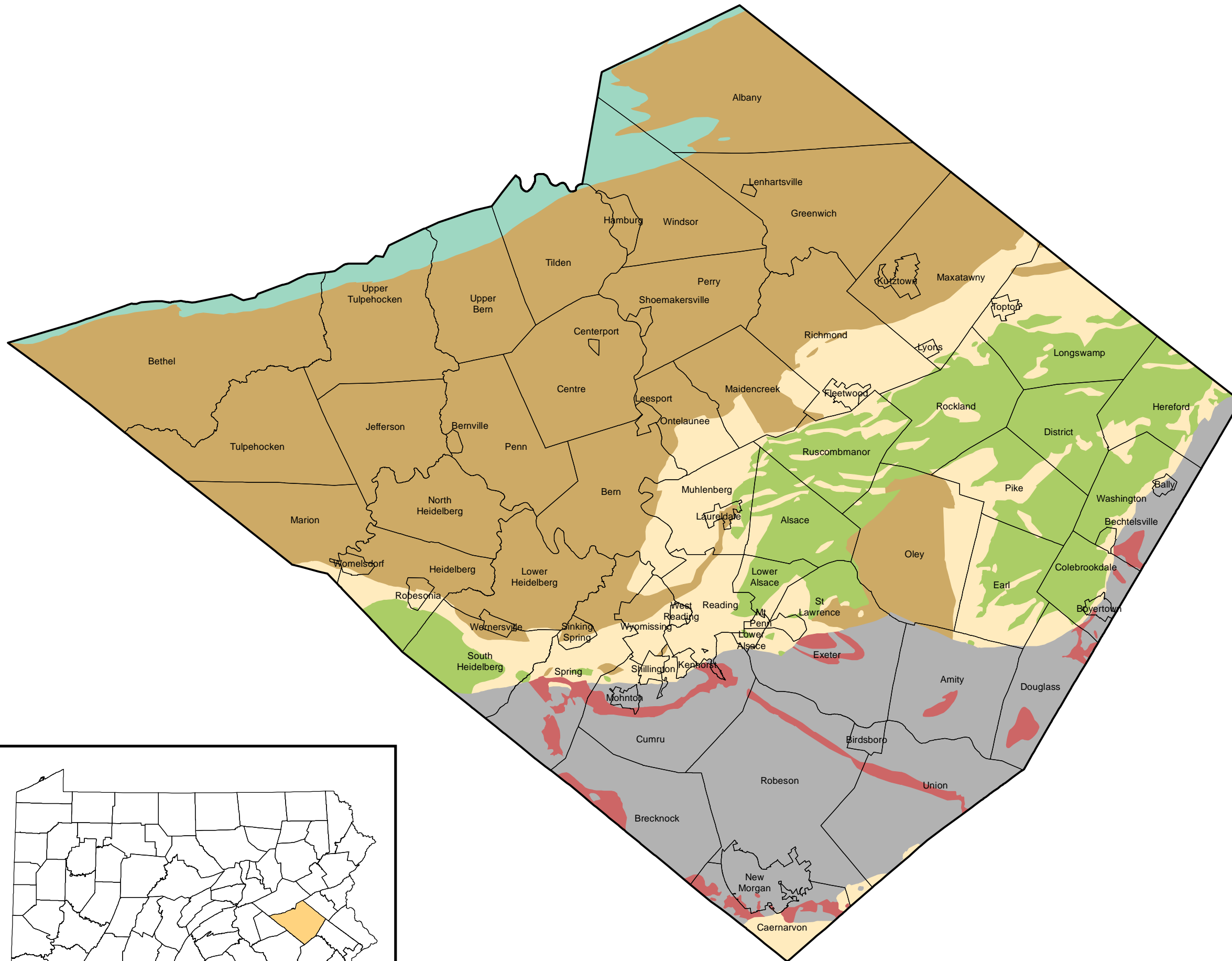
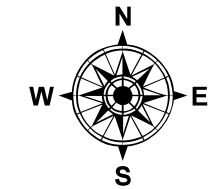
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Berks County Comprehensive Plan Update  
Adopted: January 23, 2020


# Geology Berks County, Pennsylvania



### Legend

-  Berks County Boundary
-  Municipal Boundaries

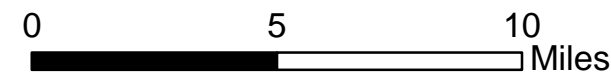
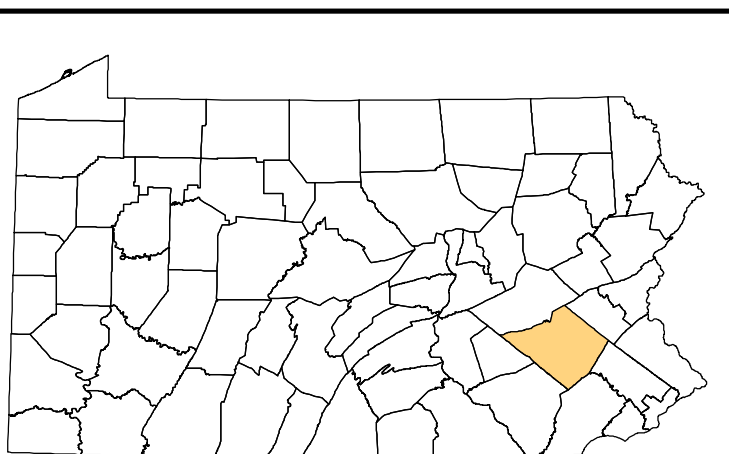
### Geologic Period

-  Precambrian
-  Cambrian
-  Ordovician
-  Silurian
-  Triassic
-  Jurassic

Source: Berks County Planning Commission, Berks County GIS, Berks County Mapping, Pennsylvania Bureau of Topographic and Geologic Survey, Department of Conservation and Natural Resources

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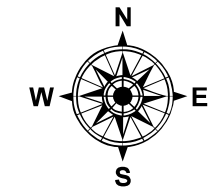
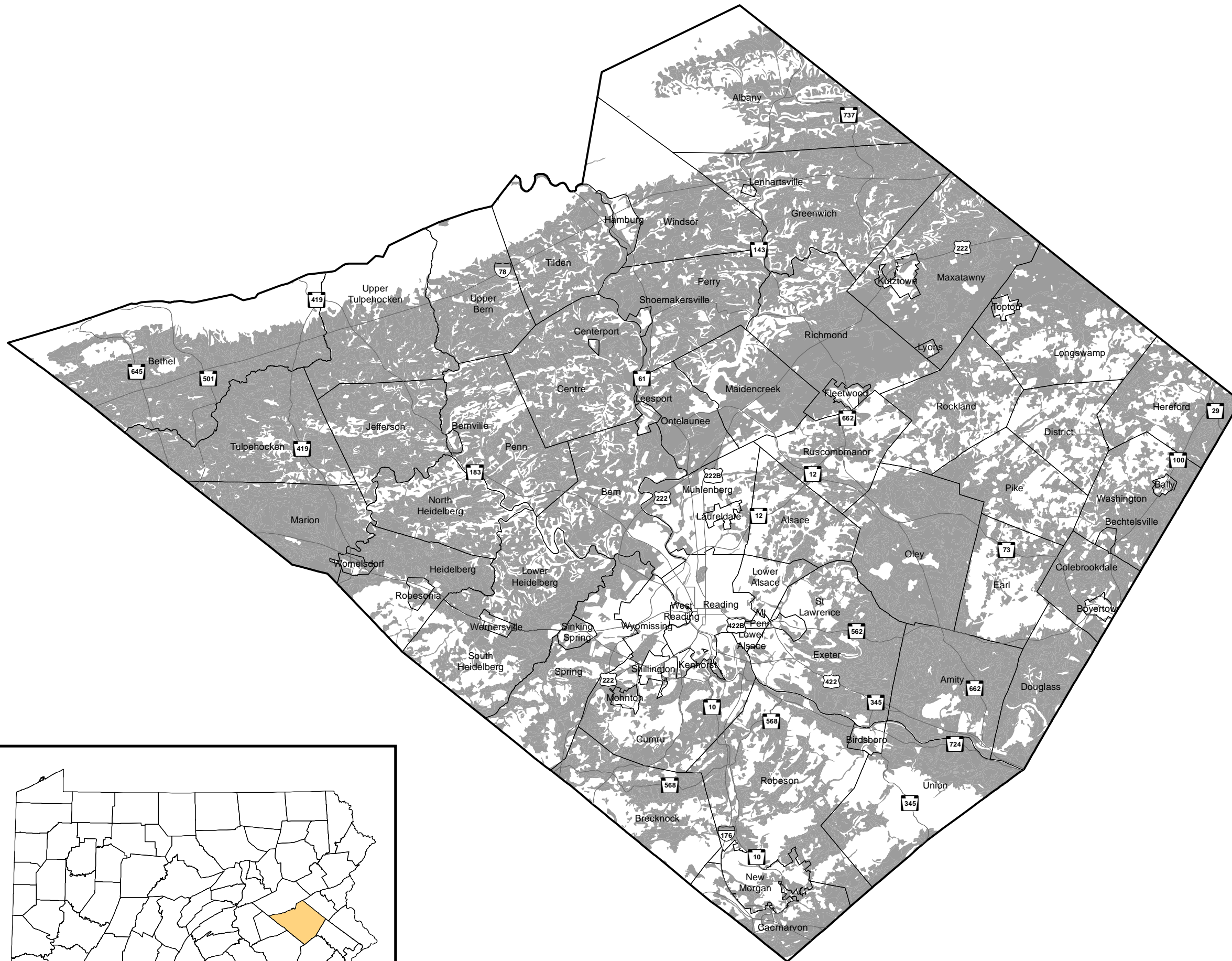






Berks County Comprehensive Plan Update  
Adopted: January 23, 2020

# Agricultural Soils Berks County, Pennsylvania



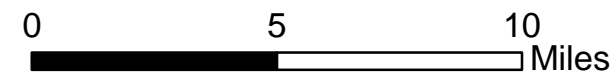
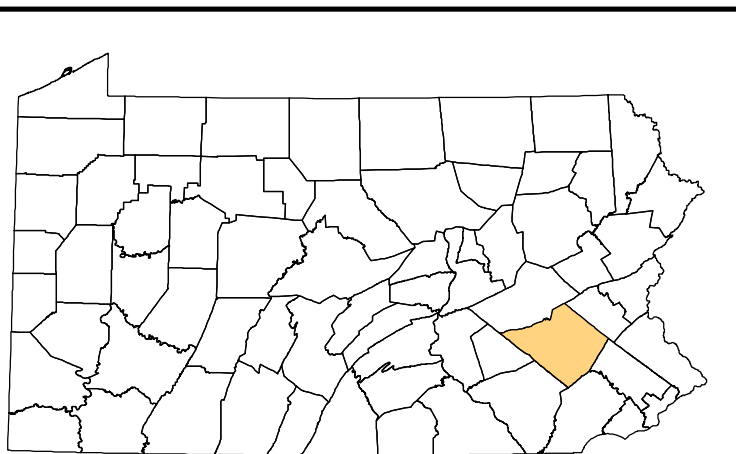
## Legend

-  Agricultural Soils (Class I-IV)
-  Soils (Class V-VIII)
-  Berks County Boundary
-  Municipal Boundaries
-  Major Roads

Source: Berks County Planning Commission, Berks County GIS, Berks County Mapping, Berks County Department of Emergency Services, USDA NRCS

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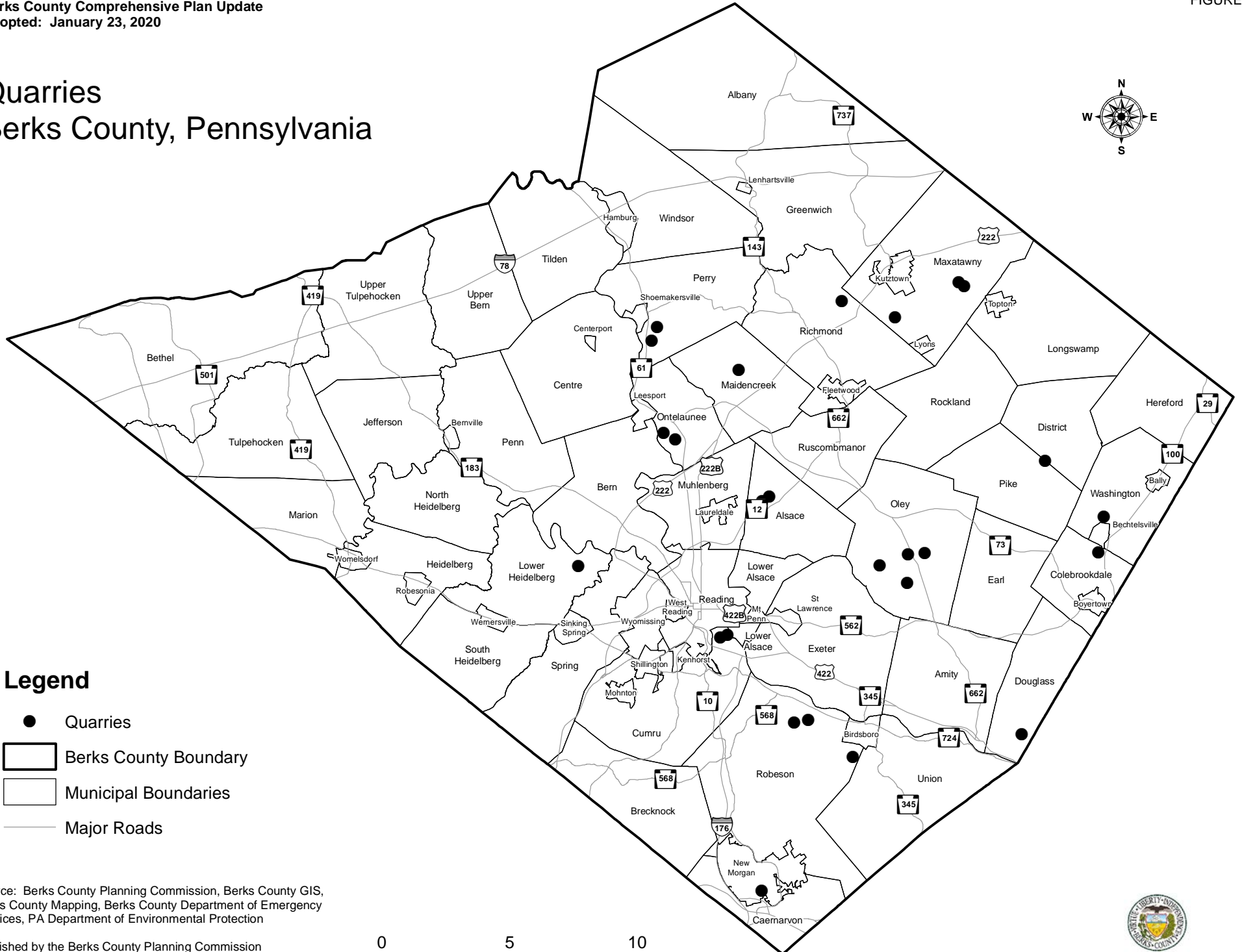
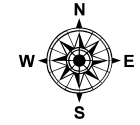






# Quarries

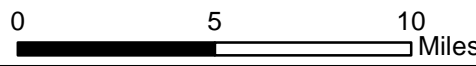
## Berks County, Pennsylvania



### Legend

- Quarries
- Berks County Boundary
- Municipal Boundaries
- Major Roads

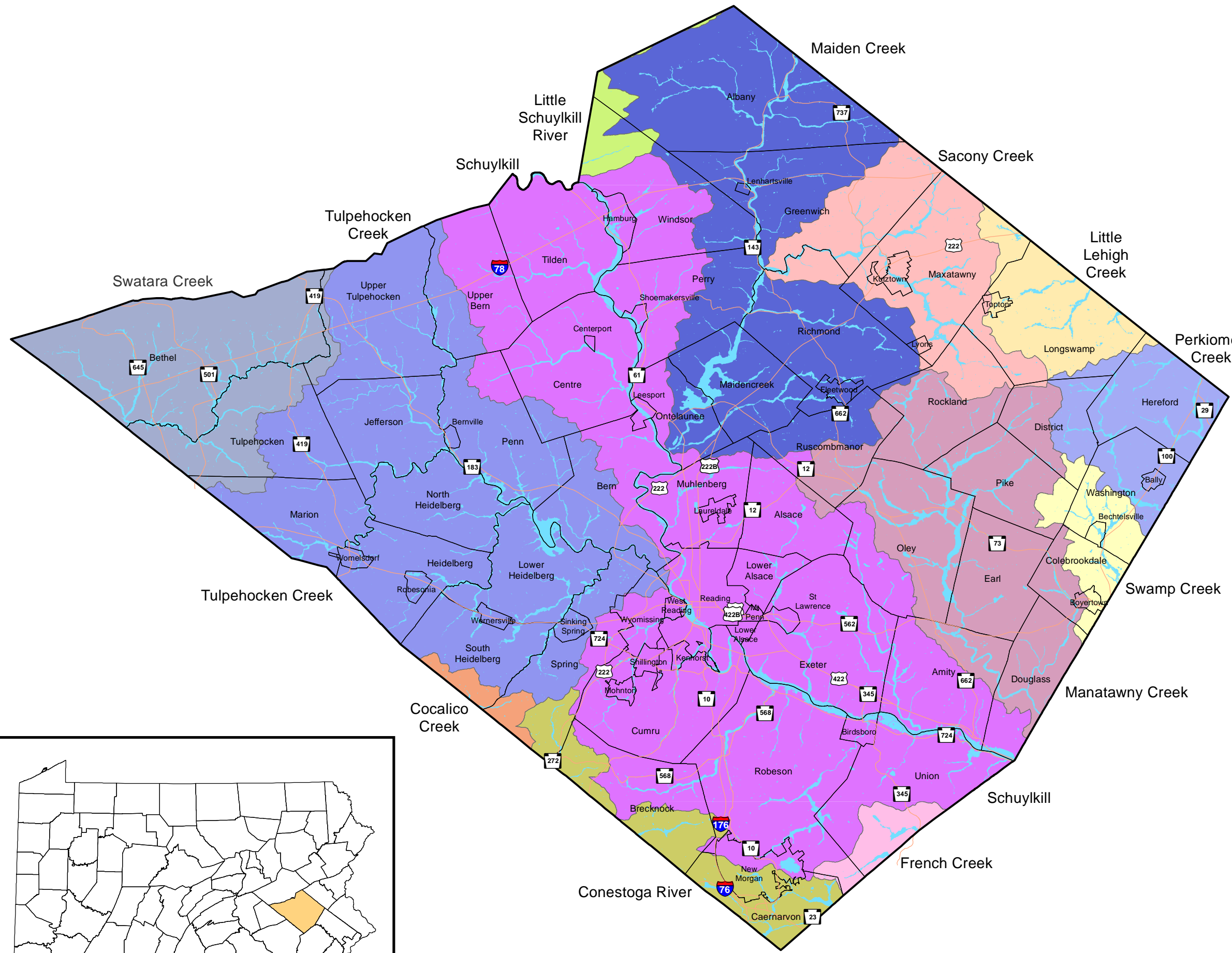
Source: Berks County Planning Commission, Berks County GIS, Berks County Mapping, Berks County Department of Emergency Services, PA Department of Environmental Protection





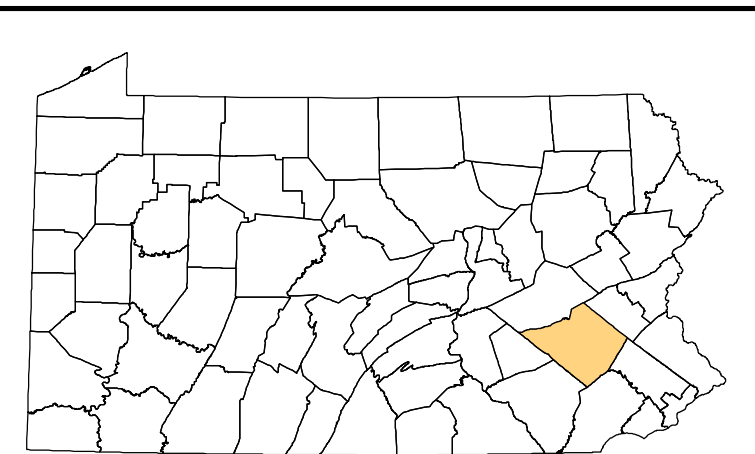
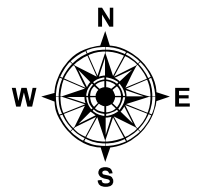
Berks County Comprehensive Plan Update  
Adopted: January 23, 2020

# Water Resources Berks County, Pennsylvania



### Watersheds

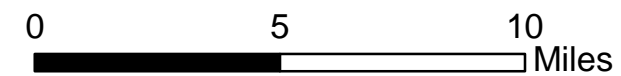
- Cocalico Creek
- Conestoga River
- French Creek
- Little Lehigh Creek
- Little Schuylkill River
- Maiden Creek
- Manatawny Creek
- Perkiomen Creek
- Sacony Creek
- Schuylkill
- Swamp Creek
- Swatara Creek
- Tulpehocken Creek
- Water Bodies
- 1% Floodplains
- Berks County Boundary
- Municipal Boundaries
- Major Roads



Source: Berks County Planning Commission, Berks County GIS, Berks County Mapping, Berks County Department of Emergency Services, FEMA (Latest Effective Date: March 21, 2017)

Published by the Berks County Planning Commission

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# Chapter 4 - Energy Conservation



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**ENERGY CONSERVATION**

**A. Introduction**

As the population grows, and with it increased energy dependence, our non-renewable energy resources are being exhausted at an increasing rate. Energy conservation needs to be given a higher priority than ever before. How we use our resources, and how technology can lessen the negative effects of energy production, will have a profound impact on future generations. As business, industry and the public become more aware of energy concerns, changes will have to be made in land uses, development types, and transportation technologies.

Energy conservation has increasingly become a topic of discussion throughout Berks County. Many organizations are focusing training and education resources on energy conservation techniques and practices. As non-renewable sources of energy are being depleted, the costs associated with production and manufacturing of energy related resources is growing. More people are looking for ways to become educated and informed about other options available to help reduce energy associated costs. As the public becomes more aware of energy conservation techniques and practices, more people will want to incorporate and use them. This will require municipalities, the private sector, and residents to become more active in promoting and permitting energy conservation techniques throughout Berks County.

As of July 2016, Berks County was ranked #6 for solar panel installations in Pennsylvania. As a result, solar-related jobs have grown rapidly with 779 solar related jobs being added in Berks County in 2016. Berks County now employs 850 people in solar industry-related jobs making it the number one county for these jobs in Pennsylvania as of December 2017. This rapid increase resulted in solar-related production increases within the battery manufacturing industry, such as East Penn Manufacturing and EnerSys, having to shift more of their production to solar-related goods.

**B. Wind, Solar, and Geothermal Energy**

Harnessing the kinetic energy from wind movement, light energy from the sun, and heat energy from inside the earth can save on energy production and reduce the amount of non-renewable resources needed to create energy. Using these forms of energy reduces the amount of pollution created from the burning of non-renewable resources and fossil fuels.

Wind turbines, also referred to as windmills, convert wind energy into electricity. Wind passing over the turbine blades causes the blades to move. Many larger wind turbines are used for commercial wind farms. These farms contain multiple wind turbines and connect to an electrical grid to provide power. Wind farms can create between a minimum of 100 kilowatts to several megawatts of electricity. The smaller wind turbine systems that generate less than 100 kilowatts are generally used for individual needs.



Photovoltaic systems convert light energy from the sun into electricity. These systems consist of cells which are generally composed of crystalline silicon. Multiple cells are usually put together to form a module, otherwise known as a solar panel. Multiple solar panels are generally used to generate enough power for a home or business. Groups of solar panels are connected to form arrays. Solar fields are essentially arrays that connect to an energy supplier’s power grid. Excess energy generated from the solar field that is not used can be sold back to the supplier company to provide additional power to the power grid. Geothermal energy converts the heat energy found inside the earth into heating and cooling for homes and businesses. Below the surface of the earth, the temperature remains a constant 50 to 60 degrees Fahrenheit throughout the entire year. A series of pipes is buried underground at a point where the temperature remains constant. The pipes are filled with fluid which connects to a compressor and an exchange system. In the summer, the fluid carries the heat from the structure into the pipes in the ground where it cools. When it comes back up to the exchange system the cooler fluid helps cool the structure. In the winter, the fluid warms slightly and is carried up to the exchange system to help warm the structure.

## **Chapter 4 - Energy Conservation**

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### **C. Incentives**

The separation of land uses that require more driving, the underuse of public transportation, and the increase on energy dependent devices all waste energy and promote pollution. Incentives help encourage the public to transition from energy demanding habits to energy conserving habits.

The U.S. Department of Energy offers tax credits and rebates up to a certain amount for specific energy-saving products as funding is available. However, this source for rebates is expected to taper off in 2019. Tax credits can be offered for various items such as biomass stoves, non-solar water heaters, and roofing. Rebates can be offered for certain appliances that reduce energy consumption. To obtain many of the incentives, the products are generally required to be considered ENERGY STAR qualified. ENERGY STAR is a labeling program, created jointly by the U.S. Environmental Protection Agency and the U.S. Department of Energy, that identifies appliances, various electronic devices, and much more as being considered an energy conserving product. Generally, those products rated as an ENERGY STAR product, consume less energy. Use of ENERGY STAR products can save money for the consumer as well as contribute to conserving energy.

Many energy generating companies are providing incentives for their consumers as funding is available. Some companies provide programs that can help identify areas in a home or business where energy is being lost or wasted and offer solutions to the problems. Many companies offer rebates on larger appliances that conserve water and energy use such as ENERGY STAR qualified washers and refrigerators. The Metropolitan Edison Sustainable Energy Fund of Berks County administered by the Berks County Community Foundation provides grants and loans to organizations and small businesses. The grants and loans are divided into six types: biomass, education, efficiency/conservation, solar, wind, as well as energy audit programs. From conception in 2000 through December 31st 2017, 64 Berks County projects have been provided with grants and/or loans through this fund.

Using energy efficient vehicles can reduce the amount of non-renewable resources being consumed. Many newer vehicles are being created to address the consumption of gas and alternative forms of energy. Several vehicle manufacturers are developing hybrid vehicles that operate using gasoline and another form of energy, usually electric.

Incentives are available through the Alternative Fuels Incentive Grant Program and the Alternative Fuels Technical Assistance Program provided by the Pennsylvania Department of Environmental Protection. These incentive programs are available for school districts, municipal authorities, political subdivisions, nonprofit entities, corporations, limited liability companies or partnerships incorporated or registered in Pennsylvania. They are in place in hopes to improve the Commonwealth's air quality and reduce the consumption of imported oil through the use of domestic alternative fuels which will in turn help the state's environment and economy.

### **D. Building Considerations**

This Comprehensive Plan uses smart growth principles to guide the created policies. Smart growth principles also aid in establishing groundwork for energy conservation in Berks County. It reduces infrastructure costs and promotes energy conservation through its ten principles. Consideration for the type of materials and the way buildings/structures are constructed can also greatly reduce dependence on energy. According to the EPA, "Smart growth is development that serves the economy, the community, and the environment by supporting healthy communities while creating economic development and jobs." Green building corresponds well to this concept as it promotes energy and water conservation, preserves open spaces through brownfield redevelopment, and has access to public transportation.

Green, sometimes referred to as sustainable, building involves using practices and techniques through all the phases of the development process that minimize and reduce negative environmental impact. The development process includes everything from siting and design, to maintenance, renovation, and demolition. Green buildings reduce negative impacts on human health, minimize air pollution generated during all phases of development, and minimize waste. In addition, they reduce negative impacts by efficiently using energy, water, and other resources.

In 2000, the U.S. Green Building Council, a non-profit organization, developed the Leadership in Energy and Environmental Design (LEED) building certification system. The system rates buildings based on key elements of environmental and human health. Some of these elements include sustainable site design, water efficiency, energy efficiency, materials

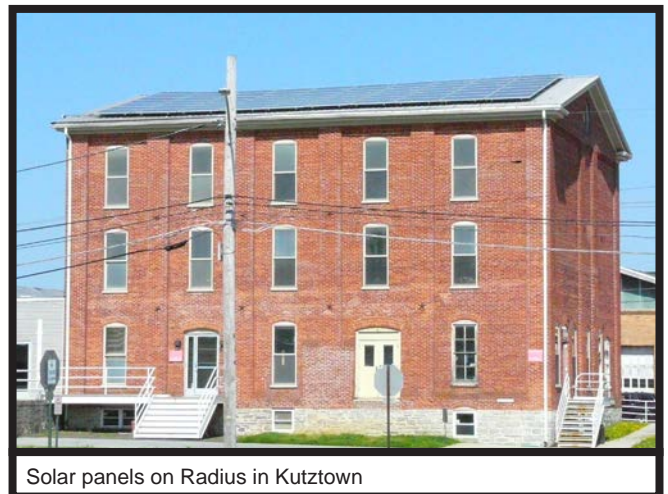
selection, and indoor environmental quality. The projected outcome of a building being LEED certified is that the building will have lower operating costs, increased asset value, reduce waste to landfills, conserve energy and water, reduce harmful greenhouse gas emissions, and be healthier and safer for occupants.

### E. Examples of Energy Conservation in Berks County

In 2010, Berks County educated its employees through the Berks Energy Expo. Northeast Energy Services Company, Inc. (NORESKO) informed employees about conservation techniques they could do to help the county conserve energy. Simple things, such as turning lights off in restrooms and shutting down computers at night all help reduce energy consumption. The infrastructure of many county facilities has been improved by weatherizing them through sealing cracks along windows and joints to minimize the amount of unwanted air infiltration. The county also has replaced many of the older lighting fixtures with newer, more energy efficient fixtures. As technology progresses and financing becomes available, the county will continue to upgrade its facilities to make them more energy efficient.

The Berks County Community Foundation building, located at Third and Court Streets in Reading, is the first building in Berks County to receive Platinum LEED certification. One feature of the building is a 5,000 gallon cistern located in the basement that stores rainwater that is used for flushing toilets. The building used recycled materials in its construction as well. Stairs were made from boards that were removed from boardwalks in Coney Island, N.Y. and countertops were made from recycled glass chips and shredded U.S. currency. The building faces south to allow more natural daylight to be used for lighting while trees along the front are a source of shading and cooling for the building. As of 2019 there are nineteen buildings across Berks County that have achieved LEED certification at various levels. There are another six buildings in the process of evaluation to achieve LEED certification.

Energy conservation is being noticed as a visible change across the landscape of Berks County. Many residents and businesses are incorporating solar panels and windmills on their properties to help reduce their own energy costs. Solar panels for individual use can be seen in many municipalities including Bern Township, Ontelaunee Township, and Laureldale Borough. Solar fields can be seen in Caernarvon Township and Ontelaunee Township. Windmills can be seen outside of Shoemakersville and in Tilden Township. Constructed by Mid-Atlantic Renewable Energy Association, the Kempton Fairgrounds has one of the first windmills erected in Berks County. Many municipalities have updated their ordinances to include provisions for these energy conservation structures. However, several municipalities still need to consider incorporating policies to address these types of structures.



School districts are beginning to incorporate energy conservation infrastructure into new and existing structures. The Reading School District incorporated a green roof into the new design of its Millmont Elementary and 6th Grade Magnet School in 2008. The green roof can help keep the building cooler in the summer by absorbing some of the heat, and keep the building warmer in the winter by acting as an insulator and retaining heat. The Conrad Weiser School District is adding a geothermal system to its existing West Elementary School. By installing and using a geothermal system in the facility, the system will pay for itself over time due to the lesser costs associated with its operation while reducing the carbon footprint for this structure.

In 2017, Berks Area Regional Transportation Authority (BARTA) had a total of sixteen hybrid buses in its fleet of public transportation vehicles. In 2018, BARTA plans to replace seven diesel buses in its fleet with another seven hybrid buses. The buses run on a combination of diesel and electric power. These buses use less fuel and do not put as many pollutants into the air because of the ability for the bus to run on either diesel fuel or electric power.

## Chapter 4 - Energy Conservation

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### F. Energy Conservation Policies

**Energy Conservation Goal:** To conserve energy through land use and transportation planning methods and education.

#### a. Energy Awareness

**Goal:** To promote education on energy conservation techniques and practices.

**Policies:**

- (1) The county will encourage public and private organizations to participate in educational programs that promote the benefits of energy-saving techniques and technologies.
- (2) The county will increase the awareness of employees on the benefits of energy conservation practices in county-owned buildings and facilities.
- (3) The county will support state and federal programs and incentives for energy conservation.
- (4) The county will promote the environmental and energy-saving benefits of recycling materials and water conservation.
- (5) The county will promote weatherization programs for all types of buildings.

#### b. Involvement

**Goal:** To promote the wise use and conservation of all energy resources.

**Policies:**

- (1) The county will promote renewable energy sources such as geothermal, wind, and solar.
- (2) The county will encourage municipalities to incorporate energy conservation regulations into their municipal ordinances.
- (3) The county will encourage residents to use energy efficient light bulbs, appliances, and devices.
- (4) The county will encourage municipalities and developers to incorporate and provide infrastructure for energy efficient vehicles through local comprehensive plan and ordinance updates and in all land development reviews where appropriate.
- (5) The County will encourage municipalities and developers to incorporate and provide infrastructure for sidewalks and multiuse trails through local comprehensive plan and ordinance updates and in all land development reviews where appropriate.

#### c. Building Conservation

**Goal:** To incorporate into the development process new energy-efficient technologies while, at the same time, using site and architectural designs and location choices that take advantage of existing energy and transportation resources.

**Policies:**

- (1) The county will promote energy-saving upgrades to existing and new structures where appropriate.
- (2) The county will continue to incorporate energy conservation techniques throughout County-owned facilities.
- (3) The county will encourage and promote LEED standards in new and existing structures.
- (4) The county will encourage subdivision designs that maximize passive solar energy, and incorporate landscaping techniques that reduce heating and cooling requirements.
- (5) The county encourages green development and structures.



# Chapter 5 - Historic and Cultural Resources



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### HISTORIC AND CULTURAL RESOURCES

#### A. Introduction

The county recognizes the importance of historic structures and the impacts associated with them. For example, historic resources provide a sense of place and identity within a community. Restored historic structures and areas attract visitors and can serve as educational resources. For these reasons, it is important to consider historically significant structures, sites, and districts in the planning process.

#### B. Community Identity

Many factors combine to create a community's distinct identity. The identity can be a blend of special geography, architecture, history, and economic activity. Pennsylvania's terrain and the extensive early transportation system that connected agricultural areas to urban areas led to a variety of building types and communities of different levels of complexity. Building materials were influenced by the type of resources that were locally available. The type and degree of economic activity determined building location, density and architectural style.

All too often our modern construction methods, retail chains, shopping centers and transportation facilities cause each community to look and feel the same. This problem is not confined to Berks County. A community's identity usually develops over time and is authentic. It is difficult to create this identity from scratch. Therefore, it is very important that a community understand and protect its important characteristics. The implementing actions may involve acquiring important properties, implementing appropriate development standards, or creating historic preservation districts.

Adhering to smart growth principles should be the central strategy for any community that wishes to maintain its identity. Re-enforcing existing architectural styles, landscaping, and road networks will better integrate new development into an existing community. Mature communities include essential retail stores, playgrounds and other community needs within walking distance of most homes. The county's goal is to maintain this sense of close community and extend that philosophy into new subdivisions.

The City of Reading is the most densely populated area of the county and is located at the center of the Schuylkill River and our transportation system. It contains a wealth of historic and entertainment highlights. Like many cities across the nation, the City of Reading is also presented with a number of serious challenges that impact the integrity of its neighborhoods and business activity. Planning and design issues that promote the city's history and a walkable environment will be very important features of any redevelopment activities in Reading.

To help preserve its historical integrity, the City of Reading established a Historical Architectural Review Board (HARB). Through their Historic and Conservation Districts Ordinance, historic districts are identified and policies for structures in those districts are addressed. Architectural exterior alterations are reviewed by the City of Reading HARB prior to the completion of the changes.

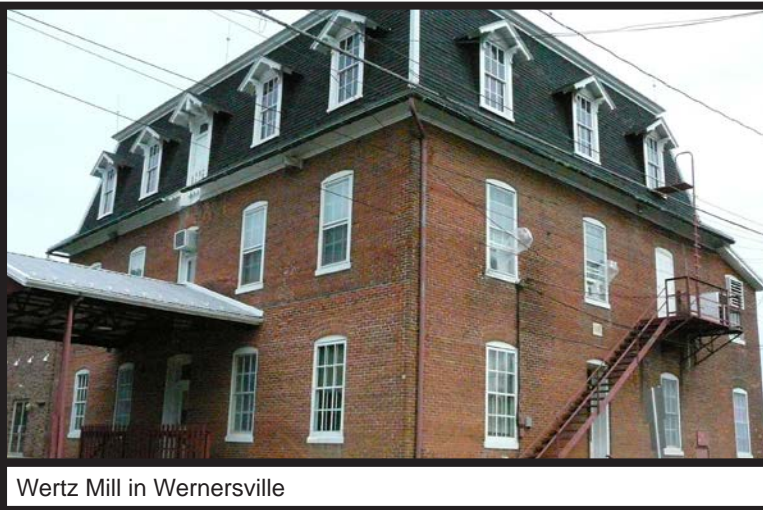
Berks County's regional identity is a mixture of its Pennsylvania Dutch agricultural tradition and early manufacturing and transportation industries. This history and our geography strongly influence our development patterns, activities, and entertainment and tourism industry. It is important that we build upon these values while also incorporating new styles and technology into our local culture.

#### C. Historic and Cultural Resources

Cultural resources are the physical evidence or place of past human activity. These areas can include structures, sites, or landscapes that are significant to a particular group of people that were associated with the area. A variety of this physical evidence can be found in the various museums that exist throughout Berks County. The Boyertown Museum of Historic Vehicles preserves our local road transportation history while the Mid-Atlantic Air Museum at the Reading Regional Airport preserves the aviation history of the area. In addition, Berks County has several other museums that preserve some of the



## Chapter 5 - Historic and Cultural Resources



Wertz Mill in Wernersville

cultural resources of the area which include the Reading Railroad Heritage Museum, Reading Public Museum, Berks Military History Museum, Central Pennsylvania African American Museum, and Pennsylvania German Cultural Heritage Center.

Berks County has a multitude of historic structures distributed throughout the county that contribute to the physical evidence and cultural identity of the area. Due to the sheer numbers, this document will focus only on those identified and registered on the National Register of Historic Places. The National Register of Historic Places is the official list of the nation's cultural resources worthy of preservation. This list includes bridges, churches, homesteads, farms,

furnaces, gristmills, schools, manufacturing buildings, and several historic districts, including the Township of Oley. Entry in the National Register gives recognition to the historical, architectural or cultural merits of the property.

Properties listed on the register receive consideration during the review of federal projects and may qualify for federal preservation tax credits or other preservation assistance when available. The efforts of numerous public and private agencies and individuals over the years have resulted in a substantial number of historic sites in the county being added to the National Register of Historic Places. Since 1989, listings of Berks County sites on the Register have increased from 78 to approximately 136, including multiple historic districts. Several historic sites have been restored to their original period appearance and have been opened to the public. Some of the sites, such as Hopewell Village, French Creek, Daniel Boone Homestead, Allegheny Aqueduct and the Gruber Wagon Works are significant components in the county's system of open space and recreation areas, as noted in the Berks County Greenway, Park and Recreation Plan. The table after the historic resources policies identifies the sites, structures and districts that have been placed on the National Register of Historic Places.

The Pennsylvania Historical and Museum Commission (PHMC) was established in 1945 to preserve, interpret, and collect information on Pennsylvania's historical resources. PHMC provides guidance for preservation planning through a variety of plans and educational opportunities. As well, there are several grants for historic preservation available through PHMC to further aid in preserving historic and cultural resources in Pennsylvania.

In an effort to assist local municipalities plan for preservation, the Berks County Planning Commission has developed and maintains a historic database for Berks County. The Berks County Historic Resources database was established with assistance from local historical societies, individuals, and organizations including PHMC. This database provides location and architectural information, as well as the historic resources' status on the National Register. Images of the historic resource are also included in the database. The database is available online as an interactive map. More information on the historic resources database and the interactive map is available on the Berks County Planning Commission website at <http://www.co.berks.pa.us/Dept/Planning/Pages/HistoricResources.aspx>.

### D. Historic Resources Policies

**Historic Resources Goal:** To preserve and promote community, cultural, historical, and aesthetic elements that identify Berks County as a special place to live and work.

#### a. Neighborhood Design

**Goal:** To maintain and enhance the character of established villages, towns, boroughs, and the city. To welcome new neighborhoods that have their own sense of community while blending with existing surrounding development and open space.

**Policies:**

- (1) The county encourages municipalities to incorporate design regulations into their land use ordinances that will help maintain and enhance local character and prevent it from being degraded.
- (2) The county encourages municipalities to allow for appropriate mixed-use development in areas zoned for greater densities to promote walking, community identity, and a sense of place.
- (3) The county supports regulations for redevelopment and adaptive reuse that take into account surrounding land uses, impact on traffic and parking patterns, and maintenance/enhancement of properties.
- (4) The county will support regulations that promote new development that is visually interesting, blends with the surrounding landscape, and allows for the creation of neighborhoods, not just developments.
- (5) The county will encourage sign regulations that keep signs at a scale consistent with community character.
- (6) The county will encourage rural open space preservation, while at the same time allowing for new development that blends in with natural surroundings.

#### b. Community Awareness

**Goal:** To promote and protect the people, places, and things that make Berks County distinctive to its residents and visitors.

**Policies:**

- (1) The county will promote its heritage resources as a destination for travelers and tourists through various forms of media.
- (2) The county will encourage local historic preservation organizations to identify historic resources and develop a plan for preservation of the resources.
- (3) The county will promote Reading and its surrounding urban area as the cultural, social, and economic center of Berks County.
- (4) The county will encourage new construction to be consistent with existing architecture and materials.

#### c. Historic and Cultural Resources

**Goal:** To recognize historic preservation and cultural resources as a means of retaining community character, providing affordable housing, and assisting economic development.

**Policies:**

- (1) The county encourages public and private entities to work together to identify and protect historic resources.
- (2) The county encourages economic development organizations to include historic preservation as a component of economic development strategies.
- (3) The county supports revision and enforcement of codes and regulations to promote the preservation of historic buildings.
- (4) The county will assist municipalities seeking information about historic preservation and, when necessary, refer them to the appropriate agencies.

## **Chapter 5 - Historic and Cultural Resources**

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- (5) The county will promote land use regulations that consider historic resources and help retain the character of rural villages.
- (6) The county encourages training for municipal officials in land use and historic preservation issues, and how they relate to economic development.
- (7) The county will continue to update the Greenway, Park and Recreation Plan, which includes recommendations regarding historic preservation.



## Chapter 5 - Historic and Cultural Resources

<b>National Register of Historic Places - Berks County Sites</b>					
	<b>Resource Name</b>	<b>Address</b>	<b>City/Municipality</b>	<b>Year Listed</b>	<b>Miscellaneous</b>
1	Allegheny Mennonite Meetinghouse	39 Horning Rd.	Brecknock Township	2009	Funerary, Religion
2	Allegheny Aqueduct	PA 724 and Allegheny Creek	Gibraltar	1984	Water-Related Transportation
3	Askew Bridge	N. 6th St. near Woodward St.	Reading	1973	Rail-Related Transportation
4	Bahr Mill Complex	Ironstone Dr.	Gilbertsville, Colebrookdale Township	1990	Gristmills in Berks County MPS
5	Barto Bridge	LR 284 over tributary to Perkiomen Creek	Barto	1988	Highway Bridges Owned by the Commonwealth of Pennsylvania, Department of Transportation TR
6	Bellman's Union Church	SW of Centerport off Rt. 726	Centerport	1973	Religion
7	Berk, Daniel, Log House	S of Albany on Maiden Creek	Albany, Albany Township	1977	Domestic, Secondary Structure
8	Berkley Historic District	Section of Snyder Rd. between PA 61 and Berkley Rd.	Ontelaunee Township	2002	Multiple Functions
9	Bethel A.M.E. Church	119 N. 10th St.	Reading	1979	Religion
10	Bishop, John, House	Perkiomen Ave.	Reading	1985	Single Dwelling, Domestic
11	Boone, Daniel, Homestead Site and Bertolet Cabin	2 mi. N. of Birdsboro	Birdsboro, Albany Township	1972	Agriculture/Subsistence, Domestic
12	Boonecroft	Oley Line Rd.	Douglassville	1982	Domestic
13	Borneman Mill	Off PA 100 SW of Clayton	Bally, Washington Township	1990	Gristmills in Berks County MPS
14	Boyer-Mertz Farm	Jct. of Noble St. and Bastian Rd.	Kutztown, Maxatawny Township	1992	Agriculture/Subsistence, Domestic
15	Bridge in Albany Township	LR 06173 over Maiden Creek	Steinsville	1988	Highway Bridges Owned by the Commonwealth of Pennsylvania, Department of Transportation TR
16	Brobst Mill	Off T 814 on Pine Cr.	Lenhartsville, Albany Township	1990	Gristmills in Berks County MPS
17	Christman, Philip, House	1 mi. SE of Bally at the Berks	Bally	1973	Agriculture/Subsistence, Storage
18	City Hall	8th and Washington Sts.	Reading	1982	Education, School
19	Cotton and Maple Streets School	Cotton and Maple Sts.	Reading	1986	Education, School

## Chapter 5 - Historic and Cultural Resources

	Resource Name	Address	City/Municipality	Year Listed	Miscellaneous
20	Curtis and Jones Company Shoe Factory	702 North 8th Street	Reading	2014	Industry
21	Dale Furnace and Forge Historic District	Forgedale Rd. NW of Bally	Bally, Washington Township	1991	Iron and Steel Resources in Pennsylvania MPS
22	Dauberville Bridge	Belleman's Church Rd. over Schuylkill River	Dauberville	1988	Highway Bridges Owned by the Commonwealth of Pennsylvania, Department of Transportation TR
23	Davies House	Berkley Rd.	East Berkley	1982	Commerce/Trade, Domestic
24	Deisher, H. K., Knitting Mill	56 Noble St.	Kutztown	1985	Industry/Processing/Extraction, Manufacturing Facility
25	Douglass, George, House	19 Old Philadelphia Pike	Amity Township	2009	Commerce/Trade, Domestic, Department Store, Single Dwelling
26	Dreibelbis Mill	Jct. of Dreibelbis Mill and Bellevue Rds.	Shoemakersville, Perry Township	1990	Gristmills in Berks County MPS
27	Dreibelbis Station Bridge	S of Lenhartsville on T 745	Kutztown, Greenwich Township	1981	Berks County Covered Bridges TR
28	Dreibelbis, Joel, Farm	PA 143	Virginville	1989	Agriculture/Subsistence, Domestic
29	First National Bank in Fleetwood	Main and Franklin Sts.	Fleetwood	2005	Commerce/Trade, Government, Social, Financial Institution, Meeting Hall, Post Office
30	Fisher, Henry, House	About 1.25 mi. N of Yellow House on PA 662	Yellow House, Oley Township	1973	Domestic
31	Foos, Charles S., Elementary School	Douglass and Weiser Sts.	Reading	1983	Education, School
32	French Creek State Park Six Penny Day Use District	7 mi. NE of Morgantown on PA 345	Morgantown	1987	Emergency Conservation Work (ECW) Architecture in Pennsylvania State Parks: 1933-1942, TR
33	French Creek State Park: Organized Group Camp 4 District	7 mi. NE of Morgantown on PA 345	Reading	1987	Emergency Conservation Work (ECW) Architecture in Pennsylvania State Parks: 1933-1942, TR
34	Gehman, John, Farm	Township Rd. N of Harlem	Seisholtzville, Hereford Township	1992	Farms in Berks County MPS
35	Geiger Mill	Jct. of Mill Rd. and PA 82	Geigertown, Robeson Township	1990	Gristmills in Berks County
36	Grand View Dairy Farm	Preston Rd. S of Wernersville	Wernersville, South Heidelberg Township	1992	Farms in Berks County MPS

## Chapter 5 - Historic and Cultural Resources

	Resource Name	Address	City/Municipality	Year Listed	Miscellaneous
37	Greisemer's Mill Bridge	NW of Boyertown on T 579	Oley, Oley Township	1981	Berks County Covered Bridges TR
38	Griesemer-Brown Mill Complex	Brown's Mill Rd. at Monocacy Cr.	Birdsboro, Amity Township	1990	Gristmills in Berks County MPS
39	Grimshaw Silk Mill	1200 N. 1100 St.	Reading	1985	Industry/Processing/Extraction, Manufacturing Facility
40	Gruber Wagon Works	W of Reading off PA 183 in Tulpehocken Creek Park	Reading	1972	Industry/Processing/Extraction, Manufacturing Facility
41	Guldin Mill	Off PA 73 SE of jct. with US 222	Blandon, Maiden creek Township	1990	Gristmills in Berks County
42	Hain Mill	Jct. of Hain Mill Rd. and T 495	Wernersville, Lower Heidelberg Township	1990	Gristmills in Berks County
43	Hamburg Armory	N. Fifth St., S of I-78	Hamburg	1991	Pennsylvania National Guard Armories MPS
44	Hamburg Historic District	Roughly Bounded by Franklin, Windsor, Walnut and Second Sts., Quince, Primrose, Peach and Plum Alleys and Mill Creek	Hamburg	2010	Commerce/Trade, Domestic, Education, Industry/Processing/Extraction, Religion, Transportation
45	Hamburg Public Library	35 N. Third St.	Hamburg	1988	Education, Library
46	Hampden Firehouse	1101 Greenwich St.	Reading	1982	Government, Social
47	Hartman Cider Press	Keim Rd., 1.1 mi. W of Lobachsville	Lobachsville	1988	Agriculture/Subsistence
48	Hendel Brothers, Sons and Company Hat Factory	517-539 S. 5th St.	Reading	1979	Commerce/Trade, Industry/Processing/Extraction
49	Hopewell Furnace National Historic Site	R.D. #1, Box 345, 5 mi. S of Birdsboro	Elverson	1966	Domestic, Industry/Processing/Extraction
50	Hotel Abraham Lincoln	100 N. 5th Street	Reading	2017	Hotel
51	Hottenstein Mansion	2 mi. E of Kutztown on U.S. 222	Kutztown, Maxatawny Township	1972	Domestic
52	Hunter's Mill Complex	Forgedale Rd.	Hereford Township	1988	Agriculture/Subsistence, Domestic, Industry/Processing/Extraction, Landscape
53	Ironstone Bridge	Farmington Ave. over Ironstone Creek	Morysville	1988	Highway Bridges Owned by the Commonwealth of Pennsylvania, Department of Transportation TR

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	Resource Name	Address	City/Municipality	Year Listed	Miscellaneous
54	Joanna Furnace Complex	N of Morgantown on PA 10	Morgantown, Robeson Township	1980	Industry/Processing/Extraction, Energy Facility
55	Johnson, Nicholas, Mill	Mill Crest Rd.	New Berlinville, Colebrookdale Township	1990	Gristmills in Berks County MPS
56	Kauffman Mill	Jct. of Mill and Mill Hill Rds.	Shartlesville, Upper Bern Township	1990	Gristmills in Berks County MPS
57	Keim Homestead	W of Lobachsville	Lobachsville, Pike Township	1974	Domestic
58	Kemp's Hotel	E of Kutztown on US 222	Kutztown, Maxatawny Township	1978	Domestic
59	Keystone Hook and Ladder Company	Second and Penn Sts.	Reading	1985	Government, Fire Station
60	Kissling Farm	Brownsville Rd. E of Robesonia	Robesonia, Heidelberg Township	1992	Farms in Berks County MPS
61	Knabb-Bieber Mill	Bieber Mill Rd. at Monocacy Cr.	Stony Creek Mills, Oley Township	1990	Gristmills in Berks County MPS
62	Knorr-Bare Farm	4995 Penn Ave.	Sinking Spring, Lower Heidelberg Township	1992	Farms in Berks County MPS
63	Kutz Mill	Kutz Mill Rd. at Sacony Cr.	Kutztown, Greenwich Township	1990	Gristmills in Berks County MPS
64	Kutz's Mill Bridge	NW of Kutztown on T 798	Kutztown, Greenwich Township	1981	Berks County Covered Bridges TR
65	Kutztown 1892 Public School Building	White Oak and Normal Ave.	Kutztown	1980	Education, School
66	Leesport Lock House	Wall St.	Leesport	1977	Commerce/Trade, Domestic, Restaurant
67	Leiby, Jacob, Farm	PA 143	Virginville, Perry Township	1992	Farms in Berks County MPS
68	Lenhart Farm	Jct. of U.S. 22 and PA 143	Lenhartsville	1978	Agriculture/Subsistence, Domestic
69	Lerch Tavern	182-184 W. Penn Ave.	Wernersville	1979	Commerce/Trade, Department Store, Restaurant
70	Levan Farm	PA 562	St. Lawrence, Exeter Township	1978	Agriculture/Subsistence, Domestic
71	Liberty Fire Company No. 5	501 S. 5th St.	Reading	1985	Government, Fire Station

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	Resource Name	Address	City/Municipality	Year Listed	Miscellaneous
72	Lincoln, Mordecai, House	Lincoln Rd.	Lorane	1988	Domestic
73	Lindbergh Viaduct	US 422/Mineral Spring Rd. over Mineral Spring Cr.	Reading	1988	Highway Bridges Owned by the Commonwealth of Pennsylvania, Department of Transportation TR
74	Livingood House-Stryker Hospital	417-419 Walnut St.	Reading	1996	Domestic, Health Care
75	Log House, Hiester House, and Market Annex	30 S. 4th St.	Reading	1979	Commerce/Trade, Domestic
76	Long-Hawerter Mill	Longsdale Rd. at Little Lehigh Cr.	Topton, Longswamp Township	1990	Gristmills in Berks County MPS
77	Lutz, John F., Furniture Co. & Funerary	3559 and 3561 St. Lawrence Ave.	St. Lawrence	1996	Commerce/Trade, Domestic, Funerary, Industry/Processing/Extraction
78	Mary Ann Furnace Historic District	Centennial Rd. SE of Longswamp	Longswamp, Longswamp Township	1991	Iron and Steel Resources in Pennsylvania MPS
79	Meinig Glove Factory-Meinig, E. Richard, Co.	621-641 McKnight St.	Reading	1985	Industry/Processing/Extraction, Manufacturing Facility
80	Merit Underwear Company	43 E. Noble Ave.	Shoemakersville	1996	Industry/Processing/Extraction, Manufacturing Facility
81	Merkel Mill	Dreibelbis Station Rd. at Maiden Cr.	Lenhartsville, Greenwich Township	1990	Gristmills in Berks County MPS
82	Merkel Mill Complex	Jct. of PA 662 and PA 143	Virginsville, Richmond Township	1990	Gristmills in Berks County MPS
83	Metropolitan Edison Building	412 Washington St.	Reading	1983	Commerce/Trade, Business
84	Mill Tract Farm	NE of Stonersville on Mill Rd.	Stonersville, Exeter Township	1977	Agriculture/Subsistence, Domestic
85	Mill at Lobachsville	Mill Rd. at Pine Cr.	Lobachsville, Pike Township	1990	Gristmills in Berks County MPS
86	Morgantown Historic District	Roughly, area surrounding Main St. bet. Walnut and Washington Sts.	Morgantown, Caernarvon Township	1995	Commerce/Trade, Domestic, Religion
87	Moselem Farms Mill	Jct. of PA 662 and Forge Rd.	Moselem, Richmond Township	1990	Gristmills in Berks County MPS



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	Resource Name	Address	City/Municipality	Year Listed	Miscellaneous
88	Moyer, John Nicholas and Elizabeth, House	152 Hetrick Rd.	New Shaefferstown, Jefferson Township	2001	Domestic
89	Old Dry Road	3 mi. (4.8 km) NW of Wernersville on Highland Rd.	Wernersville, Lower Heidelberg Township	1978	Agriculture/Subsistence, Domestic
90	Old Main at the Lutheran Home at Topton	1 S. Home Avenue	Longswamp Township	2015	Domestic, Institutional Housing, Orphanage
91	Old Swede's House	Old Philadelphia Pike	Douglassville	1974	Domestic
92	Old St. Gabriel's Episcopal Church	U.S. Route 422	Douglassville, Amity Township	1978	Religion
93	Oley Township Historic District	PA 73	Oley Township	1983	Agriculture/Subsistence, Commerce/Trade, Domestic, Industry/Processing/Extraction
94	Pagoda	Mount Penn, at jct. of Duryea Dr. and Skyline Blvd.	Reading	1972	Domestic, Hotel
95	Pine Forge Mansion and Industrial Site	Pine Forge Rd. and Douglass Dr.	Pine Forge, Douglass Township	2004	Agriculture/Subsistence, Domestic, Industry/Processing/Extraction
96	Pleasantville Bridge	S of Maxatawny on T 916	Oley, Oley Township	1981	Berks County Covered Bridges TR
97	Queen Anne Historic District	Roughly bounded by Robeson St., N. Third St., RR Tracks and Clinton St.	Reading	2004	Commerce/Trade, Domestic, Government, Industry/Processing/Extraction, Recreation and Culture, Religion
98	Reading Country Club	5311 Perkiomen Avenue	Exeter	2018	Industry/Processing/Extract, Recreation and Culture
99	Reading Hardware Company	Roughly bounded by Willow, S. 6th, and Canal Sts., and alleyway	Reading	1997	Commerce/Trade, Industry/Processing/Extraction
100	Reading Hardware Company Butt Works	537 Willow St.	Reading	1979	Industry/Processing/Extraction, Manufacturing Facility
101	Reading Knitting mills	350 Elm St.	Reading	1982	Commerce/Trade, Industry/Processing/Extraction
102	Red Men Hall	831-833 Walnut St.	Reading	2000	Commerce/Trade, Social
103	Reiff Farm	SW of Oley on T 454	Oley, Oley Township	1982	Agriculture/Subsistence, Domestic
104	Rhoads-Lorah House and Barn	1832 Old Swede Rd.	Amity Township	2007	Agriculture/Subsistence, Domestic

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	Resource Name	Address	City/Municipality	Year Listed	Miscellaneous
105	Ridgewood Farm	Jct. of PA 724 and I-176	Seyfert, Cumru Township	1992	Farms in Berks County MPS
106	Rieser Mill	Jct. of Grange and Cross Keys Rds.	Leesport, Bern Township	1990	Gristmills in Berks County
107	Rieser-Shoemaker Farm	Cross Keys Rd.	Leesport, Bern Township	1992	Farms in Berks County MPS
108	Robesonia Furnace Historic District	Furnace, S. Church and Freeman Sts. And Mountain and E. Meadow Aves.	Robesonia	1991	Iron and Steel Resources in Pennsylvania MPS
109	S Bridge	LR 06024 over Tulpehocken Creek	Sheridan	1988	Highway Bridges Owned by the Commonwealth of Pennsylvania, Department of Transportation TR
110	Sally Ann Furnace Complex	SW of Topton	Topton, Rockland Township	1976	Domestic, Industry/Processing/Extraction
111	Schaumboch's Tavern	NW of Hamburg on Hawk Mountain Rd.	Hamburg, Albany Township	1979	Commerce/Trade, Restaurant
112	Schlegel, Christian, Farm	Fleetwood-Lyons Rd.	Fleetwood, Richmond Township	1992	Farms in Berks County MPS
113	Seyfert Mill	Jct. of Old US 22 and Campsite Rd.	Strausstown, Upper Tulpehocken Township	1990	Gristmills in Berks County MPS
114	Siegfried's Dale Farm	Siegfried's Rd.	Maxatawny, Maxatawny Township	1984	Agriculture/Subsistence, Domestic, Education
115	Snyder Mill	Oley Line Rd. at Monocacy Cr.	Limekiln, Exeter Township	1990	Gristmills in Berks County MPS
116	Spannuth Mill	Jct. of Frystown and Crosskill Creek Rds.	Frystown, Bethel Township	1990	Gristmills in Berks County MPS
117	Spicker, Peter, House	150 Main St.	Stouchsburg	1983	Domestic
118	St. Michael's Protestant Episcopal Church, Parish House and Rectory	Mill and Church Sts.	Birdsboro	1982	Religion
119	Stein Mill	PA 737 at Mill Cr.	Kutztown, Greenwich Township	1990	Gristmills in Berks County MPS
120	Stirling	1120 Centre Ave.	Reading	1980	Domestic
121	Stouchsburg Historic District	12 to 153 Main St. and Water St.	Stouchsburg	1985	Commerce/Trade, Domestic, Industry/Processing/Extraction
122	Stupp-Oxenrider Farm	Dundore Rd. NW of Robesonia	Robesonia, North Heidelberg Township	1992	Farms in Berks County MPS

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	Resource Name	Address	City/Municipality	Year Listed	Miscellaneous
123	Thompson Mill	Golf Course Rd. at Seidel Cr.	Gibraltar, Robeson Township	1990	Gristmills in Berks County MPS
124	Trexler Historic District	375-424 Old Philadelphia Pike	Albany Township	2001	Agriculture/Subsistence, Commerce/Trade, Domestic, Government, Industry/Processing/Extraction, Transportation
125	Trinity Lutheran Church	6th and Washington Sts.	Reading	1976	Funerary, Religion
126	Tulpehocken Creek Historic District	Tulpehocken and Mill Creeks from Berks-Lebanon line to Blue March Dam bet. Millardsville and Bernville	Stouchsburg	1985	Agriculture/Subsistence, Domestic, Industry/Processing/Extraction
127	Virginville Historic District	Main, 2nd, 1st, and Front Sts., and Chapel Dr.	Virginville, Richmond Township	2000	Agriculture/Subsistence, Commerce/Trade, Domestic, Government, Industry/Processing/Extraction, Religion
128	Wanner, Peter, Mansion	1401 Walnut St.	Reading	1987	Domestic
129	Weidner Mill	Blacksmith Rd. at Manatawny Cr.	Earlville, Amity Township	1990	Gristmills in Berks County MPS
130	Weiser, Conrad, House	2 mi. E of Womelsdorf	Womelsdorf	1966	Domestic
131	Wertz Mill	60 Werner St.	Wernersville	1990	Gristmills in Berks County MPS
132	Wertz's Covered Bridge	NW of Reading on T 921	Reading, Bern/Spring Townships	1978	Berks County Covered Bridges TR (AD)
133	White Horse Tavern	509 Old Philadelphia Pike	Douglasville	1975	Commerce/Trade, Restaurant
134	Wilhelm Mansion and Carriage House	730 Centre Ave.	Reading	1982	Domestic
135	Willson, Thomas A. and Co.	201 Washington St.	Reading	2006	Industry/Processing/Extraction, Manufacturing Facility
136	Womelsdorf Historic District	Roughly bounded by Water, 4th, Franklin and Jefferson Sts.	Womelsdorf	1982	Agriculture/Subsistence, Commerce/Trade, Domestic, Education, Government, Industry/Processing/Extraction
137	Yoder Mill	Yoder Rd. at Oysterville Cr.	Pikeville, Pike Township	1990	Gristmills in Berks County MPS

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**HOUSING**

**A. Housing Growth**

The county’s housing supply increased from 150,222 to an estimated 164,827 units between 2000 and 2010. This gain of 14,605 units represents an increase of 9.7%. While this rate reflects a modest increase, it appears as though the level of activity reached a plateau during the last two decades as depicted in the following table. This plateau appears to be continuing and following economic trends. Previous decades experienced housing unit growth of between 12 and 19 percent.

Unfortunately, trying to estimate housing growth between 2010 and 2015 is difficult. By Census Bureau American Community Survey estimates, Berks County’s housing stock grew by only 80 units. The Census Bureau’s annual Building Permit Survey, which counts permits issued (but not necessarily completed construction), estimates an additional 2,384 units. Locally-generated data from the Berks County Assessment Office, which counts completed units, shows an additional 2,637 units. No matter which estimate is used, extrapolating to 2020 shows a marked decrease in residential unit growth.

Historic Housing Unit Counts, Berks County: 1970-2015			
Year	Population	Increase	% Change
1970	101,027	-----	-----
1980	119,934	18,907	18.7
1990	134,482	14,548	12.1
2000	150,222	15,740	11.7
2010	164,827	14,605	9.7
2015 Estimate (ACS)	164,907	80	0.0
2015 Estimate (Building Permits)	167,211	2,384	1.4
2015 Estimate (Assessment)	167,464	2,637	1.6

Source: U.S. Bureau of the Census, Decennial Census counts and 2015 1-year ACS; U.S. Bureau of the Census, Annual Building Permit Survey; and Berks County Assessment Office

**B. Type**

The following table illustrates the housing growth by type between 2005 and 2015. These residential construction figures are based on information received from the Berks County Assessment Office. These units are added to the tax rolls when construction is complete and a municipality issues their occupancy permits. The peak year for residential construction activity during this period was 2006 when 1,767 net new units (new construction minus demolitions) were completed and occupied. The low year was 2011 when only 319 net new units were added.

The bulk of the county’s existing housing stock, as estimated by the 2010 American Community Survey, was composed of single-family detached (90,828 units) and attached homes (337,325 units). There were 31,407 multi-unit structures, and 5,301 mobile homes were also estimated. Since 2000, the most predominate construction type has been the single-family detached unit, as nearly 70% (12,229 units) of all new units in the county from 2000 - 2010 were of this type. Additionally, 1,016 townhouses (5.8%), 987 semi-detached units (5.6%), 1,251 mobile homes (7.1%), and 2,692 apartment units (15.4%) were added.



Construction of a new single-family home in Lower Heidelberg Township

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Residential Construction, Berks County: 2005-2015							
Year	Single Family	Semi - Detached	Town - houses	Apartment Units	Manuf. Homes	Demolitions	Net Total Units
2005	1,081	49	82	245	124	42	1,539
2006	1,293	50	87	313	111	87	1,767
2007	900	106	109	35	112	103	1,159
2008	627	87	98	250	105	84	1,083
2009	394	71	114	474	59	73	1,039
2010	345	44	51	33	66	65	474
2011	266	21	24	16	61	69	319
2012	279	52	31	192	63	75	542
2013	295	11	48	69	95	96	422
2014	246	7	32	231	53	73	496
2015	267	16	26	57	51	33	384

Source: Berks County Assessment Office

The table above clearly shows the effects of the nationwide economic downturn and a significant slowdown in new housing construction in Berks County. This trend mirrors the slowdown in population growth discussed in the Demographics section.

### C. Density

Urban development extends along the major highways, away from the City of Reading into the surrounding municipalities. The far northern and western sections of the county continue to have the lowest housing densities. Most of the municipalities in these areas have densities of less than 50 dwelling units per square mile (du/sq mi.). These figures reflect the predominance of agriculture in the area, and the existence of the Blue Mountain range. The overall county housing density, according to the 2010 Census, was approximately 191 du/sq mi. This is an increase from the 1990 Census which was 174 du/sq mi. All boroughs in the county, with the exception of New Morgan, have housing densities higher than those of the townships. Housing densities countywide based on 2010 Census counts can be seen in Figure 09.

### D. Tenure and Vacancy

Tenure is an occupancy characteristic of housing units and is probably one of the most important. "Tenure" is a term used by the Census Bureau to distinguish between units that are 'owner-occupied' and those that are 'renter-occupied'. By 2000, the percentage of rental housing units was steady (from 1990) at 26.1%, after showing decades of decreases. However, by 2010 that ratio showed a marked increase. According to the 2010 Census, the total number of occupied units in Berks County was 154,365 units, of which 110,653 (71.7%) were owner-occupied units and 53,703 (28.3%) were renter-occupied units. The increase in the number of rental units could also be an indicator of the economic downturn as it became easier for families to rent than to obtain a mortgage. Trends shown by the 2015 American Community Survey reveal a continuation of this pattern, with approximately 71.6% of the County's occupied units being owned and approximately 28.4% of them being rental units.

There was a higher concentration of owner-occupied units in townships, where rates of over 80% were common. Conversely, the City of Reading (57.6%) and Kutztown Borough (53.6%) had the highest percentage of rental units in the county. The high figure for Kutztown Borough can be attributed to Kutztown University and the attendant student population located there.

According to the 2010 Census, there were 10,471 vacant units in Berks County. This amounts to an overall vacancy rate of approximately 6.4%. Broken down further, the homeowner vacancy rate for Berks was 1.7% and the rental vacancy rate was 7.5%.

Housing Tenure, Berks County: 2000-2015				
Year	Occupied Units	Owner Occupied	Renter Occupied	Vacant
2000	141,570	73.9%	26.1%	8,652
2010	154,356	71.7%	28.3%	10,471
2015 Est.	151,792	71.6%	28.4%	13,115

Source: U.S. Bureau of the Census, Decennial Census counts and 2015 1-year ACS

## E. Residential Subdivisions

Endorsed subdivision plans reflect general development interest and do not necessarily represent actual construction and occupancy of housing units. However, this data yields information concerning near-term construction trends, the size and extent of development, and the types of houses that are in demand. When a subdivision plan has been approved and recorded, there is a high degree of likelihood that it will be built. However, this may take several years to fully implement.

The following table summarizes endorsed residential subdivision plans between 2000 and 2015. The total number of dwelling units proposed in the plans fluctuated annually, from a high of 2,596 units in 2005 to a low of 296 in 2011. The devastating effects of the economic downturn are clearly evident in the table, as the number of Total Residential Units drops significantly between 2005-2006 and again between 2006-2007, and then again from 2008-2009 and thereafter. Recovery has been slow to occur. While the predominant form of development has historically been single-family detached units, a recent increase in semi-detached, townhouse and apartment units is evident. The average acreage per dwelling unit fluctuated throughout the period of measure; however, it generally decreased throughout with the exception of 2000, then beginning in 2010 a generally increasing trend is noted. This typically reflects an overall reduction in proposed lot size that corresponds to the increase in attached units.

Residential Subdivision Plans (Proposed New Housing Units by Type), Berks County: 2000-2015								
Year	Single Family Detached	Semi – Detached	Town house	Apartment	Mobile Home	Total Residential Units	Total Residential Acreage	Total Average Ac./D.U.
2000	442	38	57	8	0	545	2,728	5.01
2001	850	141	56	0	0	1,047	1,319	1.26
2002	887	48	189	392	215	1,731	1,574	0.91
2003	1,396	42	145	98	1	1,682	1,971	1.17
2004	1,266	10	10	145	302	1,733	1,672	0.96
2005	1,413	242	570	366	5	2,596	2,035	0.78
2006	1,245	54	317	330	1	1,947	1,773	0.91
2007	420	82	121	260	0	883	1,179	1.33
2008	184	34	125	738	0	1,081	813	0.75
2009	121	22	52	370	63	628	474	0.75
2010	191	5	50	171	5	422	947	2.24
2011	170	10	0	116	0	296	506	1.71
2012	143	2	0	261	0	406	596	1.47
2013	126	263	0	204	2	595	565	0.95
2014	142	32	0	138	0	312	726	2.33
2015	89	2	104	182	0	377	574	1.52

Source: Berks County Planning Commission Annual Subdivision Reports

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### F. Housing Affordability

The cost of homes and home value data come from a variety of sources. Census and ACS 1-year estimates report current value of homes which is a self-reported value by the household. Home sales price data is collected by the Reading-Berks Association of Realtors based on actual sales data. The ACS reported the median value of owner-occupied housing units in Berks County was \$171,100 in 2015, and \$138,400 in 2005. In contrast, the Reading-Berks Association of Realtors home sales data reported the 2015 median sales price of a single-family home in Berks County was \$149,900, and \$182,041 in 2005. During this period, the median sales price peaked in 2007 at \$188,615, then dropped to \$149,519 in 2011 where it has remained flat through 2015. The ACS reported the median gross rent which reflects contract rent plus estimated average monthly cost of utilities and fuels was \$865 in 2015, up from \$785 in 2010 and \$630 in 2005.

According to the 2015 ACS, 33.7% of Berks County households were burdened by their housing costs. Housing cost burden occurs when a household spends more than 30% of their monthly household income on housing costs. Over 53.5% of renters were cost burdened compared to 26.3% of homeowners.

Following the 2007-2008 national financial crisis, foreclosure filings in Berks County rose to 1,622 homes in 2009, followed by an additional 1,610 foreclosures in 2010 as a number of homeowners had difficulty paying their mortgage. Since then there has been a steady decline in the number of foreclosures to 939 homes in 2017.

### G. Housing Programs

The majority of federal housing programs are administered either by the Department of Housing and Urban Development (HUD) or by the Farm Service Agency (FSA) of the Department of Agriculture. HUD and FSA administer a wide range of housing programs and provide direct and indirect housing assistance through their broad range of single and multi-family housing programs.

The Reading Housing Authority and the Berks County Housing Authority administer local public housing programs for low-income, elderly and handicapped persons. The majority of public housing in Berks County is located in the City of Reading and is operated by the Reading Housing Authority. The Authority manages 1,603 public housing apartment units and townhouses located in eight different developments throughout the City of Reading, including such developments as: Oakbrook Homes, Glenside Homes, and several high-rise apartments for the elderly. In addition, the Housing Choice Voucher Program (formerly Section 8) assists more than 600 city households in paying their rent to private landlords. The Berks County Housing Authority manages smaller developments outside the city. They own and manage 209 apartment units and townhouses located in nine different developments across Berks County, and their Housing Choice Voucher Program assists more than 500 county households.

Through a collaborative planning process the County of Berks and the City of Reading have developed a single, consolidated planning and application document for the use of federal entitlement grants from HUD to implement housing, community and economic development activities. The Redevelopment Authority of Berks County and the Reading Redevelopment Authority administer their allocations through the Community Development Block Grant (CDBG) Program for public facilities, infrastructure, housing, planning, and public service improvements; the HOME Program to expand the supply of quality affordable housing; and the Emergency Solutions Grant (ESG) Program for operations, maintenance and rehabilitation of homeless shelters, essential services for homeless persons, homelessness prevention activities, and rapid re-housing activities.

Housing is at the core of the lives of the residents of the City of Reading and to the city's tax base. Like many of the Commonwealth's cities of the third class, the city's housing stock faces many issues, such as aging properties, high renter-occupancy, multiple unit dwellings, and a higher than average vacant and/or abandoned units. These issues create problems for the city with registering and inspecting the rental unit properties while making sure the dwellings meet building codes. Aging properties require continual maintenance and repairs which in some areas of the city have not occurred. Vacancy and abandoned properties create problems with blight and is often times linked with crime. The *City of Reading's Act 47 Recovery Plan* states that 'A city that cannot afford to provide basic public services will not attract new or retain current residents-nor will a City whose services are inefficient or duplicative-and result in a higher tax rate than necessary.' The *Recovery Plan* has laid out initiatives to help address the housing issues. Home improvement and



maintenance has also become a burden for some households in other areas of the county outside the city resulting in sporadic blight and abandonment of properties countywide. Both the city and the county have Blighted Property Review Committees charged with the purpose of reducing or eliminating blighted areas. The committees work with property owners, private and non-profit partners to rehabilitate blighted properties or demolish the building for neighborhood reuse. One example of this is the Buttonwood Gateway neighborhood where many properties have been demolished in an effort to improve the quality of life in the neighborhood and increase the opportunity for economic revitalization.

### H. Senior and Special Needs Housing

According to the U. S. Census Bureau's ACS 2015 estimates, nearly 30% (122,325) of Berks County residents were 55 years and older, and 16% (67,198) of county residents were 65 years and older. These figures are up from 2010 when 109,460 residents were 55 years and older, and 59,558 residents were 65 years and older. As our baby boomers continue to age, it may present challenges for the housing market to create housing alternatives that address the range of housing preferences, income levels, lifestyle choices and limitations of our seniors. Many of our seniors desire to age in place, either in their own homes or with family members who can provide assistance. As of 2015, 30.9% of our households (46,842) include one or more people 65 years of age and over and 28.2% of our seniors ages 65 and over lived alone- 18,955 households. The Berks County Area Agency on Aging provides inventories of senior housing options, including subsidized housing, personal care homes and assisted living facilities, nursing homes, and continuing care retirement communities (CCRC) which provide a combination of independent living units, assisted living facilities, and nursing care within a development.



Populations with special needs are defined in a variety of ways and vary by entity and jurisdiction. For the purposes of this plan, special needs populations will be defined as persons with disabilities- having a mental or physical impairment that affects one or more major life activities such as, such as caring for one's self, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning, and working.

People with disabilities may reside in their own residences, temporarily in health-care facilities, or in housing with a supportive environment that includes a planned services component, such as assisted living facilities, foster or group homes, long-term facilities, and transition facilities. The ACS uses six basic disability types in their definition of disability, including having a hearing, vision, cognitive, ambulatory, self-care or independent living difficulty. As of 2015, the ACS estimated that 13.3% (54,470 persons) of Berks County's civilian non-institutionalized population have a disability, up from 12.8% (51,955) in 2010. These figures do not include adults living in institutions such as correctional facilities and nursing homes.

As our senior and special needs populations will likely grow, municipalities should explore ways to encourage universal design principles in new development projects, rebuilding after disasters, undertaking a redevelopment project or retrofitting existing homes. Universal design is a concept to produce a built environment and products that are aesthetic and usable by everyone, regardless of age, ability or status in life. This concept is all about ensuring that environments are functional, convenient and accessible to both people without disabilities and people with disabilities. Some of the more common universal design features are : no-step entry, one-story living, wide doorways and hallways, non-slip surfaces, grab bars in bathrooms, kitchens with pull-out shelves, lever door handles and rocker light switches. Homes accessible to persons with disabilities are just as convenient for the non-disabled as universal design features makes it easier to move furniture into and out of a home, maneuver a stroller, or get around if a household member sprains an ankle.



## Chapter 6 - Housing

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### I. Homeless

There is a growing homeless population within the county. The Point In Time Count (PIT) is a HUD initiative to capture a snapshot of homelessness on a single night every year. The 2014 Berks County PIT count of 605 persons was higher than any previous year reported. On January 29, 2014, in Berks County there were: 301 individuals and families staying in Emergency Shelters; 293 staying in Transitional Housing; and 11 persons counted as unsheltered and staying on the streets. As these Berks County residents struggle to live independently, a network of homeless service providers offer essential resources and a variety of programs to address the problem of homelessness and our at risk community residents. Providing assistance to at-risk individuals and families from becoming homeless is a key to keeping the community stable. The Berks Coalition to End Homelessness (BCEH) is a public and private partnership consisting of agencies, businesses and individuals all working toward preventing, reducing and ending homelessness through a comprehensive coordination of solutions and programs. According to the Berks County 2014-2015 Annual Homeless Assessment Report to Congress, 2,212 persons (including 676 youth under the age of 25, and 186 veterans) were served by Emergency Shelters, Transitional Housing Program, and Permanent Supportive Housing. The report notes that there are a variety of shelter and housing facilities available to the county's homeless population providing 737 beds.

### J. Housing Policies

**Housing Goal:** To provide every household with the opportunity for affordable, healthful, and diverse housing choices in locations compatible with the land use policies of this Plan, regardless of race, color, religion, sex, handicap, familial status or national origin.

#### a. Housing Supply

**Goal:** To provide an adequate supply of dwelling units to meet present and projected population.

**Policies:**

- (1) The county encourages municipalities to provide a variety of housing types to accommodate residents as their housing needs change.
- (2) The county encourages the rehabilitation of structurally sound houses and demolition of dilapidated structures.
- (3) The county supports an emphasis on total neighborhood improvement with adequate parking, recreation facilities, landscaping, and other amenities.
- (4) The county supports building neighborhood partnership teams between the municipality, neighborhood residents, institutions, and local businesses to sponsor improvement programs.
- (5) The county encourages efforts to increase home ownership opportunities in existing neighborhoods.
- (6) The county supports implementation of programs that help first-time home buyers and low and moderate income residents to repair their homes.
- (7) The county endorses a level of new construction that satisfies market demand.
- (8) The county promotes adaptive reuse of obsolete buildings for dwelling purposes.
- (9) The county encourages municipalities to provide a variety of housing types to accommodate residents as their housing needs change.

#### b. Housing Location

**Goal:** To provide a variety of housing locations within areas containing community facilities and services as well as adequate access to public transportation.

**Policies:**

- (1) The county encourages the construction of new housing units in Growth Areas identified in the Land Use Plan, where public transportation and a variety of community facilities, jobs, and services are available.

- (2) The county encourages zoning provisions that integrate a variety of housing types, civic uses, and small-scale, low-volume commercial uses.
- (3) The county discourages residential development of sensitive environmental areas, such as floodplains, steep slopes, and wetlands. Residential units should be constructed on the portion of the site with the least amount of environmental constraints.
- (4) The county supports limited growth in rural areas, as determined by site constraints and the level of municipal services.
- (5) The county encourages zoning provisions that favor open space (cluster) design techniques, traditional neighborhood design, neo-traditional village, planned residential development, performance zoning, and innovative lotting arrangements in order to minimize the impact of development on the natural environment, create usable open space, and provide for the greatest variety of housing types and densities.

### c. Choice of Housing Types

**Goal:** To provide a variety of housing types and densities using innovative development patterns and design techniques.

**Policies:**

- (1) The county supports zoning regulations that have flexible provisions to allow for a mixture of housing types and densities.
- (2) The county encourages land within Growth Areas to be zoned for medium and high-density residential development, which will support public facilities and services.
- (3) The county encourages residential neighborhoods to be cohesive and have a sense of place that promotes social interaction.
- (4) The county encourages builders to construct a greater variety of housing types that appeal to various age groups.

### d. Housing Affordability

**Goal:** To provide a variety of affordable housing opportunities to households of all income levels throughout the county.

Affordable housing – housing where the occupant is paying no more than 30% of gross income for gross housing costs, including utility costs.

**Policies:**

- (1) The county encourages municipalities and developers to provide housing that is affordable to low and moderate income households.
- (2) The county encourages affordable housing for low and moderate-income households to be located where public transportation is available or could be extended.
- (3) The county encourages municipalities to provide density bonuses and developer incentives for the construction of affordable housing units.

## Chapter 6 - Housing

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### e. Housing Standards

**Goal:** To require that existing housing and new construction meet minimum health and safety standards.

**Policies:**

- (1) The county encourages new and existing structures to conform with the minimum standards found in the Uniform Construction Code.
- (2) The county endorses the construction of energy-efficient dwelling units.
- (3) The county endorses the use of water conservation plumbing fixtures.
- (4) The county encourages municipalities to adopt regulations for existing dwellings located in the 1% annual chance floodplain to be properly flood-proofed, and have adequate flood insurance coverage.
- (5) The county encourages the use of building codes and design standards to make structures more earthquake resistant.

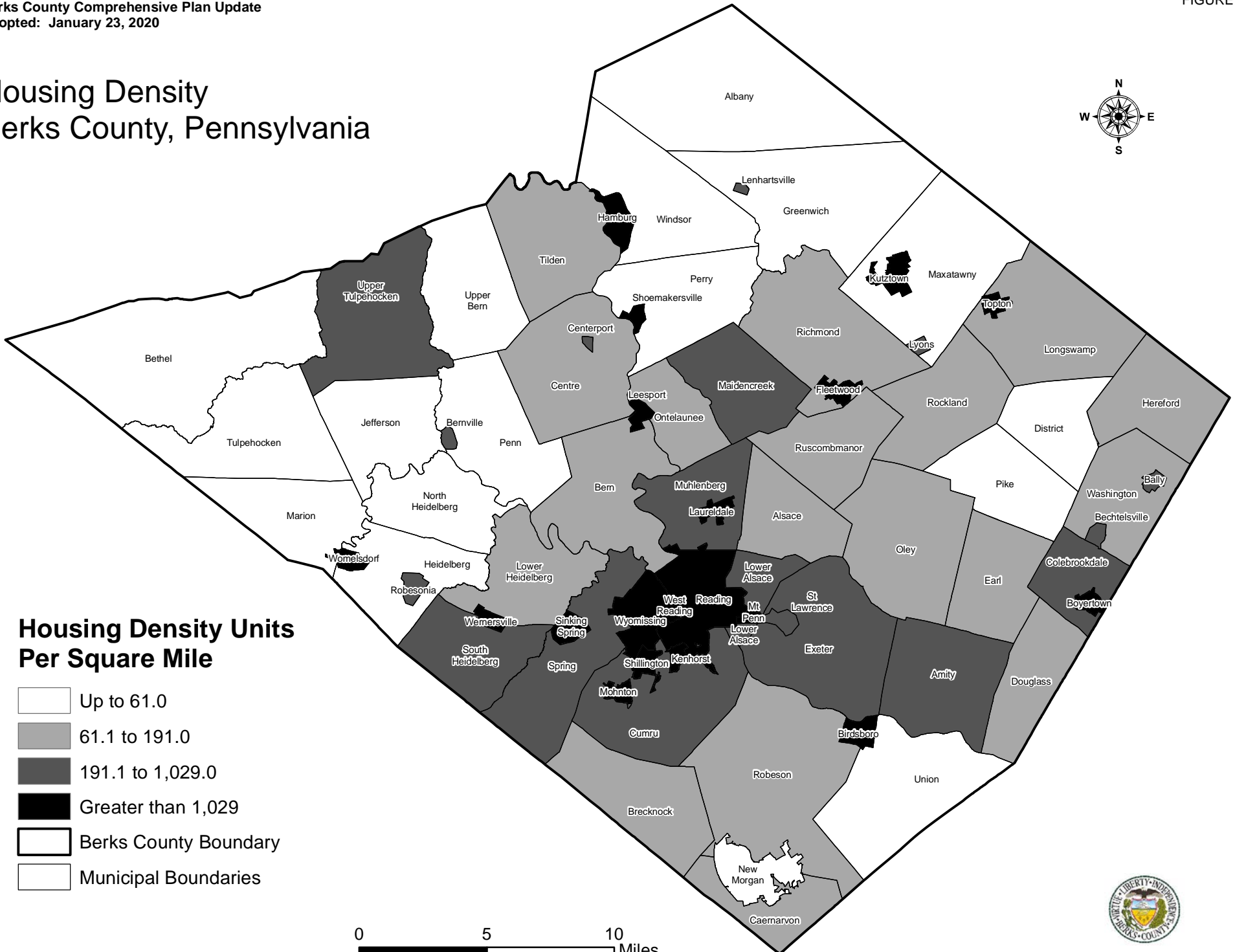
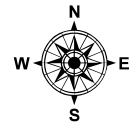
### f. Housing for Special Needs Population

**Goal:** To provide a diverse range of housing opportunities for special needs populations.

**Policies:**

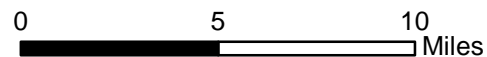
- (1) The county encourages municipalities to adopt development regulations that foster alternative housing options, such as accessory apartments, elder cottage housing opportunities (ECHO) housing, retirement communities, condominiums, full care facilities, group homes, single room occupancy residences, and shelters.
- (2) The county supports fair housing laws that prohibit discrimination in sale or rental of housing due to race, religion, national origin, sex, age, or disability.
- (3) The county recommends that housing for special needs populations be located in proximity to public transportation, shopping, jobs, medical facilities, and other services.

# Housing Density Berks County, Pennsylvania



## Housing Density Units Per Square Mile

- Up to 61.0
- 61.1 to 191.0
- 191.1 to 1,029.0
- Greater than 1,029
- Berks County Boundary
- Municipal Boundaries







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## LAND USE

### A. Introduction

Land use is only one aspect of planning; however it is an extremely important one. Land use is the alteration of the natural environment into a man-made or built environment and includes lands which are undisturbed by man. Development regulations, physical constraints and highway networks all contribute to the land use patterns within a region. Land use is used as a tool for evaluating current zoning and subdivision and land development policies as well as provides guidance for future development. Land use helps evaluate public service needs, potential environmental impacts as well as prevents potential conflicts. Municipalities utilize land use planning to balance development and preserve natural resources. It serves to guide official decisions regarding the distribution and intensity of private development, reinvestment in urban centers and capital improvement programs.



Industrial development underway in Perry Township

The following discussions will analyze the existing land use of the county as well as determine a plan for future land use and how that plan will be implemented through various goals and policies.

To ease analysis of land use data electronically and to maintain consistency throughout county planning documents, the county is divided into five planning regions. The five regions are as follows and are shown on Figure 10.

- Hawk Mountain
- Oley Hills
- Southern Highlands
- Tulpehocken
- Metro

### B. Existing Land Use Patterns

Berks County encompasses a total area of 554,605 acres. Agriculture is largely represented in the northern and western regions of the County as well as in the Oley Valley and East Penn Valley. There are smaller pockets of agriculture throughout the county. Open Space is concentrated in the Oley Hills, Hawk Mountain, and Southern Highlands Regions.

Historically, the developed land uses typically have been a function of the road network and natural features throughout the county. Most of the more intensive land uses are found close to transportation facilities and public infrastructure. Commercial development typically follows the residential population.

The Existing Land Use Map (not updated for current revision) shows the depth of development radiating from the Reading Metro area along our major highway corridors. The expense and difficulty of building new infrastructure highlights the importance of in-fill development and redevelopment of existing developed areas. There has been continued residential development and clustering throughout the rural areas of Berks County particularly the Oley Hills and Southern Highlands.

### C. Existing Land Use Analysis

#### Methodology

The Existing Land Use Map was created digitally using a geographic information system (GIS). The Berks County GIS tax parcel data was modified to include a specific land use designation for each parcel. Land use assessment codes, aerial imagery, information from the Act 167 stormwater plans, and other GIS data related to land use were also used in the analysis. Please note that the existing land use analysis was not revised during the 2018 Update, and still reflects existing uses prior to 2013.

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The following existing land use categories are shown on Figures 12 through 17.

### Residential Land

The Existing Land Use Map divides residential lands into two categories according to density: Residential Low and Residential High. Together, the Residential High and Residential Low categories comprise 16% of the county's land area or 88,726 acres.

The Residential High category is characterized by a variety of dwelling unit types, including single-family detached, semi-detached, row homes and townhouses, apartments, and mobile homes within parks, at densities that exceed one unit per acre. While only 5% of the total lands in the county or 25,448 acres are "high density residential", they do account for the majority of the county's housing stock. Residential High land is concentrated in the Reading Urban Area extending outward from the City of Reading along the major road corridors, including U.S. 422 and U.S. 222. Row homes, semi-detached, as well as low and high-rise apartment complexes are common in the older neighborhoods. As one moves toward the periphery of the urban area, neighborhoods take on a suburban character consisting primarily of single-family detached dwellings interspersed with semi-detached and townhouse developments. Additionally, smaller versions of this type of high density residential development exist in the outlying Boroughs, including Hamburg, Kutztown, Topton, Boyertown, Bally, Bechtelsville, Robesonia and Womelsdorf, as well as villages, such as Morgantown, Oley and Shartlesville. Mobile home park communities are located throughout the county, with large developments occurring in Tilden, Longswamp, Greenwich and Hereford Townships.

The Residential Low category consists of primarily single-family detached dwelling units on one to five acre lots. A lot size larger than five acres was subject to more than one existing land use designation, as the residue land was typically designated as Open Space. Residential Low land is the third largest existing land use category, comprising 11% of the county's land area or 63,278 acres. Due to the large lot sizes, the Residential Low category consumes more acreage than the Residential High category and accommodates fewer dwelling units. The impact of this inefficient pattern of land development affects the economics of municipal and school district operations. The rural areas of the county, particularly the Oley Hills (18,913 acres) and Southern Highlands Regions (16,033 acres) are dominated by this type of residential development, characterized by low density subdivisions and large lot road frontage development. The agricultural areas are among those with the lowest residential density figures in the county. This indicates that the county's agricultural land preservation strategy, including the Agricultural Conservation Easement and Agricultural Zoning Incentive programs, has significantly reduced the amount of residential development that potentially could have occurred within these agricultural areas. One can deduce that the consequence of this strategy is additional development pressure in our rural areas characterized by rolling woodland.

From 2001 to 2010, 16,375 new housing units were constructed. After a high of 2,787 units constructed in 2001 there was a steady annual decline to a low of 539 units built in 2010, the fewest number of dwelling units constructed in a single year since the early 1980's. This decline is a result of the economic downturn and the national mortgage crisis. Throughout the county several residential subdivisions have stalled either in the approval process or in mid-construction. Foreclosures on homes escalated during the second half of the decade which is resulting in an increase in household size as families move in together to share costs, and an increase in the number of renters. Construction activity will most likely remain sluggish for a period until this excess inventory clears the market.

During the 2001-2010 period 29% and 27% of the new units built were located in the Metro Region and the Southern Highlands Region, respectively. Activity in the Metro Region was in-fill development, as well as peripheral expansion of the urban core. The majority of the new construction in the Southern Highlands was concentrated along the U.S. 422 East corridor and the Pennsylvania Turnpike area. These areas are considered to be bedroom communities for the Philadelphia region. The municipalities with the most activity were the Townships of Exeter, Amity, Spring, Maiden Creek, and Muhlenberg which accounted for nearly 40% of the new units constructed. The Borough with the most activity was Sinking Spring (405 units). Thirty-four percent of the new units were constructed in three school districts: Wilson, Exeter, and Daniel Boone. While not specifically tracked, it is estimated that approximately 70% of the new housing units built during this ten year period were constructed within Growth Areas or the Existing Development Areas of Berks Vision 2020. The dominant type of dwelling unit construction continued to be the single-family detached unit, as over 70% of all homes constructed were of this type. Age-restricted housing developments only available to seniors, as well as assisted living facilities were also popular developments constructed in the last decade reflecting an aging population. This has resulted in a greater choice

of living arrangements for our senior population. Another trend was the construction of student housing associated with our universities/colleges.

### Commercial Land

Land in this category contains such uses as retail, offices, utilities and personal, professional and business services. Over the last ten years the commercial land use sector has expanded along such major transportation routes as U.S. 422, U.S. 222 and PA 61. The expansion of commercial uses along these transportation networks correlates to the expanding residential corridors as well as expansion of utilities such as public sewer and water services.

Commercial uses comprise only 2% of the county's total land area or 10,095 acres. However, being one of the smaller existing land use categories, approximately 6.6 million square feet of commercial development has been constructed in the last decade. The majority of the commercial square footage that has been developed is strip shopping centers. Some of the large shopping centers are located in the Metro Region but centers have also been built in outlying areas such as Colebrookdale, Hamburg and Morgantown. The shopping centers include grocery retailers, big box stores such as Wal-Mart, as well as restaurant chains and service oriented businesses. The development of these commercial centers provides services on more of a local regional basis rather than the larger county basis.

The majority of these commercial uses can be found in the Metro Region and account for 44% of the commercial land use within the county. The presence of commercial uses within the core metropolitan region of the county signifies that commerce and service oriented businesses are still economically thriving in an economic downturn which the nation has been facing for some time.

Of the 35 office uses developed in the last ten years, 17 are medical offices including 2 surgical centers. The construction of these satellite medical centers at various regional locations provides residents within the county and beyond various medical services which are more accessible than the central locations.

An increasing trend within the last 10 years has been the construction of self-storage facilities. Approximately 35 mini-warehouse storage units have been constructed since 2001.

### Industrial Land

Industrial land uses include processing, fabrication or assembly of raw materials or component parts, wholesale trade and warehousing. Landfills, junk yards, and quarries are also included within this designation.

Approximately 11,059 acres or 2% of land in Berks County are industrial uses. Quarries and landfills account for a majority of the acreage. Lands occupied by quarry operations are abundant throughout the county as shown on Figure 07. The various quarry operations provide a readily available mineral resource for the agricultural, industrial and construction markets. The Environment chapter provides information on the various resources which are quarried. Landfill areas within the county are divided among five facilities as shown in Figure 34 located in the Community Facilities chapter of this plan.

Industrial uses within the county are primarily located in the Metro Region. Traditionally, concentrations of industrial development have located along the Schuylkill River and PA 61 corridor.

Existing large industrial facilities that have expanded within the last ten years include Carpenter Technology and East Penn Manufacturing. Expansion of such large industrial uses indicates that the county has retained some of their largest employment units. However, in the last ten years the county has lost several significant industrial employers.

Since 2001, several new industrial uses have located within the City of Reading including Sun Rich Foods, Unichain, Rose Corp., Hydro Jet and KVP. These new industrial uses provide solid evidence that industrial land areas are still available within the county and that redevelopment of past industrial sites are a viable option within the core industrial and commercial sector.





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As the population grows and expansion of development occurs the need for energy supply also grows. Three power plants- Ontelaunee Energy Station, Granger Energy and United Corrstack- have been constructed since 2001. The power plants provide both energy and work force opportunities.

### Institutional Land

Institutional lands are used for public services such as governmental and public safety facilities, educational facilities (including athletic fields owned by educational institutions), hospitals, cemeteries and religious institutions. These land uses occupy 9,138 acres or approximately 2% of the county land area. Nearly 42% of the institutional land is located within the Metro Region, with the remaining acreage evenly distributed throughout the other four regions. Significant new construction occurred from 2001 to 2010 including:

- The Reading Hospital for Post-Acute Rehabilitation and the relocated St. Joseph Medical Center
- 14 new churches
- over a dozen new education facilities affiliated with our public school districts, institutions of higher education, and the Reading Hospital
- 4 new ambulance and fire company facilities
- Several municipal office and maintenance buildings.

These major construction investments indicated the need to keep pace with population increases.

### Agricultural Land

The rich soil, aided by a favorable climate and centralized Mid-Atlantic location, has contributed to a strong agricultural tradition. Over 65% of the soils in the County are Classes I-IV. These productive soils provide the base for our agriculture industry. The 2007 Census of Agriculture reported that Berks County annually ranks among the State's leading producers of agricultural products, including mushrooms, dairy products, poultry products, corn for grain, alfalfa, wheat, soybeans, barley, apples and peaches.

Agriculture is the most extensive land use in Berks County, occupying 201,712 acres or approximately 36% of the county's total land area. These lands are used for pasture, the growing of crops, and the raising of livestock, farmsteads, barns, silos, mushroom farms, and the fields where trees and plants are harvested for nurseries. Agriculture, to some degree, is found in each of the Townships in Berks County. Over 70% of the agricultural land is located within the Hawk Mountain and Tulpehocken Regions. This large concentration of farmland is generally bounded by the Blue Mountains to the north, the Reading Prong to the east, U.S. 422 West and the Reading Urban Area to the south. Another significant area of agricultural land is the Oley Valley which contains a concentration of productive soils. A smaller band of concentrated farmland is located along the PA 100 corridor through Hereford and Washington Townships. The agricultural activity of these areas extends into counties adjacent to Berks, especially Lancaster, Lebanon, Montgomery and Lehigh.

In 2007, the Census of Agriculture reported that Berks County ranked fourth in the state for the total number of farms and ranked sixth in the state for the amount of land in farms. While the number of farms in Berks County is increasing, the size of farms is decreasing. The Census identified 1,980 farms in 2007 compared to 1,586 farms in 1997. The average farm size in 2007 was reported as 112 acres which decreased from 140 acres in 1997. A major concern over the years has been the continual loss of farmland, as the Census reported that the county lost 100,000 acres of farmland between 1959 and 1992. Most of this loss is attributed to the change in land use patterns as growth shifted from urban centers to suburban and rural communities. However, the Census of Agriculture indicates that this loss of farmland has begun to stabilize.

Berks County has made a commitment to preserve its farmland based on the recognition that agriculture is an important component of the county's economy. The county and its municipalities have utilized several tools available in Pennsylvania to protect the county's farmland and maintain our agricultural industry's viability. These tools include the establishment of the Clean and Green program and Agricultural Security Areas, the purchase of agricultural conservation easements, and effective agricultural zoning. Together, these programs form an agricultural preservation strategy that strives to protect productive soils from non-farm related development, minimizes conflicting land uses detrimental to agricultural enterprises, and retains a critical mass of clustered agricultural land so that a sufficient market remains for agricultural support services and businesses.

Clean and Green (PA Act 319) creates an incentive for landowners to devote their land to agricultural use, agricultural reserve or forest reserve use by lowering the property tax rates for those who enroll in this voluntary program. The program establishes the preferential assessment value, and enrolled land is taxed at the use value of the land rather than fair market value. Land removed from the program is subject to a roll-back tax, imposed for up to seven years. The total amount of land under Clean and Green, as of May 2013, is over 270,700 acres or nearly 49% of the total land area of the county.

Under Pennsylvania Act 43 of 1981, Berks County municipalities and landowners have collaboratively created over 158,700 acres (May 2013) of Agricultural Security Areas. Involvement in this program is voluntary and represents a public expression of support for the land to remain in agricultural use. However, landowners may develop their land for non-agricultural use at any time without penalty. Benefits to participation in this program include limited protection against local nuisance regulations and from condemnation of land, and eligibility to participate in the Pennsylvania Agricultural Conservation Easement Program.

The county established its Agricultural Conservation Easement (ACE) program in 1989. The goal of this voluntary program is to preserve large clusters of farms to ensure the future of agriculture in the county. Agricultural easements limit the activity to agriculture and remain with the property in perpetuity. The program is one of the largest programs in the nation for farmland preservation. As of May 2013, Berks County has purchased ACE on 654 farms comprising 64,350 acres. This equates to nearly 12% of the county's total land area or 32% of the county's total agriculture lands. Funding for easement purchases is provided annually by both Berks County and the state. While the public has invested a large sum of money in this program, applications to the program continue to exceed the amount of funding available each year. In addition to the county's program, the Centre Township Municipal Land Protection Program has purchased ACE on 15 farms totaling approximately 2,041 acres, the Berks County Conservancy holds agriculture easements on 44 farms totaling approximately 3,302 acres, and other municipalities and non-profit organizations such as Adopt An Acre, hold easements on 17 farms totaling approximately 924 acres. Combined, these programs have preserved more than one-third of the county's farmland through agricultural conservation easements. See Figure 11 for the location of the easements.

In an effort to keep large agricultural areas relatively free of non-farm development, municipalities can adopt Effective Agricultural Zoning (EAZ). Permitted uses generally are limited to "normal agricultural operations" that are consistent with the practices and technological developments within the agricultural industry, as well as those uses that compliment and support agriculture. Non-farm uses that would be disruptive to agricultural activities are not allowed, such as uses that would generate excessive traffic, consume significant areas of farmland, induce capital facility growth, and uses that would have the effect of altering the essential character of the district. Non-farm dwellings are generally permitted, but their number and associated acreage are stringently limited. Although Lower Heidelberg Township adopted the first agriculturally protective zoning ordinance in the State in 1973, growth of such ordinances was slow. The use of EAZ increased when the Berks County Planning Commission introduced its Agricultural Zoning Incentive Program (AZIP) in the mid-1990's. The primary purpose of the program was to implement the agricultural element of the County Comprehensive Plan. In return for the successful adoption of effective agricultural zoning, the county paid for the costs associated with amending the municipality's zoning ordinance. Currently, over 164,000 acres in 27 townships have effective agricultural zoning in place.

### **Recreation Land**

Recreation land provides space and facilities for people to engage in active and passive recreation activities. These include playgrounds, parkland, state gamelands/forests, as well as recreation land owned by non-profit recreational groups (i.e. homeowners associations, sportsman clubs, and little league organizations) and commercial recreation (i.e. golf courses, miniature golf courses, campgrounds, ski areas). Recreation lands occupy 47,169 acres or over 8% of the county's total land area.

The largest landowner of recreation land within Berks County is the State with over 30,000 acres of gamelands, state parks, and state forests. Berks County is fortunate to have a wide range of public park and recreation assets, as well as many of our unique natural and historic resources protected by public entities. Despite the vast inventory of public resources, much of the federal and state land is located along the periphery of the county. In some cases municipal recreation is not evenly distributed among neighborhoods, making accessibility problematic for many Berks County residents. The non-profit and private sectors play a significant role in providing recreation and leisure opportunities. They supplement

## Chapter 7 - Land Use

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public resources by providing capacity and resources that are beyond the realm of the public sector. A specific recreation land inventory is available in the Berks County Greenway, Park and Recreation Plan.

The Hawk Mountain Region contains 42% of the total recreation land in the county. The majority of this land consists of state and federal land holdings associated with the Kittatinny Ridge/Appalachian Trail, which runs along the county's northern boundary in the Blue Mountains. Significant regional recreation acreage located in other regions are the lands associated with Blue Marsh Lake; French Creek State Park; and Mount Penn which is a combination of city and county parkland. The Oley Hills Region contains the least amount of recreation acreage (2%) of all the regions in the county.

Besides the Appalachian Trail, other regional trails include the Schuylkill River Trail (SRT), the Horse-Shoe Trail and the Union Canal Trail. The SRT is a 120-mile multi-use trail in southeastern Pennsylvania that will eventually extend the entire length of the Schuylkill River from Frackville to Philadelphia, traversing five counties. The SRT is the backbone of the regional trail system. The SRT through Berks County is 60% complete. The two longest, open sections of the SRT Berks County are the 19 mile SRT Thun Section from Pottstown to Reading, and the 7 mile SRT Bartram section from Hamburg north into Schuylkill County. A temporary trail alignment from Reading to Hamburg has been designated; however, most of this section is on-road until a permanent location is secured. The Horse-Shoe Trail is a 141 mile bridle and hiking trail connecting the SRT in Valley Forge National Historic Park and the Appalachian Trail north of Harrisburg, traversing Chester, Berks, Lancaster, Lebanon, and Dauphin Counties. Approximately 29 miles of the Horse-Shoe Trail are in Berks County (Brecknock, Robeson, Spring, and Union Townships) where it connects with existing trail networks in French Creek State Park, Birdsboro Waters, and Hopewell Furnace National Historic Site. Most of the trail is on private land without permanent legal protection making its location vulnerable and ever-changing. In Berks County, only 11.5 miles of the trail are protected and nearly 4 miles have been forced on to roads. The Union Canal Trail winds along the Tulpehocken Creek for 6.5 miles connecting the City of Reading to the Blue Marsh Lake trail network.

Since 2001, notable changes to the recreation network include:

- Two properties, totaling nearly 269 acres, were added to French Creek State Park providing a connection between the park and Schuylkill River Trail
- The county added Antietam Lake Park to its parkland
- A USDA Forest Legacy Conservation Easement was placed on Birdsboro Waters (1,764 acres of Birdsboro Municipal Authority's watershed)
- Neighborhood parkland grew primarily through the subdivision and land development process
- Spring Township and Muhlenberg Township added large community parks
- Several local trails in the Greater Reading area were constructed filling gaps in the trail network and connecting resources, including the Angelica Creek Trail, Wyomissing Creek Trail, Union Canal Connector Trail, and the Muhlenberg Rail Trail
- Three golf courses opened and Blue Marsh Ski area closed.

### Open Space Land

The Open Space category contains land that is predominantly wooded or vacant that does not include a structure. Examples are meadows and fields (not farmland). Residue land associated with large residential lots over 5 acres, as well as forested land on farmland is also included in the category. The majority of this land is privately owned, except for municipal watershed lands.

Open Space is the second largest use of land at 153,131 acres or approximately 28% of the county's total land area. The Oley Hills Region contains 28% of the total open space in the county. Other areas of the county containing significant amounts of open space include the slope of the Blue Mountains and the South Mountain area. Low density residential development has continued to fragment these rural areas.

### Transportation

Land in this category contains roads and railroads. While the network of transportation modes that serves Berks County also includes air service, bus and motor freight services, these land uses, as well as parking garages are included in the commercial category.

While many factors can influence growth and development patterns, the existing transportation network has always been prominent in shaping Berks County. Development has concentrated near the major transportation facilities to take advantage of their accessibility. The amount of land area consumed by such a network is 27,108 acres or approximately 5% of the total county land area. As of January 2009, there were 3,313 miles of state and local roads in Berks County. This is an increase of 255 miles since 2001. Recent upgrades to the highway network include U.S. 222 South. There is a total of approximately 125 miles of operational railroad line in the county. The amount of land actively used for rail-related activities in the central railroad yards located in the City of Reading has decreased significantly. Further discussion of the transportation network within the county can be found in Chapter 9 of this plan.

### Water

Surface water is comprised of rivers, streams, ponds, and lakes. These waterways and surface impoundments provide for water withdrawals which are used for domestic, industrial and agricultural purposes. Surface water also provides habitat for aquatic plant and animal life; sustains wildlife and attract migratory waterfowl; provides recreation in the forms of boating, fishing, swimming and aesthetic appreciation of nature; and the assimilation of treated waste water effluent. Surface water occupies 6,467 acres or approximately 1% of the county's total land area.

The county is drained by a network of streams, the majority of which empty into the Schuylkill River and eventually drain to the Delaware River. In addition to the Schuylkill River Watershed, two and one-half percent of the county land area also drains to the Delaware River, but via the Little Lehigh Watershed and Lehigh River. The Delaware River Basin Commission (DRBC) manages the water resources within these two sub-watersheds. DRBC programs include water quality protection, water supply allocation, regulatory review, water conservation initiatives, watershed planning, drought management, flood loss reduction, and recreation. Approximately 10% of the county land area drains into the Susquehanna River, and eventually the Chesapeake Bay, through the Swatara, Conestoga and Cocalico Watersheds. The Susquehanna River Basin Commission manages the water resources in these watersheds much like DRBC. Additionally, land use activities in these three watersheds are subject to the Chesapeake Bay Total Maximum Daily Load (TMDL). The TMDL was established by the U.S. Environmental Protection Agency to restore clean water in the Chesapeake Bay and throughout its basin. The Bay TMDL identifies pollution reductions from major sources of nitrogen, phosphorus and sediment across the basin and sets pollution limits necessary to meet water quality standards. The pollution limits are divided by jurisdiction and major river basin, and are designed to ensure that all pollution control measures needed to fully restore the Bay and its tidal rivers are in place by 2025, with at least 60% of the actions completed by 2017. Land use within Berks County's portion of the Swatara, Conestoga and Cocalico Watersheds will have to adhere to the Watershed Implementation Plans. These plans, currently being prepared, will detail how and when the jurisdictions will meet pollution allocations. This project emphasizes the vulnerability of our surface water resources, as well as the need for their proper management.

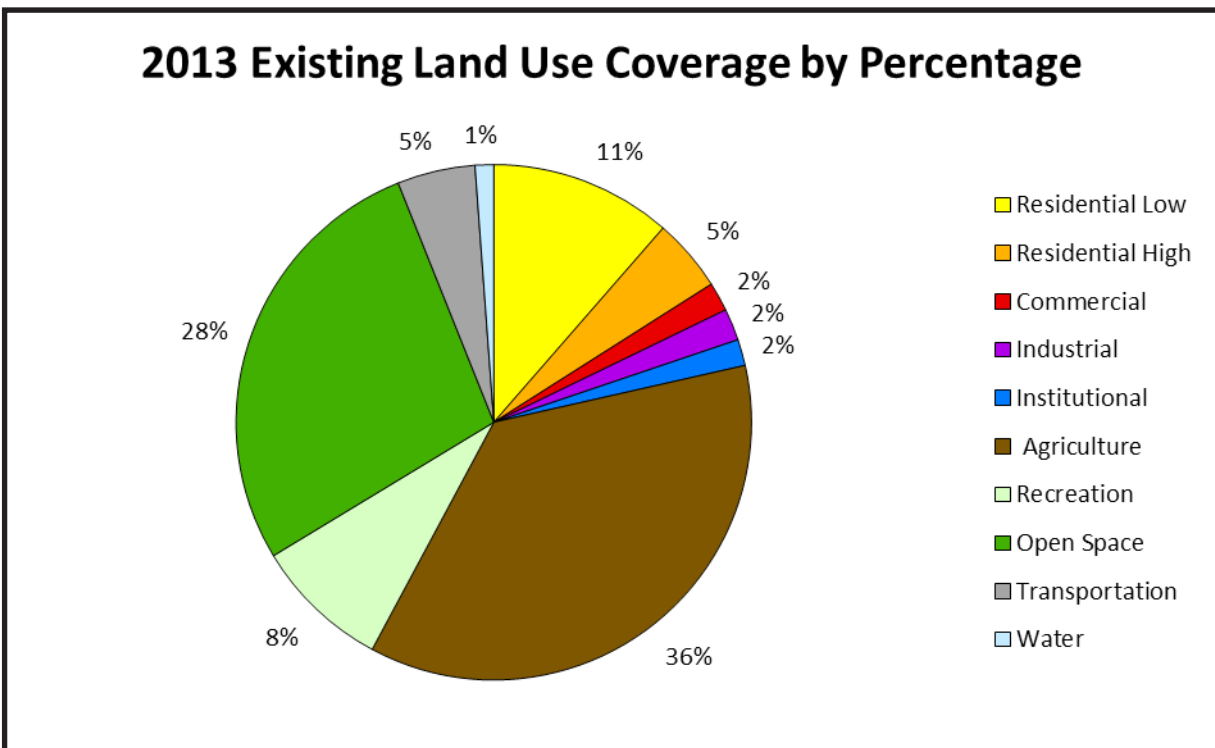
The major watercourse in the county is the Schuylkill River. The Schuylkill River enters Berks County through the Blue Mountain Gap near Hamburg Borough and traverses centrally through the county in a south and southeasterly direction before exiting the county near Douglassville.

Two major tributaries to the Schuylkill River-the Tulpehocken Creek and the Maiden Creek-are dammed and used as public water supplies. The Tulpehocken Creek Watershed drains over 140,000 acres and has 19 named streams which contribute water flow to the Schuylkill River.

The largest reservoir in the county is Blue Marsh Lake, located on the Tulpehocken Creek. Completed in 1979, Blue Marsh is a 1,150 acre lake built and maintained by the U.S. Army Corp of Engineers. The dam was authorized by Congress for flood control, water supply, water quality and recreation. Blue Marsh Lake is the major water supply for the suburbs located west of the City of Reading. The reservoirs' water control practices benefit downstream communities including Reading, Birdsboro, Pottstown and Philadelphia. The Maiden Creek Watershed drains over 138,000 acres and also has numerous named streams which contribute water flow to the Schuylkill River. Lake Ontelaunee, located on the Maiden Creek is a 1,082 acre man-made lake. This reservoir was developed in 1926 by the City of Reading for water supply, but is also a popular venue for fishing and hiking. Other major tributaries to the Schuylkill River include the Allegheny, Hay, Antietam, Irish and Monocacy Creeks. Numerous farm and former mill ponds are scattered throughout the rural areas of the county and range in size.

## Chapter 7 - Land Use

2013 Existing Land Use Cover by Region						
Land Use	Hawk Mountain	Oley Hills	Southern Highlands	Tulpehocken	Metro	County
Residential Low	10,878	18,913	16,033	9,498	7,956	63,278
Residential High	4,289	3,253	5,674	2,396	9,836	25,448
Commercial	1,507	1,264	1,886	1,042	4,396	10,095
Industrial	2,030	2,147	2,584	695	3,603	11,059
Institutional	1,480	1,066	1,461	1,303	3,828	9,138
Agriculture	85,237	32,737	18,301	57,221	8,216	201,712
Recreation	19,887	1,025	9,957	9,685	6,615	47,169
Open Space	36,088	43,718	33,092	25,866	14,367	153,131
Transportation	6,604	4,042	4,786	3,992	7,684	27,108
Water	1,709	569	1,178	1,468	1,543	6,467
<b>Region Total</b>	<b>169,709</b>	<b>108,734</b>	<b>94,952</b>	<b>113,166</b>	<b>68,044</b>	<b>554,605</b>



### D. Development of Regional Significance and Impact

The Commonwealth defines “development of regional significance and impact” as any land development that, because of its character, magnitude, or location will have substantial effect upon the health, safety, or welfare of citizens in more than one municipality. These types of regional uses typically put a demand on community facilities and transportation networks, as well as can create land use nuisances. The land uses in Berks County that have regional impact and significance include large shopping centers, major employers, commercial corridors, major office and industrial areas, regional entertainment and recreation complexes, hospitals, the government center, colleges and other large school campuses, large quarry operations, landfills, superfund sites, petroleum storage areas, commercial solar and wind farms, large mixed use developments, multiple auto dealers in close proximity, hotels, convention centers, prisons and airports. The county recognizes that there may be other lists developed by municipalities containing developments that are significant on a regional scale versus the list above which are at a countywide scale.



Thresholds to determine if a development is of regional significance or impact are as follows:

- Regional shopping center with more than 300,000 gross square feet of retail or office space
- Individual industrial or commercial office facility, or a planned industrial or office park with more than 500 employees
- Petroleum or highly flammable or explosive material refining, processing, or storage area
- Warehouse complex with more than 500,000 gross square feet, or trucking terminal averaging more than 250 container or trailer loads per day
- Regional entertainment and recreational complex, including theaters or centers for the performing arts, stadiums for competitive sports (totaling more than 2,000 seats), amusement parks, downhill ski areas, horse and dog racing tracks, drag strips and automobile raceways, and similar facilities
- Hospital and medical center offering inpatient care facilities
- Scheduled service airports
- Institutions of higher education, such as a college, university or technical school, and other school campuses on tracts of land ten acres or more
- Commercial corridors combining retail, office, industrial, or warehousing uses on contiguous tracts of land fronting on a highway with more than 500 employees
- EPA designated superfund sites
- Municipal and hazardous waste disposal facilities
- Quarrying, mining, or other extractive operations removing 50,000 tons or more per year
- CAFO (concentrated animal feeding operation with either more than 1,000 animal equivalent units, or operations with 301 to 1,000 AEUs that are CAOs)
- Developments that are expected to increase the volume of traffic on adjacent public roads by more than 15%, or which shall cause a “D” level of service or worse on adjacent public roads

The Berks County Planning Commission can aid the municipalities by assessing the impacts of these developments and providing development reviews that identify regional implications and solutions. It is important to realize that the aforementioned developments can have effects that are felt beyond the county borders. Therefore, efforts should be made to work with adjoining municipalities that will be affected by these developments of regional significance. The Berks County Planning Commission can assist facilitate communication and coordination among municipalities.

### **E. Pipelines**

As development spreads into more rural areas and previously undeveloped land turns into housing subdivisions, business parks, and shopping centers, the potential risks of developing near pipelines becomes more prevalent. To keep communities safe a risk-informed approach is needed for land use planning and when addressing proposals for new development. This allows local governments to consider the risk and likelihood of possible pipeline incidents and what consequences would follow.

Berks County encourages local governments to complete the PIPA, Pipelines and Informed Planning Alliance, Recommended Practice Evaluation Worksheet for Local Governments. Through completion of this worksheet, local governments can reduce risks and improve safety by adopting practices such as obtaining transmission pipeline data, having a transmission pipeline consultation zone ordinance, and implementing planning areas around transmission pipelines.

The Berks County Planning Commission also encourages shared right-of-way spaces for utilities in order to minimize the impacts of easements and disturbance of land along transmission pipeline corridors. Through restrictions placed on land uses allowed along transmission pipeline rights-of-way, and discouraging development within a reasonable buffer along transmission pipeline corridors, the adverse effects on the general public could be minimized should a pipeline incident occur.

## Chapter 7 - Land Use

### F. Future Land Use Plan

The Future Land Use Plan depicts the pattern of projected land use, targeting areas that are appropriate for urban growth and reinvestment, as well as areas that should be preserved/conserved for their agricultural, recreational or natural resource assets. The core purpose of the Future Land Use Plan is to manage the amount, intensity and character of the different land uses throughout the county.

#### Methodology

The 2019 Future Land Use Plan was created digitally using a geographic information system (GIS). Current data including 2016 aerial imagery, zoning, public water service area, sewer service areas from municipal Act 537 Plans, soils, slopes, floodplains, tax parcels, conservation easements and transportation networks were used in the analysis to update the Future Land Use Plan. The analysis determines areas that are currently developed, areas where growth should occur at different densities, the location of agricultural preservation and permanent open space, as well as areas where development should not occur due to environmental hazards. In areas where local comprehensive plans were more recent than zoning ordinances, the comprehensive plan was given more weight in making land use decisions.

Since the Future Land Use Plan is intended to act as a regional guide for municipal land use decisions, the Planning Commission invested a great deal of effort towards coordinating the local plans and regulations of each local government with the county's land use version. The municipalities were given the opportunity to review and comment on the draft future land use plan in the winter of 2018, as the commission held a meeting in each region for municipal officials in which the land use pattern for each region was explained. Where warranted, the Future Land Use Plan was edited to reflect changes resulting from the meetings and municipal review prior to the official Act 247 Pennsylvania Municipalities Planning Code review process.

The following section describes the land use categories portrayed on the Future Land Use maps. The pattern of projected land use is depicted on Figure 18 for the county and Figures 19 through 23 for each region. The 2018 Future Land Use Acreage table shows the acreage for each Future Land Use category for the Regions and the county as a whole while the depicts the acreage for each Future Land Use category by municipality.

#### Agricultural Preservation

Land within this designation includes areas with existing agricultural productivity that are part of a large contiguous land area with suitable soils predominantly devoted to agricultural operations. An Agricultural Operation as defined by Act 247 is an enterprise that is actively engaged in the commercial production and preparation for market of crops, livestock and



Cattle farm in Berks County

livestock product and in the production, harvesting and preparation for market or use of agricultural, agronomic, horticultural, silvicultural and aquacultural crops and commodities. The term includes an enterprise that implements changes in production practices and procedures or types of crops, livestock, livestock products or commodities produced consistent with practices and procedures that are normally engaged by farmers or are consistent with technological development within that agricultural industry. Farms preserved by agricultural conservation easements, regardless of the location, and/or size of the agricultural area, are also depicted. Other features taken into account when classifying this category were; land located within an area designated for agricultural use by local comprehensive plans; a zoning district that contains effective agricultural preservation techniques; lands that border an area of an adjacent county that is predominately agricultural; land that is composed of soil capability classes I, II, III or IV; land that is included within an approved Agricultural Security Area.

The objectives of this category are to strengthen the farm industry, promote the long-term viability of the agricultural economy, protect the agricultural land resource base, minimize land use conflicts in agricultural areas, and protect enough farmland so that a sufficient market remains for agricultural support businesses. Areas should be reserved primarily for agricultural purposes, and are inappropriate for infrastructure extension and conversion to incompatible non-farm development. A variety of programs and tools can be used, including but not limited to: tax reduction programs, establishment of agricultural security areas, purchase or donation of agricultural conservation easements, and enactment of effective agricultural zoning. Effective agricultural zoning (EAZ) focuses on agriculture by protecting productive farmland, permitting a wide variety of farm-related uses, including supplemental farm businesses and other uses that complement and further the objectives of agricultural land protection, and by restricting non-farm activities that fragment farmland and are disruptive to agricultural activities. Non-farm dwelling unit density is stringently limited; typically one dwelling per 20 to 50 acres, while homes are required to be built on small lots (one to two acres). Any non-farm development should be located on the lowest quality agricultural soil as may be feasible, and so as to minimize interference with agricultural production. EAZ districts should encompass large areas of clustered farms and should not be fragmented into small islands of farmland.

Intensive animal operations, including Concentrated Animal Operations (CAO's) and Concentrated Animal Feeding Operations (CAFO's) as defined by state statute, and other intensive agricultural uses, such as mushroom operations, are an important part of our agricultural economy and are becoming more accepted as normal agriculture. As the livestock industry experienced a trend towards larger and more concentrated operations, the state and federal governments enacted a number of statutes and regulations governing intensive agricultural operations. Some of these statutes limit the authority of local municipalities to address such issues, and therefore, local comprehensive plans and zoning provisions addressing intensive animal operations should be compliant with applicable federal and state laws and regulations.

### **Existing Development**

This category consists of commercial, industrial, and institutional development, as well as residential development at a range of densities. These areas should serve as multi-purpose centers for commerce, residential, civic and cultural/entertainment activities providing for mixed use livable communities. A variety of reinvestment, rehabilitation, and revitalization efforts, will be promoted to take advantage of the extensive infrastructure network in place, to improve the tax base of the urban centers, and keep our older urban areas vibrant. Municipalities are encouraged to create public/private partnerships that jointly support a community-driven comprehensive strategy to revitalize, stabilize and grow older neighborhoods. Popular initiatives are the Main Street program, used to revitalize downtown and neighborhood business districts, and the Elm Street program, committed to the revitalization of older residential areas bordering Main Streets and central business districts. Successful on-going local initiatives capitalize on a neighborhood's assets, actively seek local buy-in, create inviting atmospheres by supporting physical improvements to facades, provide sidewalk amenities, solve parking issues, assist existing businesses expand and recruit new ones, and market the area's unique characteristics. The Pennsylvania Department of Community and Economic Development (PA DCED) manages the Main and Elm Street programs while the Pennsylvania Downtown Center is contracted by the state to coordinate the programs and provide technical assistance to interested communities. PA DCED offers a variety of other programs and funding opportunities to assist with business expansion, a community project or site revitalization. Adaptive reuse and brownfield redevelopment are encouraged to meet the changing needs of the market. Strategies should enhance the character of the existing community and be consistent with the historical heritage, scale and density of the area. This category also reflects existing lower density development which has occurred over time in the rural and agricultural areas. Mining/quarry operations and landfills are also included in this category. Reasonable expansion of mining/quarry operations reflecting current production levels will be supported provided the expansion does not infringe on eased agricultural land.

### **Designated Growth and Future Growth**

Developable land that is open, unoccupied or currently farmed, and due to its location is appropriate for future urban high density and suburban median density development requiring a full range of public services and facilities. This includes a balance of residential, commercial, industrial, institutional and recreational uses. These multi-purpose areas are expected to accommodate the majority of the growth anticipated to occur in Berks County over the next two decades. Typically, growth areas are contiguous to existing developed areas where they can maximize existing

## Chapter 7 - Land Use

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investment in public sewer and water systems, transportation networks, and other public facilities and services or where public sewer is anticipated in the near future for health and safety reasons. A full range of public infrastructure services including sanitary sewer, water, storm sewer, highways and other transportation modes, police and fire protection, schools, parks, and other services should be adequately planned and provided as needed to accommodate the growth as it occurs. Residential development should not be allowed to occur at rural low densities (one unit per acre or less) that would increase land consumption and prevent a compact level of development. Land for commercial, industrial and institutional uses must be planned for to provide for the economic and employment needs of the area and to ensure that the area has an adequate tax base. Methods for determining adequate parkland acreage or fees in lieu thereof, and transportation capital improvements attributable to new development should be established. The use of an Official Map is encouraged to assist a municipality reserve sites for future road improvements, parks and other public facilities. Compact mixed-use communities that promote quality of life opportunities, pedestrian and bike friendly design and alternative means of transportation are encouraged. These livable communities should provide for the everyday needs of the residents, promote a sense of community, and respect the natural, historic and cultural heritage of the area. Important natural resources within Growth Areas should be protected.

Designated Growth and Future Growth Areas are intended to be multi-purpose activity areas characterized by concentrated density and suburban/urban development. Designated Growth Areas encompass the regions that surround Existing Development Areas. These areas are currently suitable for medium/high density development due to the presence of the necessary public infrastructure services in place. Future Growth Areas are suitable for medium/high density development in the future as planned public infrastructure expands or becomes available. These areas are typically located adjacent to Existing Development Areas or Designated Growth Areas, but can be located in rural areas if other growth factors are present, such as an interchange. Development within Designated Growth and Future Growth Areas should be planned for densities that exceed one unit per acre. While the Plan refers to such densities as compact, concentrated, medium, high, suburban and urban it deliberately does not define them. By not specifying densities and land use type, the Plan remains flexible to allow municipalities to determine the range and mix of densities, land use types, and character they envision for their communities. However, the Planning Commission advises that such densities increase proportionate to the level of public infrastructure and services available.

Growing the job base and expanding the tax base are important to the economic health of Berks County. Since competition for new business recruitment is keen, making Berks County a more competitive place for attracting new firms and retaining/expanding existing businesses is crucial. With roots in an industrial past, Berks County looks to retain the best of these traditional economic drivers while positioning ourselves for new opportunities. Business development should consist primarily of industrial and office growth. Focus on the provision of high quality, living wage industries should prevail over expansion of low-wage retail development. The development of large scale retail should not be the primary type of economic development pursued. Such development provides few living wage jobs, limits employee benefits, and creates part-time jobs that are not sustainable for the livelihood of employees.

### **Economic Development**

Expansion and diversification of the tax base are important to the economic health of Berks County. Competition, both from surrounding areas and other states, is high for new business recruitment and maintaining existing businesses. It is important to make Berks County a more competitive location for attracting new firms and retaining/expanding existing businesses. This includes ensuring that the County has a skilled, educated workforce to meet the present and future needs of local businesses and potential employers. With roots in an industrial past, Berks County looks to retain the best of these traditional economic drivers while positioning itself for new opportunities.

Recently, there has been a more coordinated approach to economic development within the county. The primary economic development agencies aligned themselves into the Greater Reading Chamber Alliance (GRCA) in 2016, in order to provide a “one stop shop” for business recruitment, business retention, expansion and promotion. The GRCA is also working very closely with the Workforce Development Board and educational facilities to ensure the needed skilled workforce for existing and new businesses.

The agencies that collaborated to create the *Ride to Prosperity: Strategies for Economic Development* and later its update, as described in Chapter 8, also collaborated through a Sites and Infrastructure Committee (SIC). The Berks County Planning Commission with input from the SIC, determined which site selections factors are needed to begin an analysis of the county for business siting purposes. A web map tool was created and then the site selection factors were input into the



tool to assess Berks County. The site selection factors initially evaluated included:

- Land without environmental/land use constraints (land not suitable for development and/or land that has a conservation or agricultural easement)
- Interchanges
- Major Roads
- Public Sewer
- Public Water

The web map tool, which is found on the Berks County Planning Commission website, is periodically updated to include changes to the above criteria and also contains other information, such as floodplains and aerials, available to use in a site search. In addition to these criteria, local land use factors were then evaluated to narrow the site selection process for the Economic Development Areas (EDAs) that are found on Figures 24 through 29.

Once the EDAs were identified per the above information, the areas that are existing developed industrial/commercial and re-development areas that met the above criteria were included in the EDAs designation. One of the considering factors that went into adding EDAs to the Future Land Use Plan was to decrease the potential for economic development sites to be converted into homes, shopping centers or other uses. While there are sites suitable for business development, a number of the sites will need to have infrastructure improved or extended to them.

Berks County and its municipalities need to facilitate the provision of adequate locations by providing consistent land use planning, business-oriented zoning, and to the greatest degree possible utility, water, sewer and transportation infrastructure. This will minimize the task that the economic development community and developers have in assembling and developing business sites. Berks County needs to increase its economic competitiveness amongst surrounding counties and in some cases other states and in order to accomplish this we need to continue to improve our infrastructure. As discussed elsewhere in this Plan the purchase of agricultural conservation easements and their impact upon business development, EDAs and transportation projects should be eliminated. Also, it is key to foster a business-friendly environment that provides incentives, and improves quality of life components (housing availability and cost, quality health facilities, schools, recreation and cultural facilities, low crime rate). Our economic development agencies and educational facilities should continue to focus on marketing the region and preparing or attracting a skilled labor force.

### Permanent Open Space and Recreation

Lands within this designation include federal, state, county, and municipal parkland, recreation facilities, open space areas, as well as municipal water supply watersheds; permanent holdings of conservancies and other similar non-profit organizations for the purpose of conservation; and potential natural areas, parks, greenway and linear stream protection corridors. These areas should create a permanent network of adequate and diverse open space, park and recreational resources for the use of all county residents. A wide range of recreational experiences should be provided, which consist of active recreation, passive park opportunities, and natural open space and conservation environments that secure irreplaceable, unique, or threatened natural features and resources. A countywide greenway system interconnecting the county's major park, recreation and open space resources through a network of open space corridors and linear parks and trails is advocated in the Berks County Greenway, Park and Recreation Plan. This Plan is adopted as an addendum to the Berks County Comprehensive Plan. Privately owned commercial recreation facilities such as fitness centers, bowling alleys, miniature golf, golf courses, and similar uses are not included in this category.

### Rural Conservation

These lands are characterized by low density development, prominent forest cover, and may contain slopes greater than 15%, as well as fragmented areas of farmland/agricultural activity and land eased for open space, natural



Willow Creek playground in Ontelaunee Township



## Chapter 7 - Land Use

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resource or woodland conservation. These areas typically contain scenic resources. Development should be subject to flexible siting standards, conservation design standards, and disturbance limitations designed to avoid the most critical environmental constraints, and allow land to be developed efficiently with the least degree of environmental impact. Rural development density depends on the environmental constraints present, and the area necessary to accommodate on-lot sewage disposal and water supply, but is less than or equal to one dwelling unit per acre. Village expansion, consisting of residential and locally oriented retail use and community service uses, will be encouraged to reflect the historical pattern of growth, scale and character of the area. Generally, Rural Conservation areas are not served by public sewer or water, except where necessary to resolve existing health problems due to failing on-lot sewage systems; or serve village areas. Growth areas may expand into Rural Conservation areas in the future, if expansion is contiguous, logical and such urban development is reflected in the municipal comprehensive plan, zoning ordinance and municipal sewage facilities planning. Due to the scattered nature of the agricultural activity, aggressive agricultural preservation techniques are typically not practical.

### Environmental Hazard

Lands in this category consist of Identified Floodplain Areas, watercourses, water bodies, and their associated wetlands. An Identified Floodplain Area is classified as Special Flood Hazard Areas (SFHA's) on the Flood Insurance Rate Maps (FIRM's) issued by the Federal Emergency Management Agency (FEMA), and any Community Identified Flood Hazard Area. The primary purpose of this designation is to encourage their proper management and sustain their natural functions and values. In most cases, these areas should not be disturbed, nor developed, because of their natural environmental importance, the associated environmental constraints, and the substantial public interest in preventing damage due to floods, minimizing sedimentation and erosion, and enhancing water quality. The exception would be for the improvement of existing buildings within an Identified Floodplain Area that would be elevated and floodproofed to the regulatory flood elevation. Such redevelopment should be designed, located and constructed to have a minimal effect upon the flow and height of flood waters and does not increase the flood hazard to properties located upstream or downstream of the redevelopment site. Floodplains were delineated using FEMA Flood Insurance Rate Maps (FIRM) issued on July 3, 2012, and LOMR's issued by FEMA since the 2012 flood map revision.

### G. Future Land Use Analysis

The two largest uses of land in the future are projected to be developed land and land used for agriculture. Over 27% (152,890 acres) of the county falls within our Existing Development category. Our "built environment" is not stagnant, as it is continually evolving. Revitalizing our urban centers, including the modernization and adaptive reuse of our older buildings, is a key factor in the reduction of the amount of sprawl and the continued healthy growth of the county. Likewise, over 28% (153,295 acres) of the total County land area is designated as Agricultural Preservation, recognizing agriculture's contribution to the local economy and the county's investment in our agricultural preservation program. Over 81% of the land projected for Agricultural Preservation is located in the Hawk Mountain and Tulpehocken regions.

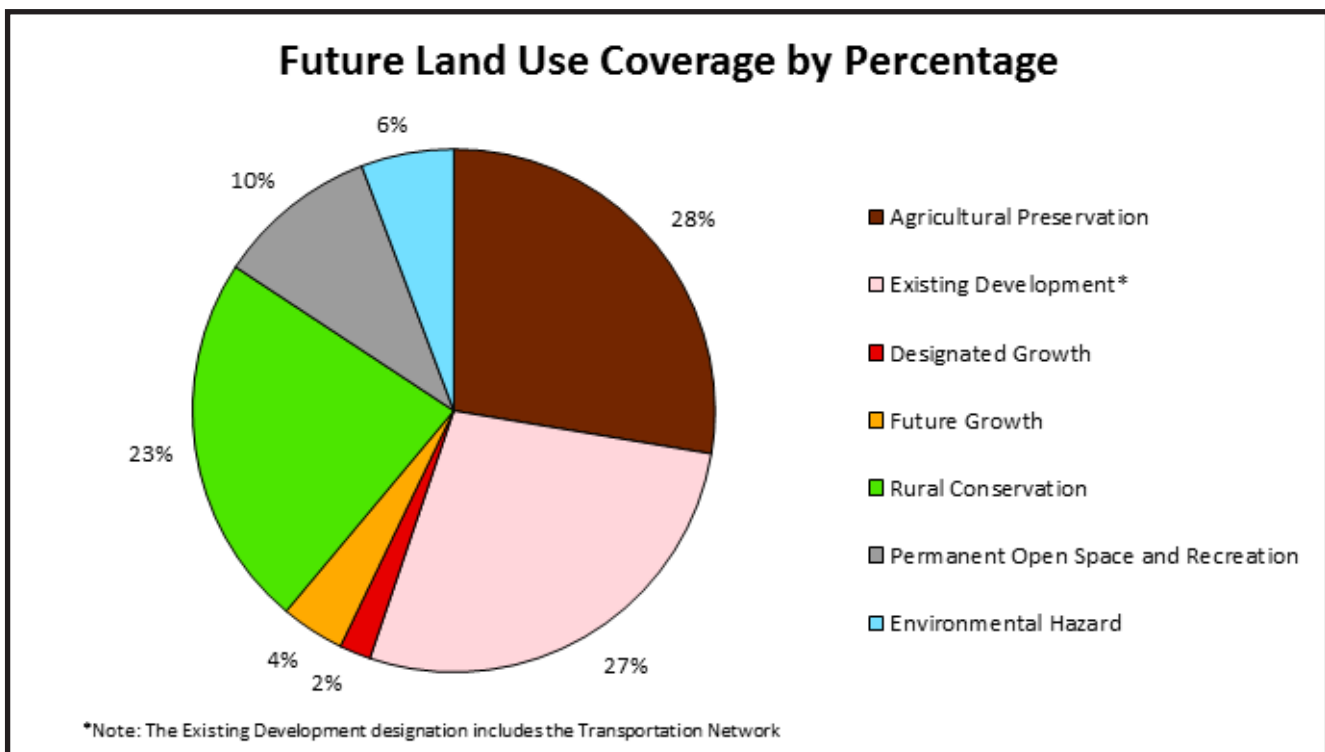
The third largest category, covering 23% of the county, is Rural Conservation. Over 76% of the Rural Conservation land is located within the Oley Hills, Hawk Mountain and Southern Highland regions. The Permanent Open Space and Recreation, and the Environmental Hazard categories comprise 10% and 6% of the county land, respectively. Together, these three conservation oriented categories along with the Agricultural Preservation category represent 67% of the total county land area.

The plan for future development of Berks County envisions the addition of 32,552 acres of Designated and Future Growth Areas (or 5.8% of the county's total land area) to accommodate the majority of the new residences, businesses, and institutional uses. This projected development pattern continues the trend of growth along major road corridors and at interchanges of the inter-state highways. The anticipated development is spread somewhat unequally among the regions. Certain areas have more potential to accommodate growth than others based upon environmental and infrastructure constraints, the location of conservation easements, brownfield reclamation as well as local land development regulations. The Southern Highlands Region has the highest amount of acreage projected for urban growth with 9,497 acres or 10% of the region's total land area. Most of the growth in this region is projected along the U.S. 422 corridor, and in the Borough of New Morgan. The region with the least amount of acreage projected for urban growth is the Oley Hills with 3,845 acres or less than 4% of the regions total land area. The majority of this growth is located along the PA Route 100 and Route 73 corridors.

The Planning Commission performed an analysis to assure that the population projection could be accommodated by the Future Land Use Plan. The focus of this evaluation was on the Growth Areas (Future and Designated), since the majority of our future development is intended to occur in these two areas. In order to achieve a balanced mix of land use, 45% of the growth area was reserved for non-residential uses. This acreage is provided to accommodate the necessary services, employment opportunities, and tax base to complement population growth.

Applying average suburban/urban residential densities, the current mix of housing types being constructed in Berks County, and an infrastructure factor, it was determined that the Growth Areas can yield a total of 38,228 dwelling units. Multiplying this number of units by the estimated 2015 household size for Berks County (2.64 persons/du), 100,922 persons can be accommodated in the Growth Areas alone. It is noted that additional growth will occur in the other land use categories and therefore, this is considered a conservative approach. Berks County’s population projection for the year 2030 is 440,656 persons, which amounts to a population increase of 25,385 persons from the 2015 population estimate of 415,271. Therefore, ample room is available to accommodate the population increase projected during the life of this Plan, provided mixed use and moderate to high density development occurs.

2020 Future Land Use Acreage						
	Hawk Mountain	Oley Hills	Southern Highlands	Tulpehocken	Metro	County Total
<b>Agricultural Preservation</b>	72,595	19,518	9,007	51,931	244	<b>153,295</b>
<b>Existing Development</b>	22,064	29,370	27,754	16,255	30,809	<b>126,252</b>
<b>Designated Growth</b>	1,715	2,244	3,484	1,263	2,063	<b>10,769</b>
<b>Future Growth</b>	6,804	1,601	6,013	5,516	1,849	<b>21,783</b>
<b>Rural Conservation</b>	28,880	44,670	24,055	16,913	14,062	<b>128,580</b>
<b>Permanent Open Space and Recreation</b>	22,324	1,854	13,347	10,933	7,022	<b>55,480</b>
<b>Transportation Network</b>	6,376	3,950	4,752	3,916	7,644	<b>26,638</b>
<b>Environmental Hazard</b>	8,948	5,514	6,537	6,431	4,392	<b>31,822</b>
<b>Region Total</b>	<b>169,706</b>	<b>108,721</b>	<b>94,949</b>	<b>113,158</b>	<b>68,085</b>	<b>554,619</b>



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2020 Future Land Use Acreage by Municipality							
Municipality	Agricultural Preservation	Developed	Environmental Hazard	Designated Growth	Future Growth	Permanent Open Space & Recreation	Rural Conservation
Albany	10,318	1,866	1,013	0	64	7,700	5,046
Alsace	59	3,009	164	31	80	176	4,289
Amity	937	4,527	991	1,239	1,369	754	1,932
Bally	0	244	2	67	0	14	0
Bechtelsville	0	149	54	30	0	6	101
Bern	138	5,255	1,176	242	581	1,381	4,037
Bernville	0	159	47	5	41	25	0
Bethel	10,917	4,093	1,287	408	1,397	2,995	6,434
Birdsboro	0	638	137	20	17	41	12
Boyertown	0	467	9	9	0	1	5
Brecknock	585	3,625	413	2	102	1,319	5,459
Caernarvon	945	2,556	435	395	359	168	823
Centerport	0	63	16	28	0	4	0
Centre	8,704	2,558	838	57	463	9	1,379
Colebrookdale	51	2,858	311	712	91	50	1,305
Cumru	83	6,532	509	399	81	1,073	4,709
District	437	1,730	257	0	0	188	4,740
Douglass	1,078	2,732	499	192	265	122	3,257
Earl	273	3,564	199	84	32	504	4,225
Exeter	2,282	7,363	1,119	1,053	192	1,419	2,284
Fleetwood	18	586	42	3	6	15	0
Greenwich	9,456	3,007	855	0	859	437	5,326
Hamburg	0	782	330	32	62	27	22
Heidelberg	4,304	1,324	326	120	777	1,156	1,169
Hereford	2,866	2,482	698	0	267	40	3,481
Jefferson	6,582	1,841	666	12	298	40	820
Kenhorst	0	308	33	22	0	10	0
Kutztown	0	697	111	75	72	36	33
Laureldale	0	437	0	0	0	81	0
Leesport	0	333	94	15	0	25	15
Lenhartsville	0	51	13	3	3	0	53
Longswamp	3,008	3,626	480	277	372	299	6,538
Lower Alsace	0	1025	119	9	0	1,525	428
L. Heidelberg	3,439	2,137	1,138	205	349	2,089	506
Lyons	17	131	0	92	0	7	0
Maidencreek	2,527	2,974	1,222	415	249	1,232	526
Marion	7,922	956	416	0	483	19	55
Maxatawny	8,273	2,750	999	92	2,099	174	2,466
Mohnton	0	442	25	3	0	20	1
Mount Penn	0	251	0	1	0	1	4
Muhlenberg	0	5,214	556	253	9	394	1,331
New Morgan	0	1,040	315	0	2,322	0	0

Municipality	Agricultural Preservation	Developed	Environmental Hazard	Designated Growth	Future Growth	Permanent Open Space & Recreation	Rural Conservation
N. Heidelberg	4,352	1,306	691	17	43	1,035	1,496
Oley	9,032	3,106	1,634	179	431	29	1,092
Ontelaunee	23	2,515	754	484	722	527	842
Penn	2,776	1,749	724	19	486	2,409	3,812
Perry	7,795	2,173	721	108	784	100	63
Pike	327	2,300	547	0	0	15	5,807
Reading	0	5,039	494	96	3	793	25
Richmond	6,784	3,301	822	130	367	80	3,755
Robeson	1,802	6,770	1,415	341	1,058	2,342	8,202
Robesonia	0	405	61	38	0	12	55
Rockland	2,122	2,940	450	21	5	23	5,351
Ruscombmanor	73	3,560	149	42	307	279	4,433
St. Lawrence	0	394	36	19	14	59	53
Shillington	0	563	15	4	0	57	0
Shoemakersville	0	203	119	24	0	10	0
Sinking Spring	0	687	40	40	0	31	0
S. Heidelberg	732	3,445	339	288	603	1,123	2,324
Spring	0	6,952	422	461	453	910	2,659
Tilden	3,035	2,549	743	215	453	2,304	2,997
Topton	1	347	19	68	0	10	0
Tulpehocken	10,904	1,916	710	53	1,006	4	230
Union	1,378	2,860	1,178	223	316	7,123	2,033
Upper Bern	5,536	1,420	295	294	372	2,177	1,428
U. Tulpehocken	6,506	1,766	432	24	636	3,105	2,299
Washington	1,269	2,936	544	725	14	218	3,302
Wernersville	0	402	7	64	0	9	0
West Reading	0	335	26	2	0	9	9
Windsor	3,625	1,564	377	122	313	4,908	3,486
Womelsdorf	1	439	19	34	32	17	11
Wyomissing	0	2,566	130	31	0	184	1
<b>TOTAL ACREAGE</b>	<b>153,292</b>	<b>152,890</b>	<b>31,827</b>	<b>10,768</b>	<b>21,779</b>	<b>55,478</b>	<b>128,576</b>

## H. Adjoining County Land Use Relationships

The purpose of this section is to consider regional land use patterns along county borders. The bordering counties surrounding Berks County include Chester, Lancaster, Lebanon, Lehigh, Montgomery and Schuylkill.

The regional growth trends of the surrounding counties have influenced Berks County’s development pattern. The rapid growth experienced in some of these adjacent regions has increased residential development and the resultant commercial development in some of Berks County’s eastern and southern municipalities. Additionally, Berks County’s development pattern has been strongly influenced by the region’s transportation network. Our growth, due in part to in- migration, has been accelerated as a result of the U.S. 422 Expressway in Montgomery and Chester Counties. This expressway has reduced travel time and created a direct corridor to Philadelphia causing sections of southeastern Berks County to serve as bedroom communities for the Philadelphia region. Furthermore, growth in the Allentown area is also having an impact in Berks County. Maxatawny, Longswamp, Hereford, and Washington Townships all show increased residential and commercial development pressure. The opening of the U.S. 222 expressway extension southern

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section joining to Lancaster County in 2006 has also contributed to growth pressure. Generally, each of the counties' Comprehensive Plans encourage compact, consolidated development adjacent to existing urban areas where public sewer and water facilities are available or could be easily extended. The planning strategies also restrict development on environmentally sensitive land, in order to protect natural resources and preserve critical open space. Since the majority of land along the county's border, both within Berks County and in the adjacent counties, is designated by future land use plans for low density residential, agriculture, or conservation, there are no major conflicts. A brief discussion of each adjoining county's future land use follows.

**Chester County**—Chester County, encompassing 758 square miles, forms the southeastern boundary of Berks County. Since 1996, Chester County has been the fastest growing county in Pennsylvania, adding nearly 70,000 people between 1996 and 2007. According to the 2010 US census, the population was 498,886 people. Chester County is characterized by urban centers spread throughout the county with connecting suburban areas in-between. The remainder of the county is rural with areas of agriculture mixed in. Connecting Berks County to the Philadelphia region is U.S. 422, which has expressway status in Chester and Montgomery Counties and arterial status in Berks County. Other major connecting features include the Pennsylvania Turnpike, Route 724, Route 345, Route 23, the Horse-Shoe Trail and the Schuylkill River.

The majority of the existing land use along the Chester County/Berks County boundary is open space consisting of French Creek State Park, large areas of woodland known as the Hopewell Big Woods and limited agriculture. *Landscapes 2*, envisions a rural landscape along the border between the two counties, except for an urban landscape in the Elverson area along Route 23. Land in Berks County adjacent to the Elverson area includes preserved farms and southwest of this area to the southern tip of Berks County consists of existing development and growth areas. Other than these two areas there is general consistency along the border.

Source: *Landscapes 2 Chester County Comprehensive Plan 2009*.

### Lancaster County

Lancaster County, composed of 952 square miles, forms the southwestern boundary of Berks County. It had a population of 514,445 people according to the 2010 US Census. Agriculture in Lancaster County has historically played a major role in the development of Berks County's agricultural economy and influenced our culture. Lancaster County ranked first in the state in 2010, with a total number of 5,293 farms and approximately 463,000 acres in farmland. U.S. 222 is a limited-access expressway in Lancaster County connecting the City of Reading and the City of Lancaster. Other major connecting features include the Pennsylvania Turnpike, Route 23, Route 625, Fritztown Road, and the Horse-Shoe Trail.

The existing land uses along the Berks/Lancaster boundary are consistent, consisting primarily of open space and agriculture with scattered residential uses. Concentrated development occurs in the Borough of Adamstown, of which the majority of its land area is located in Lancaster County. Berks County is expecting limited growth along the Route 222 corridor near the border with Lancaster County. The localized growth in this area is generally consistent.

Source: *Balance, The Growth Management Element of the Comprehensive Plan for Lancaster County, 2006*.

### Lebanon County

Lebanon County, covering 363.9 square miles, borders the northern portion of Berks County's western boundary. From the time of its formation, Lebanon County's economy has revolved around its farmland. Residential, commercial and industrial sectors of the county have been growing at a moderate rate and encompassing larger land areas including the central corridor of commercial, industrial and residential development following U.S.422 from the City of Lebanon east to the Berks County border. Population has steadily increased to 133,568 people according to the 2010 US Census. Besides Route 422 which connects the Cities of Lebanon and Reading, other major connecting features include the Route 22/I-78 corridor, Route 419, Route 501, Route 645, the Appalachian Trail and the Tulpehocken Creek.

A generalized description of the future land use plan illustrates natural areas and rural resource protection areas along



both the north and south mountain ranges that border Berks County. The Lebanon Future Land Use Plan calls for mainly agricultural areas throughout the remainder of the border with Berks County, with the following exceptions: along the Route 422 and Route 419 corridors near Myerstown, Newmanstown and Richland, the plan calls for mostly Suburban Business. Although there are pockets of Agricultural Preservation within this area of Berks County, this area is generally consistent. The Route 22 and I-78 corridor in Lebanon County calls for Suburban Business and Suburban Neighborhoods. According to the Berks County Future Land Use Plan, this area calls for Agricultural Preservation. The other area of inconsistency is the Mt. Aetna area in Berks County. Berks County calls for Future Growth due to the placement of infrastructure, whereas Lebanon County calls for Agricultural Preservation.

Source: *Lebanon County Comprehensive Plan, 2007*

### **Lehigh County**

Lehigh County is composed of 348 square miles. According to the 2010 US Census, the population is 349,497 people. Lehigh borders Berks County's northeastern boundary. A large area of the central portion of the Lehigh Valley is dominated by Urban Development. This is concentrated along the Route 22/I-78 corridors and Route 222. The outlying areas of the county are mainly rural with agriculture throughout. Route 222 connects the City of Allentown and the City of Reading. Other major connecting features include the Route 22/I-78 corridor, Route 143, Route 29/100, and the Appalachian Trail.

The Berks/Lehigh County border is primarily rural, dominated by Farmland Preservation and Natural Resource areas. Lehigh County has purchased a number of agricultural easements along the border particularly in the area north of I-78. Development pressures are creeping westward toward the Berks County border along the Route 22/I-78 corridor, the Route 222 corridor, and in the Alburtis area. However, the border land uses between Berks and Lehigh County are generally consistent.

Source: *Comprehensive Plan for Lehigh Valley, 2005 (Updated 2010)*.

### **Montgomery County**

Montgomery County consists of 486 square miles. It borders Berks County's eastern boundary. Montgomery County is thriving with over 799,874 people (2010 US Census) and a half million jobs. The majority of this population resides in the southern portion of the county as growth has radiated from Philadelphia. They have a variety of recreational, cultural, and community amenities. Suburban/urban residential development clustered around important transportation routes, major retail hubs and office complexes characterize this area. By 2025, the county is expected to grow by 107,000 people, 49,000 homes, and 77,000 jobs. Route 422 connects the City of Reading with Pottstown and the Philadelphia region. Other major connecting features include Route 73, Route 100, Route 29, the Schuylkill River and the Schuylkill River Trail.

The Berks/Montgomery border is characterized by rural resource areas, including agriculture to the northeast of Boyertown. Montgomery County has purchased a number of agricultural easements along this border. Town residential areas, business areas and suburban residential areas are present in the Boyertown and Pottstown/Stowe area along PA 100. A rural area characterizes the border between the Boyertown and Pottstown/Stowe growth areas. Therefore, there is general consistency along the border between the two counties.

Source: *Montco 2040: A Shared Vision, 2015*

### **Schuylkill County**

Schuylkill County encompasses a physical area of 780 square miles. The landscape of Schuylkill County is characterized by alternating mountain ridges and lowland valleys running in a northeast-southwest direction. Woodlands comprise approximately 45% of the land area of the county, with agriculture encompassing about 30%. According to the 2010 U.S. census, the total population in the county was 148,289 persons. A prominent feature in both the county's history and landscape is the presence of two large anthracite coal belts which are located northeast to southwest through the center of the county. Many of the county's existing villages and boroughs were developed around mining centers to house workers and their families. Mining as a land use currently represents 10% of the total area of the county.

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Schuylkill County borders the northwestern boundary of Berks County. The Blue Mountain/Kittatinny Ridge is the dividing feature between the two counties which is comprised of State Game Lands and a State Forest traversed by the Appalachian Trail. The two main thoroughfares into Berks County are Route 183 and Route 61, with Route 61 connecting the City of Reading and Pottsville. Other connecting features include Route 645, Route 501, the Schuylkill River, and the Bartram Section of the Schuylkill River Trail.

Both Schuylkill and Berks County Future Land Use Plans call for preservation and conservation type land uses along the length of the boundary making this border consistent. The Cabela's retail complex is located along Route 61 at the interchange of I-78 just a few miles south of the Berks / Schuylkill border and has brought significant commercial growth to the area. However, due to the terrain along the county border, significant development pressure is not expected to carry over to the Port Clinton area.

Source: *Schuylkill County Comprehensive Plan, 2006*.

### I. Land Use Policies

**Land Use Goal:** To create and adhere to a logical, coordinated land use pattern that provides for a variety of appropriate types of development, while recognizing land and infrastructure capabilities in relation to natural features and environmental and physical factors.

#### a. Agricultural Preservation Areas

**Goal:** To preserve the agricultural land base, while promoting the agribusiness system and its long-term viability.

**Policies:**

- (1) The county will identify, maintain, and preserve the most viable agricultural land for agricultural use, and support agriculture as a primary land use and a valued element of the county's economy.
- (2) The county will continue to administer the Agricultural Conservation Easements (ACE) Program through its Agricultural Land Preservation Board. It will concentrate on purchasing easements of contiguous parcels of suitable farmland, giving priority to parcels located in Agricultural Preservation areas.
- (3) The county will promote the Best Management Practices (BMP's), Conservation Plans, and nutrient management plans to promote good stewardship of the soil and water resources through the Berks County Conservation District, Berks Nature, Natural Resource Conservation Service, or other appropriate agency.
- (4) The county will give local municipalities assistance to encourage them to enact Effective Agricultural Zoning regulations in Agricultural Preservation areas.
- (5) The county will promote agricultural activities and agricultural businesses such as farm equipment sales and service, farm supply stores, and businesses which market or process farm products while maintaining prime agricultural soils.
- (6) The county will encourage its municipalities to provide for intensive animal operations and other intensive agricultural uses.
- (7) The county supports the establishment and continuance of adequate farm-related programs and organizations, including the USDA Farm Service Agency (FSA), USDA Natural Resource Conservation Service, County Conservation District, and Penn State Cooperative Extension in Berks County, Berks County Agricultural Land Preservation Board, Berks Nature, Berks County Farm Bureau, and Berks County Grange.
- (8) The county will strongly discourage construction of new local access roads through agricultural areas.
- (9) Agricultural Preservation areas should contain at least 500 acres of contiguous farmland, with the exception of Agricultural Conservation Easements.
- (10) The county supports the use of natural buffers, such as stream corridors, woodland, and hedgerows to buffer residential development from agricultural uses.

- (11) The county will not support the permanent easement of any parcel or portion of a parcel, regardless of designation by the Berks County Comprehensive Plan, that interferes with a project listed on the LRTP and/or TIP.

**b. Designated and Future Growth Areas**

**Goal:** To direct smart, concentrated growth to appropriate areas.

**Policies:**

- (1) The county should support a land use pattern that allows a wide variety of interrelated suburban/urban land uses consistent with sound planning principles.
- (2) The county will encourage municipalities to enact land use regulations that promote smart growth principles, including higher density development, mixed-use development, and Traditional Neighborhood Design.
- (3) The county supports a full range of public infrastructure services being planned and provided as needed to accommodate the growth as it occurs.
- (4) The county supports a fiscally-efficient, and environmentally-sensible orderly expansion of infrastructure with respect to land capabilities, higher density zoning, and quality of life in Future Growth Areas.
- (5) The county should focus its most intensive population growth, employment, financial and infrastructure investments in the Existing Developed, Future and Designated Growth Areas. Development should be compatible with the character of the community.
- (6) The county will facilitate intermunicipal cooperation and coordination of planning activities.
- (7) The county should focus a portion of its funding for highway projects that add capacity, infrastructure expansion, and development in Designated Growth, Future Growth and Existing Developed Areas.
- (8) The county should enhance and diversify its economic base and provide maximum employment opportunities in these areas.
- (9) The county does not support the purchase of Agricultural Conservation Easements in growth areas.
- (10) The county will assist in facilitating the communication and coordination among municipalities of the review process for the above mentioned development types if it is determined that these developments have regional impacts on municipalities throughout the county.

**c. Existing Development Areas**

**Goal:** To maintain and revitalize areas with established development through in-fill development and rehabilitation.

**Policies:**

- (1) The county should promote programs to strengthen the built environment as multi-purpose centers to maintain and restore them as attractive, efficient, and desirable places to live, work, and enjoy recreation.
- (2) The county should support efforts to revitalize existing developed areas that have changing functions or are currently under-utilized.
- (3) The county supports efforts to preserve historic districts, sites, and structures.
- (4) The county promotes in-fill development, compatible in scale, style, and character to the surrounding land uses and infrastructure capabilities.
- (5) The county encourages the acquisition and redevelopment of Brownfield Sites.
- (6) The county believes that our existing permitted quarries, with reasonable expansion, can provide the necessary quantity of standard materials to meet our construction needs during the term of this plan. Existing quarrying operations and any expansion of these facilities should comply with state statutes governing mineral extraction.

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### e. Permanent Open Space and Recreation

**Goal:** To preserve, protect, and create a diverse open space network and provide adequate recreational opportunities for county residents.

**Policies:**

- (1) The county should continue to support open space preservation and recreation projects that are underway.
- (2) The county and its stakeholders should pursue the open space network of interconnecting greenways, trails, and parks, as recommended by the Berks County Greenway, Park and Recreation Plan. Completing the Schuylkill River Trail through Berks County will have significant positive impacts for the county on the trail network, recreation and economic development and is, therefore, the highest priority in the county for investment.
- (3) The county should acquire open space for future parkland. Highest priority should be given to open space identified in the Berks County Greenway, Park and Recreation Plan that is vulnerable to development.
- (4) The county will use grant programs to plan and finance open space and recreation investments.
- (5) The county will support municipal and non-profit organizations in their efforts to obtain funding to maintain, acquire, expand, preserve and develop local open space and recreation resources.
- (6) The county will encourage municipalities to preserve open space through innovative subdivision and land development techniques.
- (7) The county should provide technical assistance to municipalities that will support complete and improving regional trails.
- (8) The County will support improvement of park, recreation, and open space facilities to accommodate special needs populations.

### f. Rural Conservation Areas

**Goal:** To use development techniques that will conserve natural resources while not conflicting with rural environments.

**Policies:**

- (1) The county will encourage municipalities to enact land use regulations that promote sensitive and flexible design principles and techniques allowing land to be developed efficiently with the least degree of environmental impact, consistent with rural land use patterns and infrastructure capabilities.
- (2) The county encourages the use of sensitive site design that preserves the natural hydrologic conditions including, but not limited to, the preservation of natural drainage features, the reduction of the amount of impervious surfaces and the implementation of stormwater Best Management Practices (BMP's).
- (3) The county will support expansion of public sewer and water in Rural Conservation Areas to rectify public health problems and serve village areas, without impacting the land use patterns of adjacent areas.
- (4) The county will support community or alternative technology for sewage facilities that are acceptable to the Commonwealth, in order to encourage innovative and affordable environmentally sensitive site designs.
- (5) The county will support agricultural uses as an appropriate land use in Rural Conservation Areas.
- (6) The county will support taxation and assessment policies that help preserve critical natural resource areas.
- (7) The county will continue to promote the wise management and use of our forest resources to ensure their long-term health and productivity, and encourage landowners of forested land to participate in the State's Forestry Stewardship Program.

**g. Environmental Hazard Areas**

**Goal:** To protect water resources and restore degraded hydrological systems.

**Policies:**

- (1) The county will strongly discourage development within Identified Floodplain Areas. Any improvements to existing building should be elevated and/or floodproofed to regulatory flood elevation.
- (2) The county will encourage municipalities to establish a floodplain management program with measures that rectify existing problems, prevent new problems from occurring, and enact floodplain management regulations that exceed the minimum state and federal requirements.
- (3) The county will support the relocation and/or acquisition of known flood-prone structures with repetitive losses to reduce hazard losses within floodplains.
- (4) The county will support the protection of wetlands and wetland fringe areas from encroachment and unregulated development activities.
- (5) The county will support the enactment of riparian buffer zone requirements in zoning and subdivision ordinances.
- (6) The county will support protecting the character of streams and watersheds that have High Quality and Exceptional Value designations.
- (7) The county will support the protection and preservation of the quality of stream environments associated with designated Scenic Rivers.
- (8) The county will assist in planning and coordinating highway projects as well as other necessary infrastructure improvements that minimize the impact on Environmental Hazard Areas.
- (9) The county supports stream valley floodplains as trail connector elements that link major open spaces and parks, while concurrently acting as open spaces and/or buffers themselves.

**h. Environmental Resources**

**Goal:** To protect all environmental resources.

**Policies:**

- (1) The county encourages the use of Erosion and Sediment Control Programs by requiring erosion and sediment plan approval by the County Conservation District and providing for inspection, compliance and enforcement measures.
- (2) The county will support the preparation of watershed protection plans and environmental assessments by qualified organizations and agencies.
- (3) The county will encourage municipalities to adopt zoning ordinances to safeguard wellhead protection areas.
- (4) The county will promote water conservation measures to ensure the future availability of water resources, and encourage green building techniques.
- (5) The county will support protecting the character of streams and watersheds that have High Quality and Exceptional Value designations.
- (6) The county will continue to support municipalities identified as an MS4 through the educational offerings through the Berks County MS4 Steering Committee and Cooperative Education Program.
- (7) The county will provide outreach and education to encourage municipalities to follow Act 167 guidelines, including the Act 167 requirement for municipalities to adopt Stormwater Management Ordinances and updates for each municipal watershed.

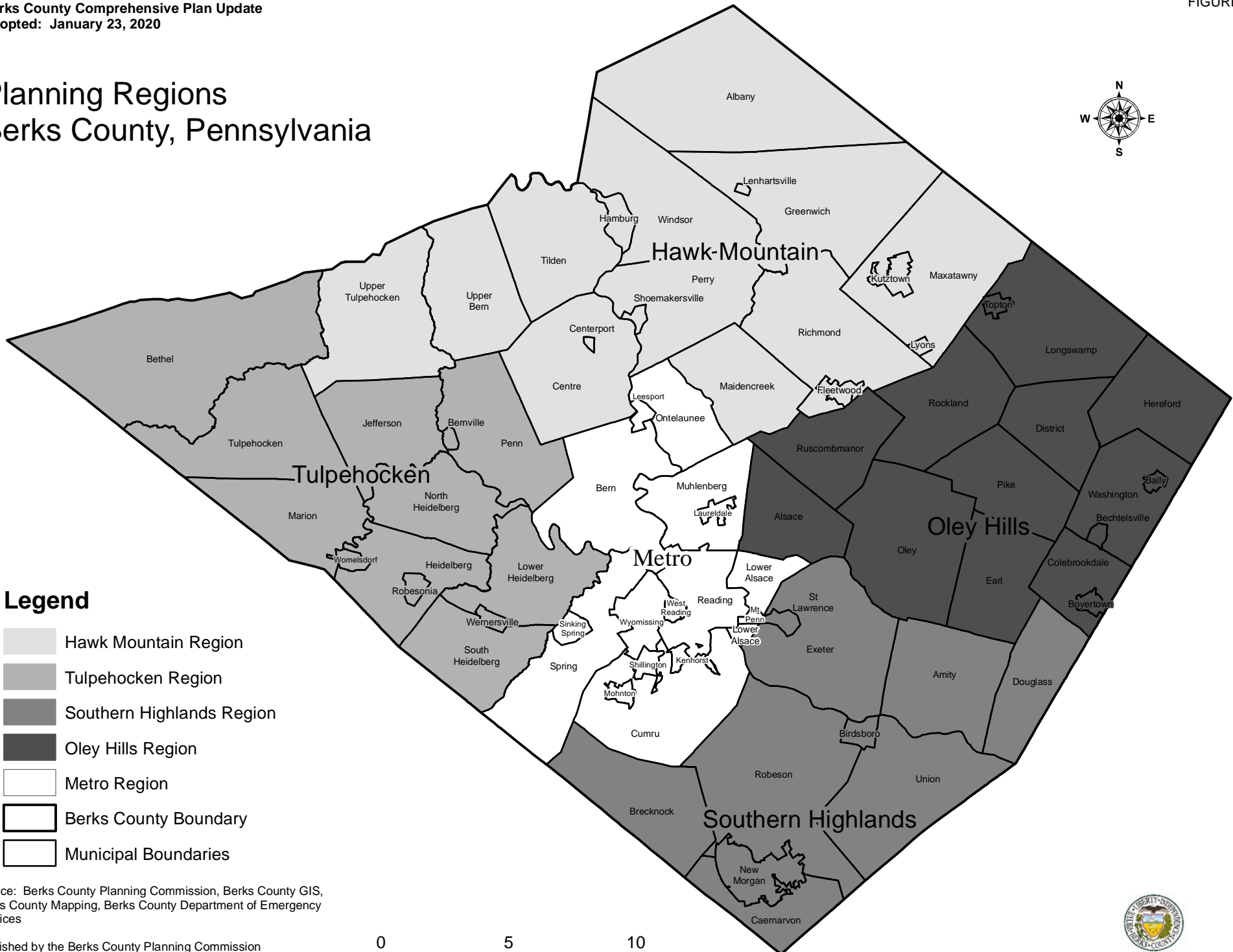
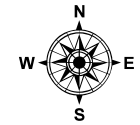


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






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- (8) The county supports municipal policies for the maintenance of stormwater management facilities and encourages municipal ownership and proper maintenance. The county does not recommend that individual property owners have the maintenance responsibility and/or ownership of stormwater facilities.
- (9) The county will encourage municipalities to identify areas with existing stormwater problems and create a plan to fix and/or alleviate the identified problems.
- (10) The county will encourage the use of Best Management Practices associated with stormwater facilities to improve the quality of water that is exiting the facility.
- (11) The county will encourage the protection and preservation of stormwater recharge areas.
- (12) The county supports strict disturbance standards on slopes of 15% or greater, wetland fringe areas and large stands of woodland.
- (13) The county will strongly discourage development on natural slopes of 25% or greater.

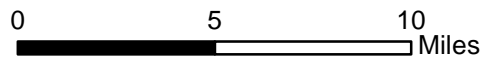
# Planning Regions Berks County, Pennsylvania



### Legend

-  Hawk Mountain Region
-  Tulpehocken Region
-  Southern Highlands Region
-  Oley Hills Region
-  Metro Region
-  Berks County Boundary
-  Municipal Boundaries

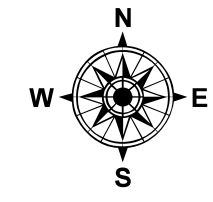
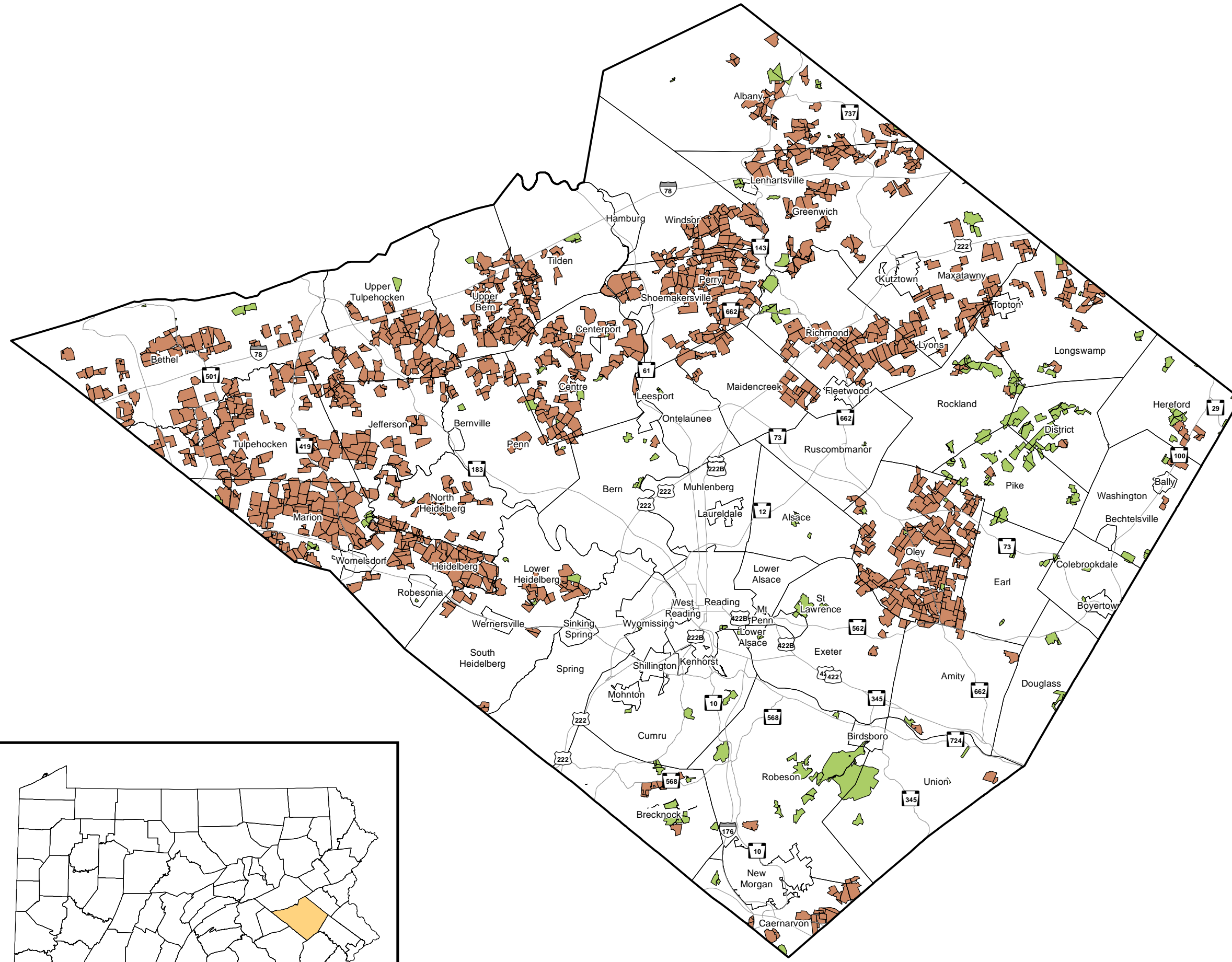
Source: Berks County Planning Commission, Berks County GIS, Berks County Mapping, Berks County Department of Emergency Services





Berks County Comprehensive Plan Update  
Adopted: January 23, 2020

# Easements Berks County, Pennsylvania

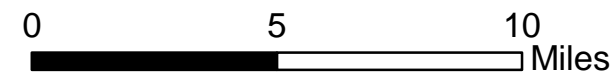
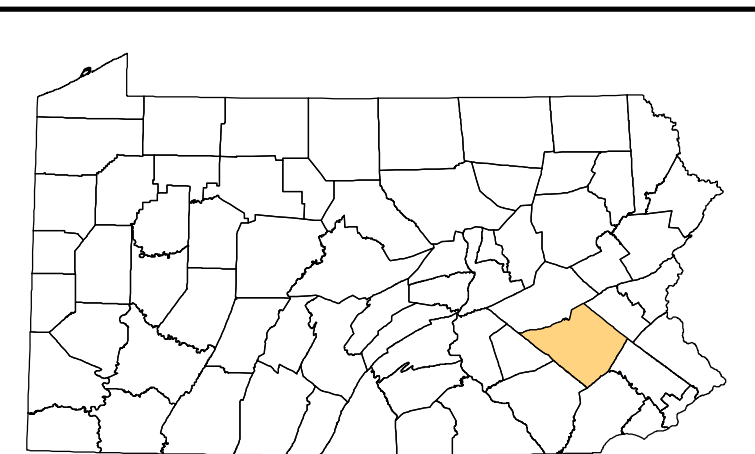


### Legend

- Agricultural Easements
- Easements
- Berks County Boundary
- Municipal Boundaries
- Major Roads

Source: Berks County Planning Commission, Berks County GIS,  
Berks County Mapping, Berks County Department of Emergency Services  
Published by the Berks County Planning Commission

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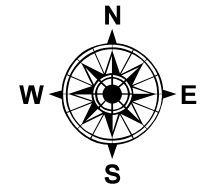






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Adopted: January 23, 2020

# Existing Land Use Berks County, Pennsylvania



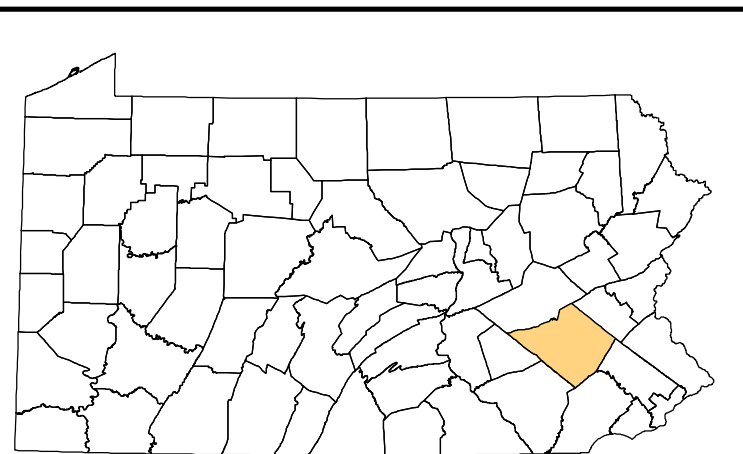
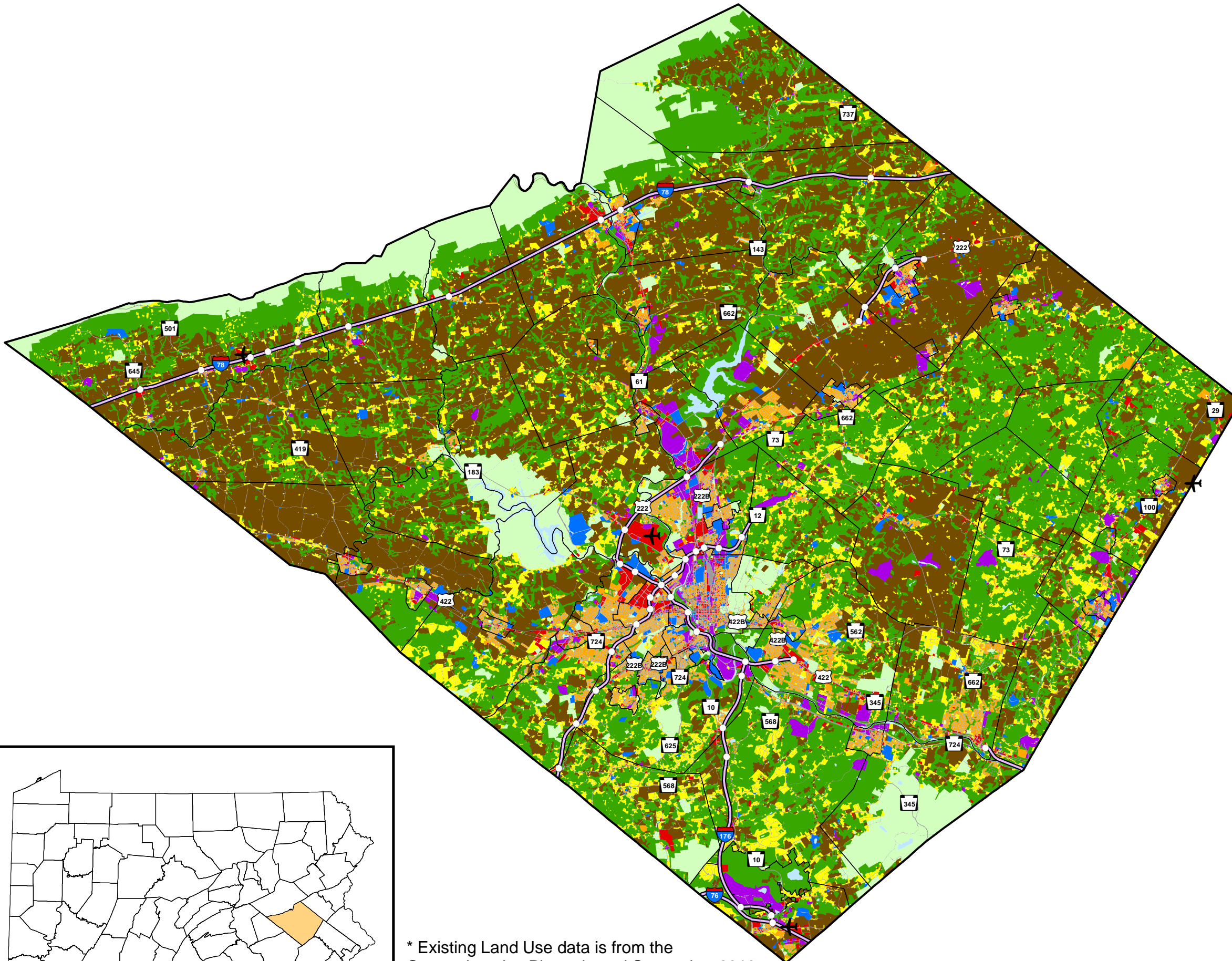
## Legend

- Residential Low
- Residential High
- Commercial
- Industrial
- Institutional
- Recreation
- Open Space
- Agriculture
- Water
- Transportation
- Berks County Boundary
- Municipal Boundaries
- Limited Access Highway
- Railroads
- Interchanges
- Public Airports

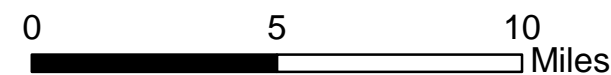
Source: Berks County Planning Commission, Berks County GIS,  
Berks County Mapping, Berks County Department of Emergency Services

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\* Existing Land Use data is from the  
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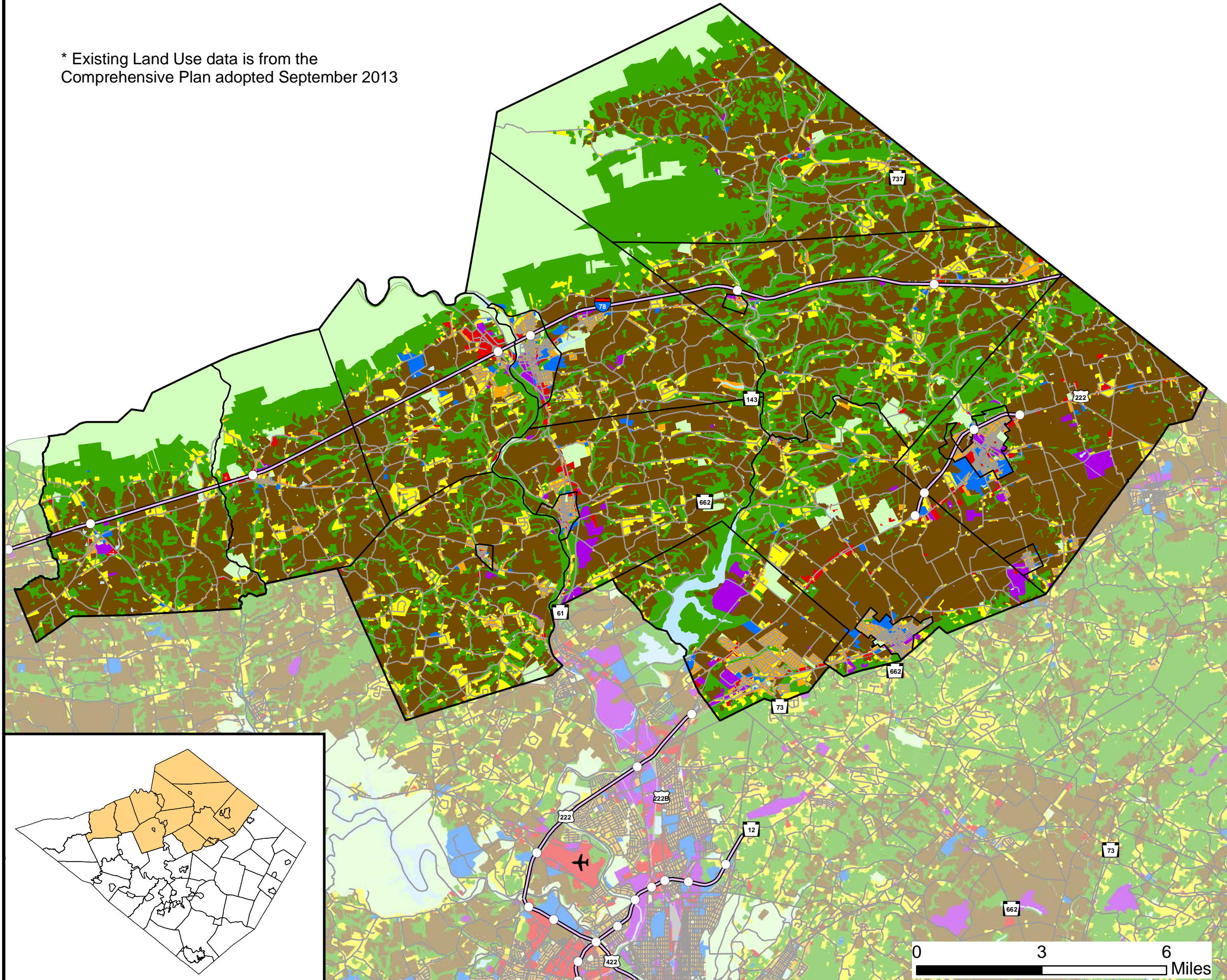




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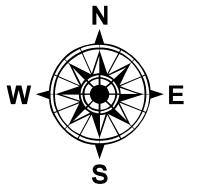
# Hawk Mountain Region Existing Land Use Berks County, Pennsylvania

\* Existing Land Use data is from the  
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## Legend

- Residential Low
- Residential High
- Commercial
- Industrial
- Institutional
- Recreation
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- Agriculture
- Water
- Transportation
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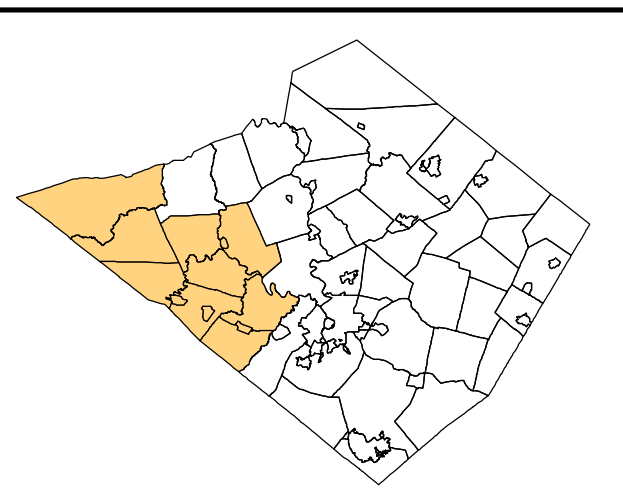
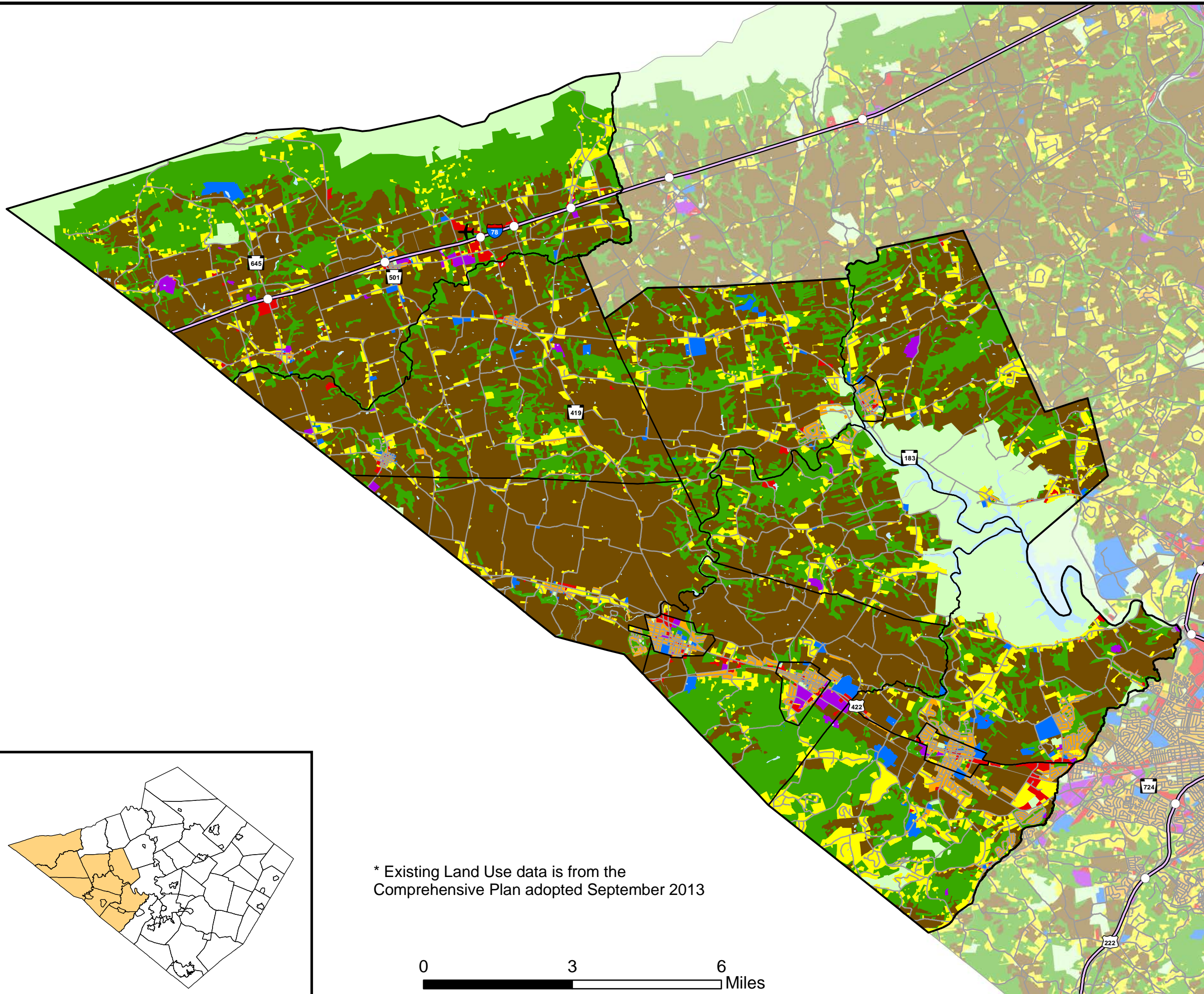
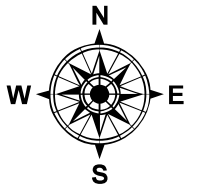


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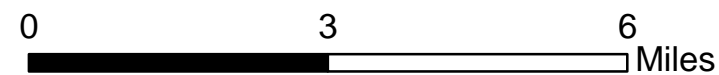
# Tulpehocken Region Existing Land Use Berks County, Pennsylvania

## Legend

- Residential Low
- Residential High
- Commercial
- Industrial
- Institutional
- Recreation
- Open Space
- Agriculture
- Water
- Transportation
- Municipal Boundaries
- Limited Access Highway
- Railroads
- Interchanges
- ✈ Public Airports



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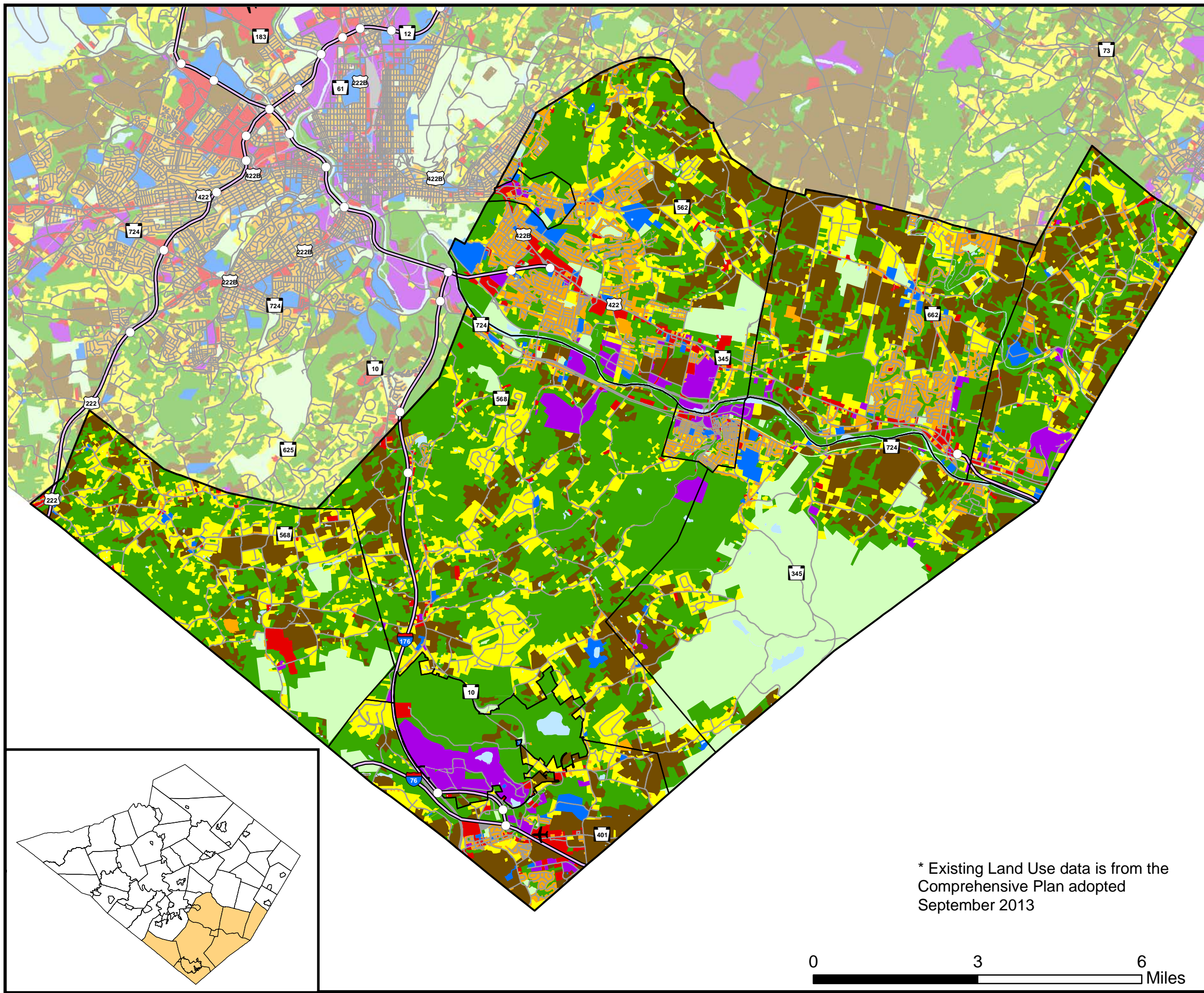






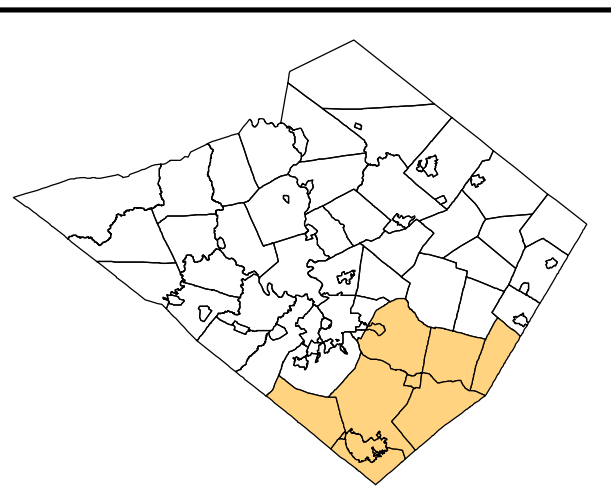
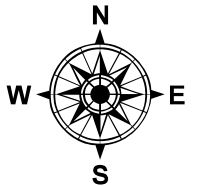
Berks County Comprehensive Plan Update  
Adopted: January 23, 2020

# Southern Highlands Region Existing Land Use Berks County, Pennsylvania

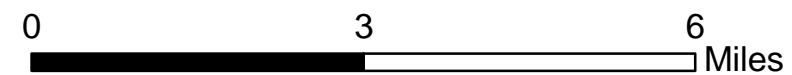


## Legend

- Residential Low
- Residential High
- Commercial
- Industrial
- Institutional
- Recreation
- Open Space
- Agriculture
- Water
- Transportation
- Municipal Boundaries
- Limited Access Highway
- Railroads
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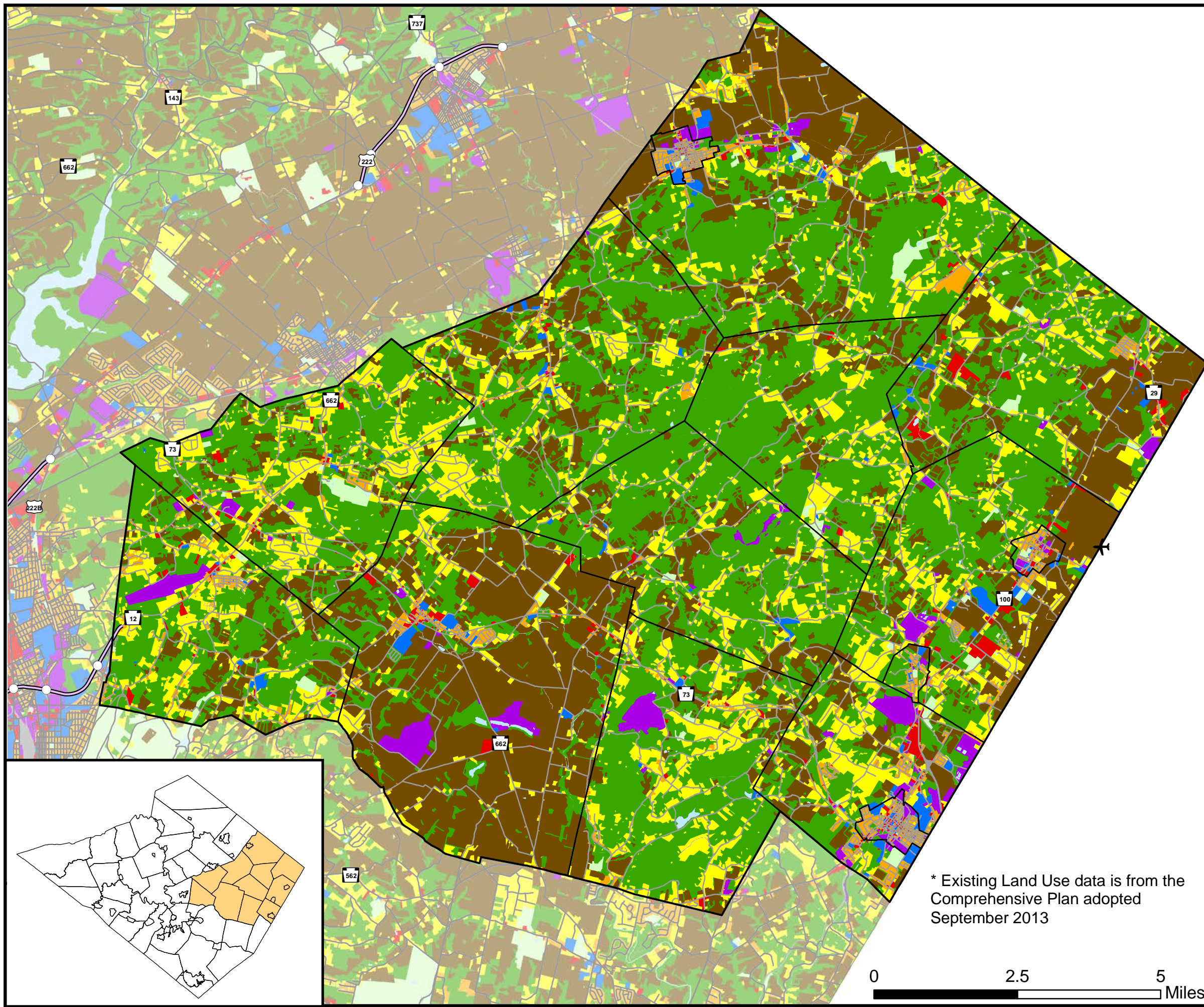






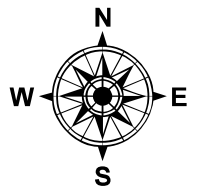
Berks County Comprehensive Plan Update  
Adopted: January 23, 2020

# Oley Hills Region Existing Land Use Berks County, Pennsylvania



## Legend

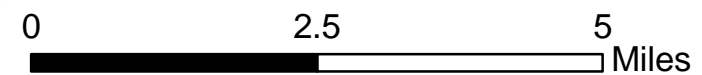
- Residential Low
- Residential High
- Commercial
- Industrial
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- Recreation
- Open Space
- Agriculture
- Water
- Transportation
- Municipal Boundaries
- Limited Access Highway
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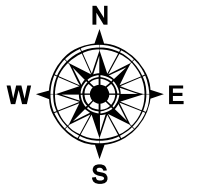


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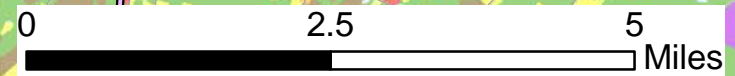
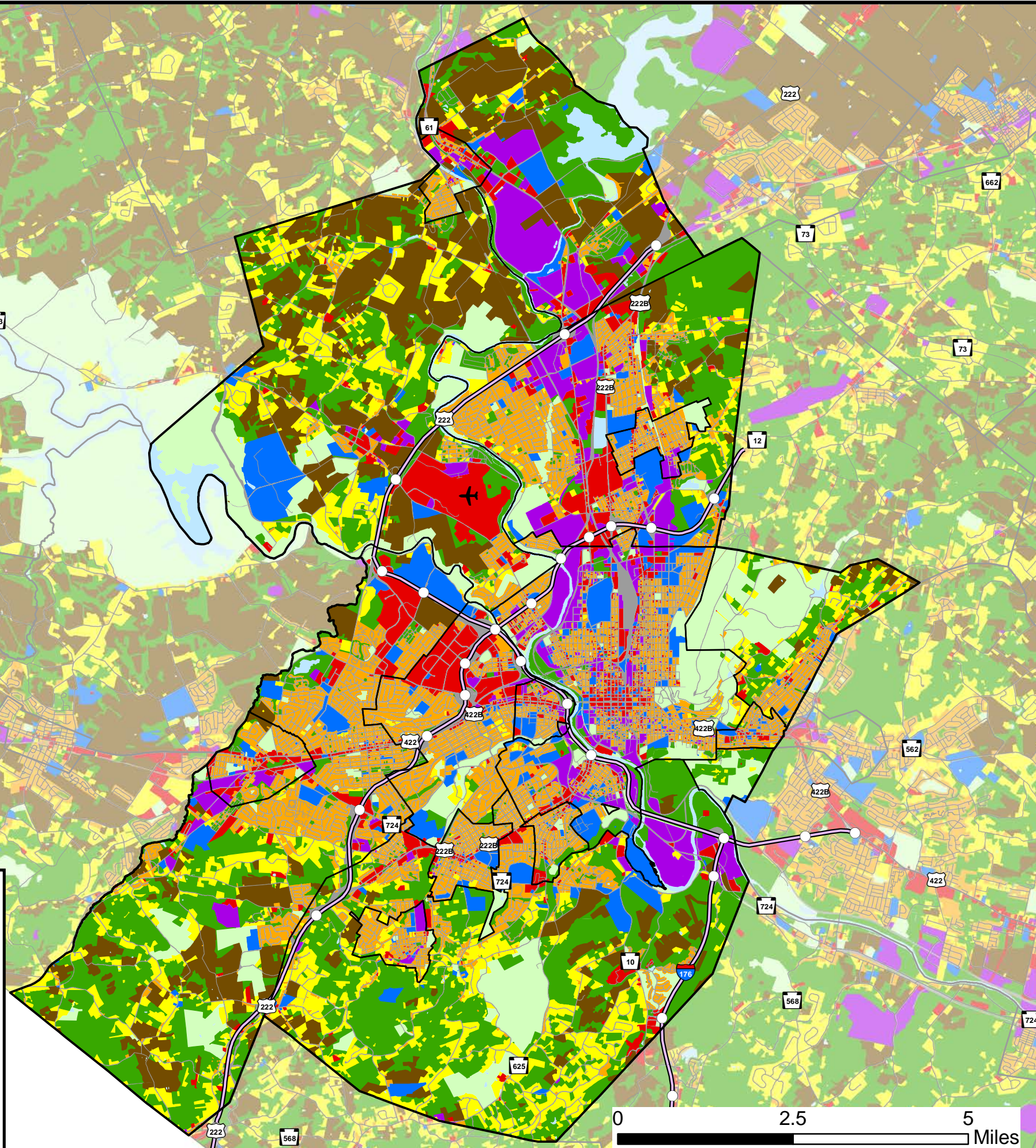
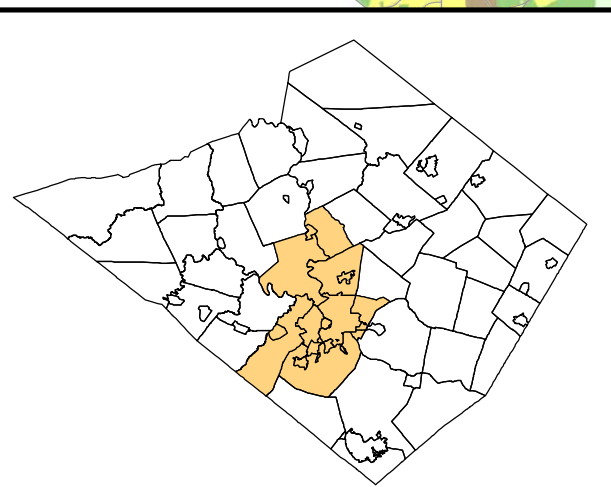
# Metro Region Existing Land Use Berks County, Pennsylvania

## Legend

- Residential Low
- Residential High
- Commercial
- Industrial
- Institutional
- Recreation
- Open Space
- Agriculture
- Water
- Transportation
- Municipal Boundaries
- Limited Access Highway
- Railroads
- Interchanges
- ✈ Public Airports



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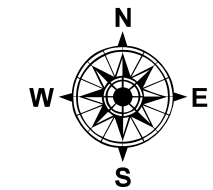






Berks County Comprehensive Plan Update  
Adopted: January 23, 2020

# Future Land Use Berks County, Pennsylvania



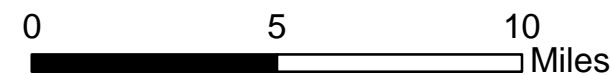
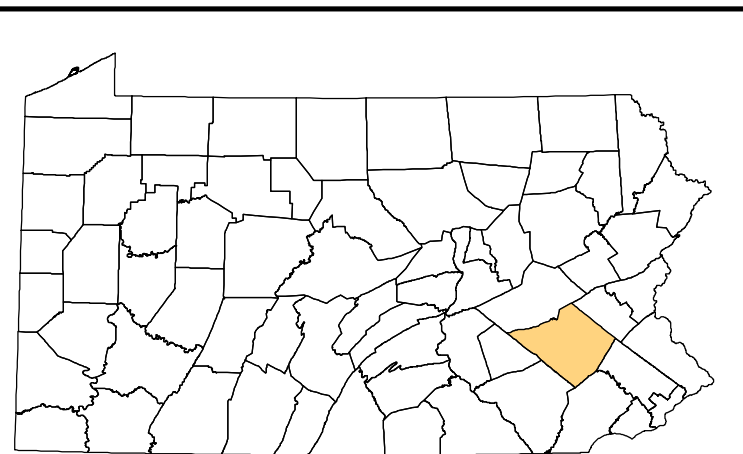
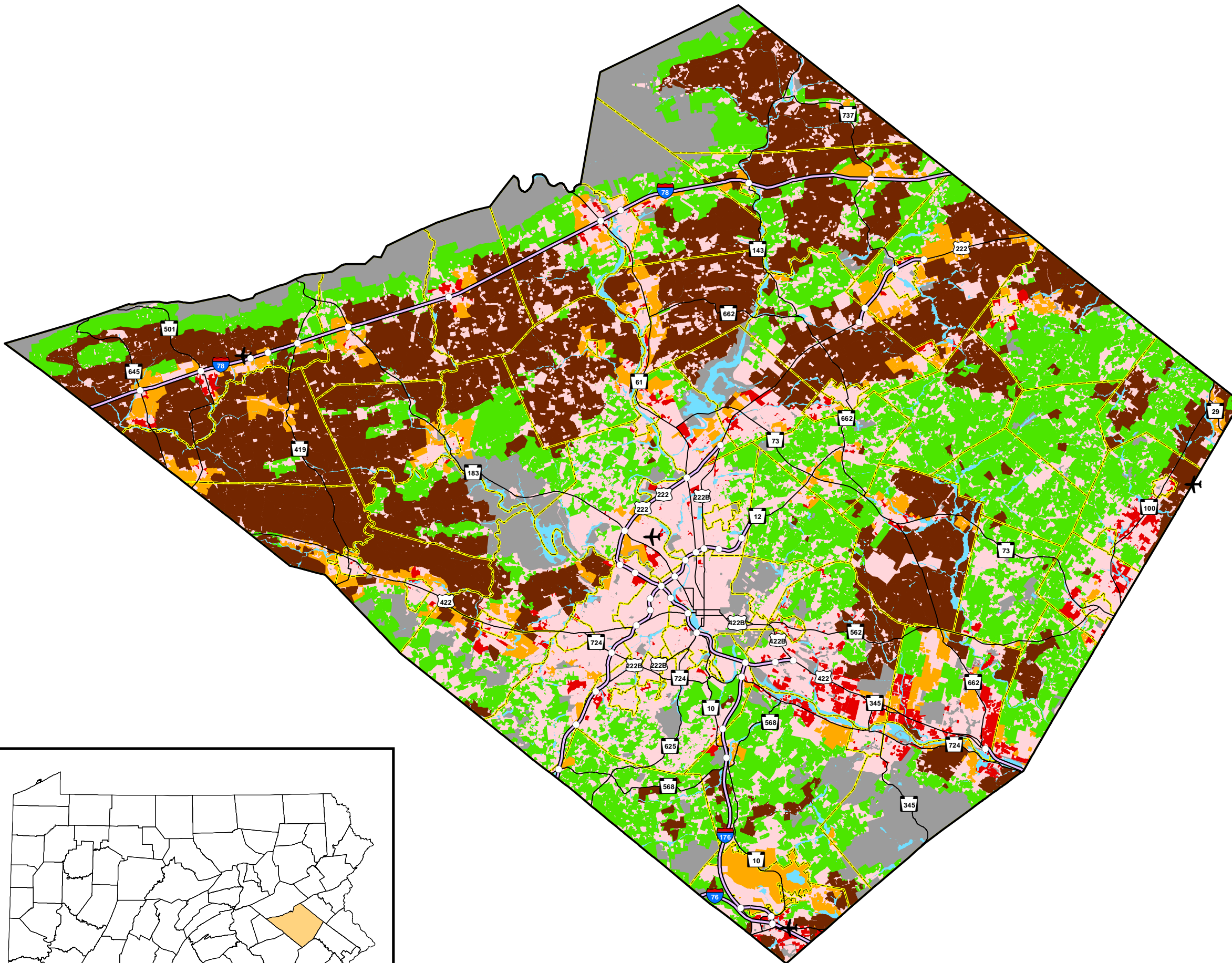
## Legend

- Existing Development
- Designated Growth
- Future Growth
- Rural Conservation
- Agricultural Preservation
- Permanent Open Space and Rec
- Environmental Hazard
- Transportation Network
- Berks County Boundary
- Municipal Boundaries
- Limited Access Highway
- Major Roads
- Railroads
- Interchanges
- Public Airports

Source: Berks County Planning Commission, Berks County GIS, Berks County Mapping, Berks County Department of Emergency Services, FEMA

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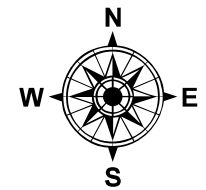






Berks County Comprehensive Plan Update  
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# Hawk Mountain Region Future Land Use Berks County, Pennsylvania



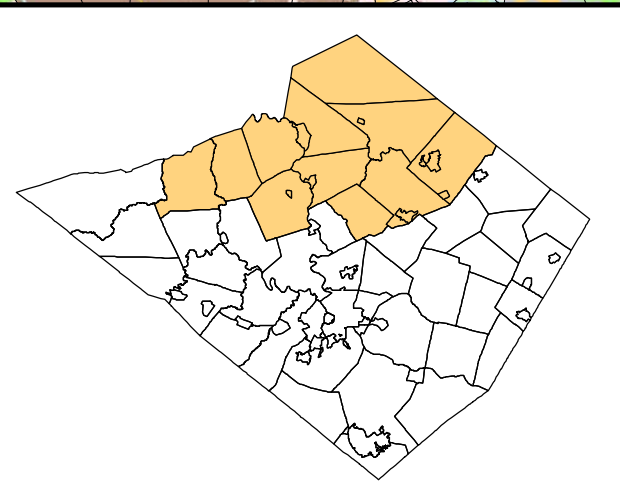
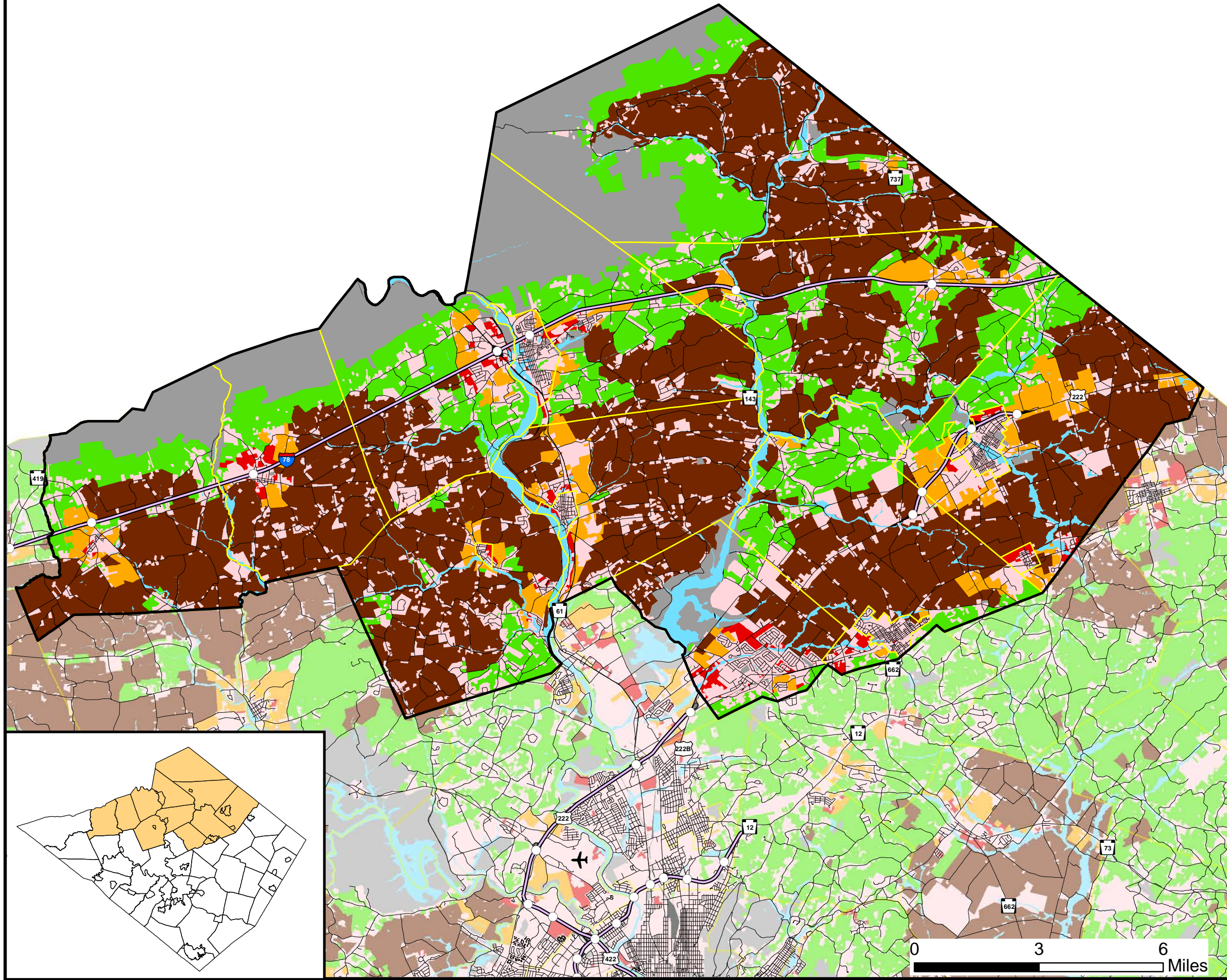
## Legend

- Existing Development
- Designated Growth
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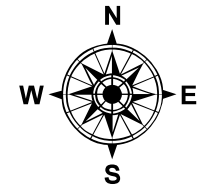






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# Tulpehocken Region Future Land Use Berks County, Pennsylvania



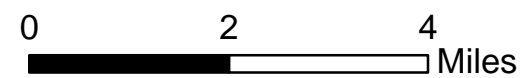
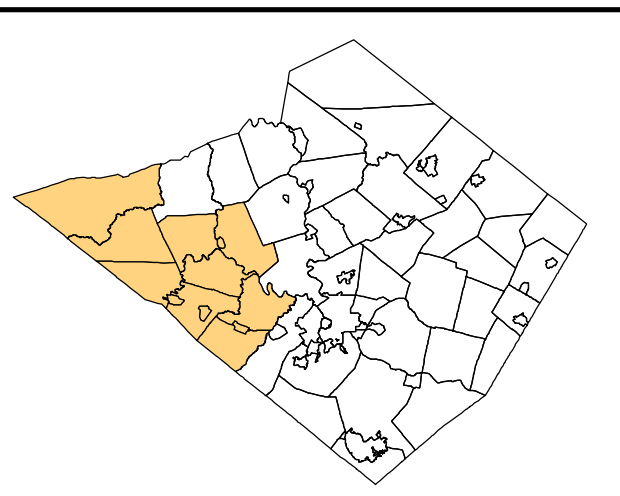
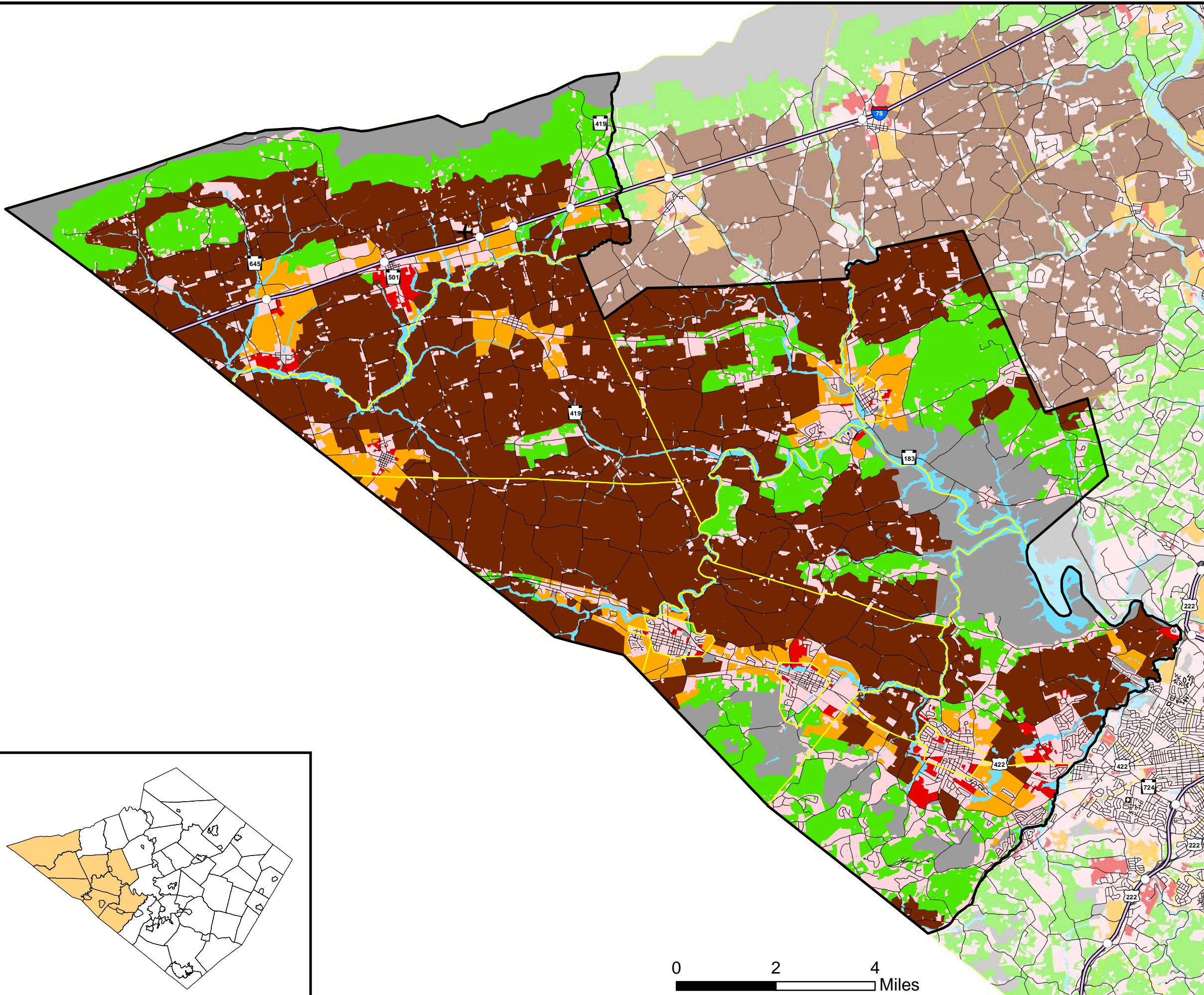
## Legend

- Existing Development
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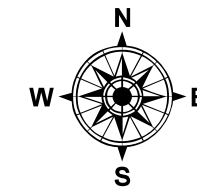






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# Southern Highlands Region Future Land Use Berks County, Pennsylvania



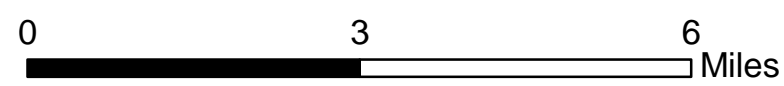
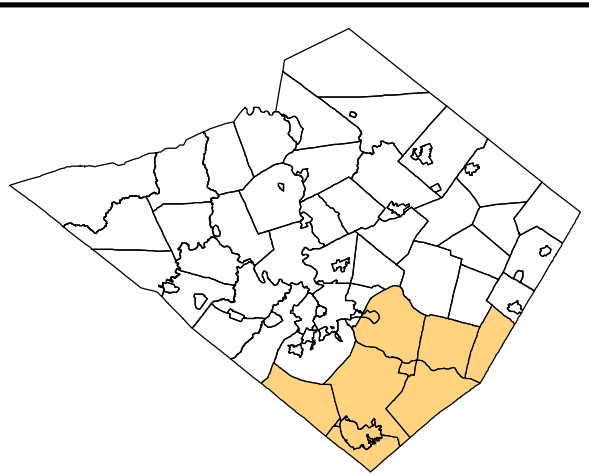
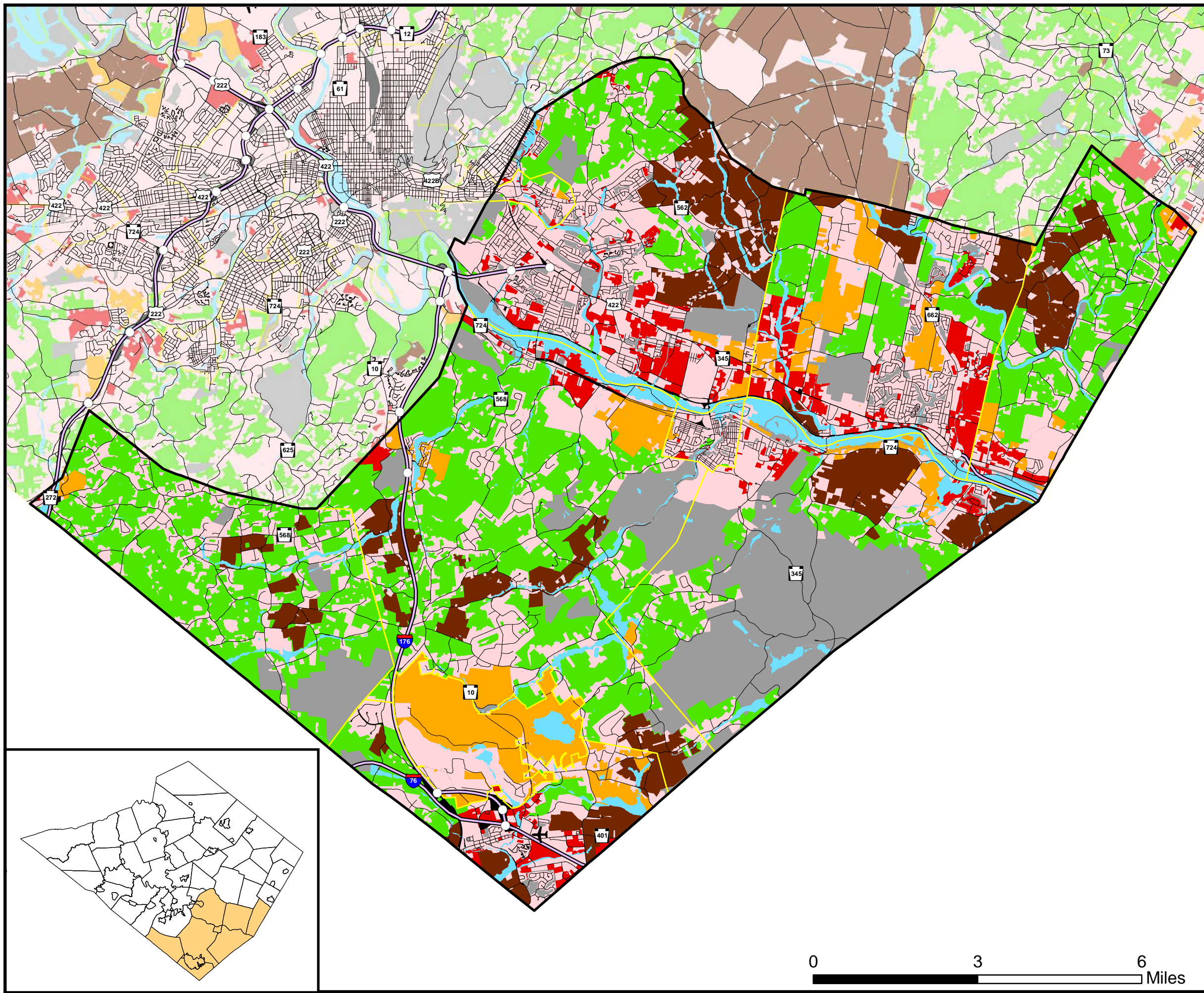
## Legend

- Existing Development
- Designated Growth
- Future Growth
- Rural Conservation
- Agricultural Preservation
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- Planning Region Boundary
- Municipal Boundaries
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Source: Berks County Planning Commission, Berks County GIS, Berks County Mapping, Berks County Department of Emergency Services, FEMA

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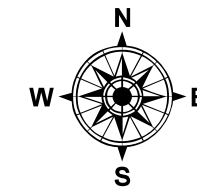






Berks County Comprehensive Plan Update  
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# Oley Hills Region Future Land Use Berks County, Pennsylvania



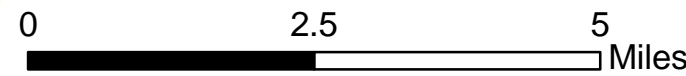
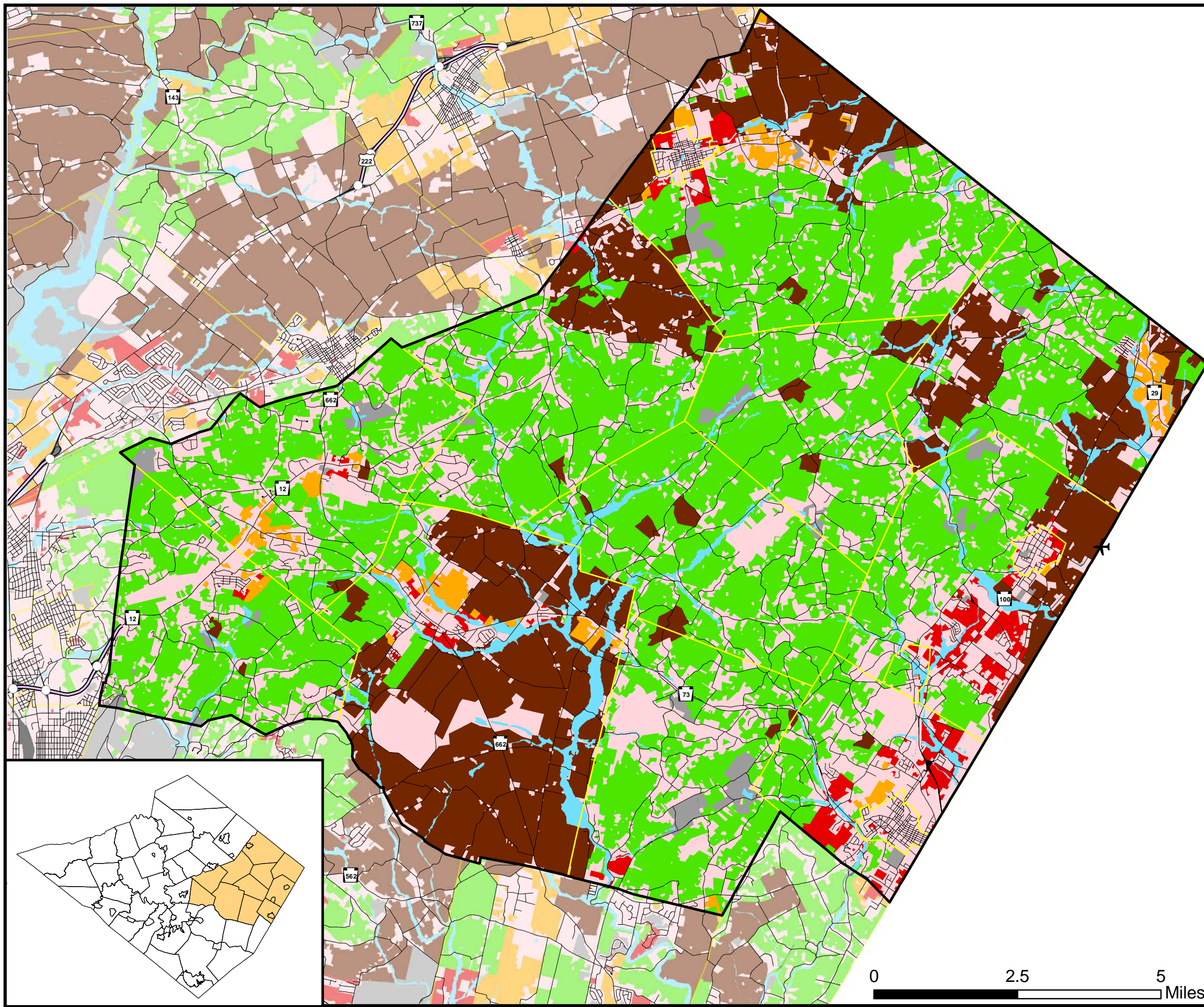
## Legend

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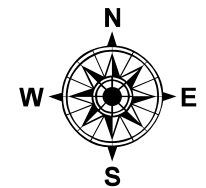






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# Metro Region Future Land Use Berks County, Pennsylvania



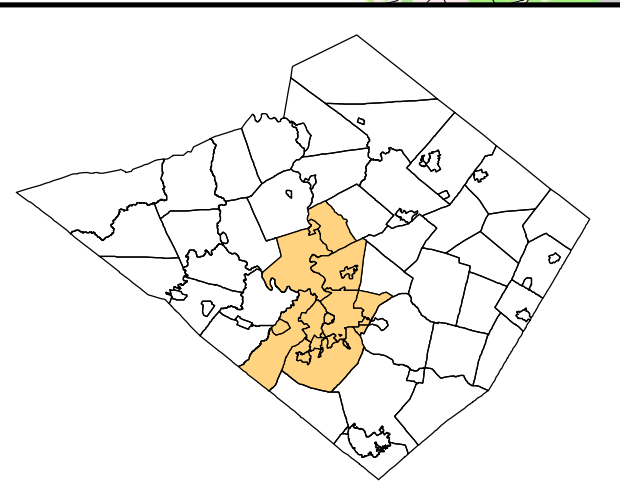
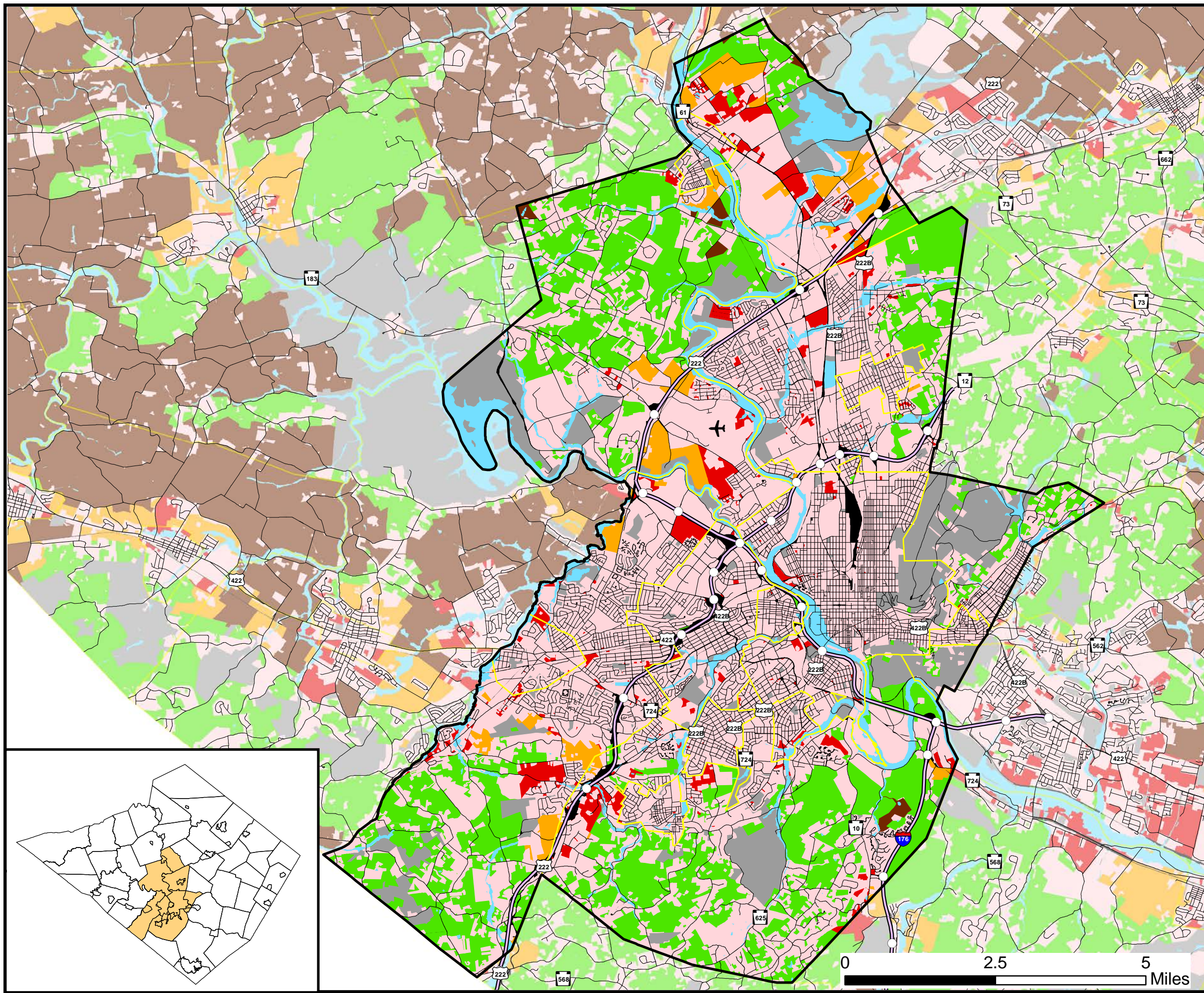
## Legend

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Source: Berks County Planning Commission, Berks County GIS  
Berks County Mapping, Berks County Department of Emergency Services,  
FEMA

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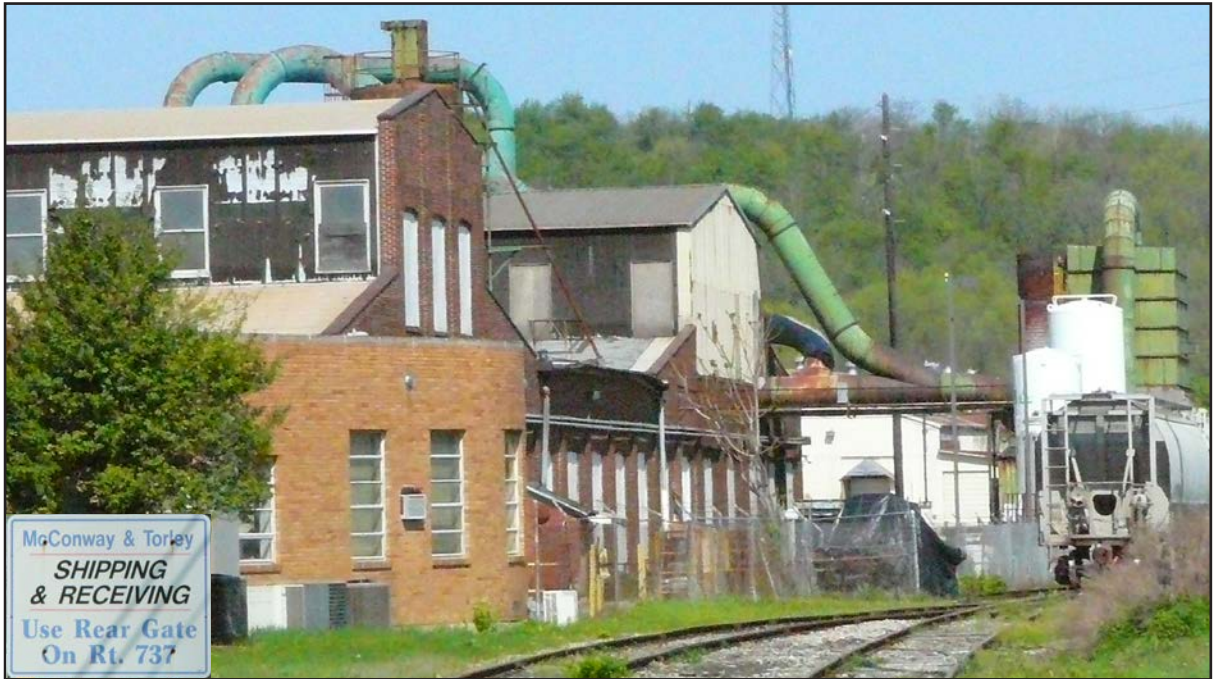
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# Chapter 8 - Economy



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## ECONOMY

### A. Introduction

The Economy element of the comprehensive plan assesses Berks County's workforce, economic and employment trends and characteristics, and additional factors contributing to the local economy.

Berks County's economic base, like its land use, changes dramatically from one end of the county to the other. The county's economic roots in agricultural production are quite evident over much of its area, where agriculture still plays the primary economic role that it has for well over a two centuries. The county's urban area around Reading, over the last 30 years, transformed from a heavy manufacturing and retail center to a more diverse economy, including considerable expansion of the health care sector.

The goals and policies in this section promote programs and actions that support a successful economy, one in which the public, non-profit and private sectors can attract new business investment and develop a skilled, educated workforce to meet the present and future needs of local companies and potential employers. The county economy, along with the larger Pennsylvania State economy is in perpetual movement, adapting to both constraints and opportunities of political, economic, social (including cultural and demographic), and technological change.

### B. Labor, Employment and Unemployment

#### Labor Force Growth

A county's labor force is every person between the age of 16 and 64 that would generally be available to work. The county's labor force added over 17,000 people since 2001 and grew more than three neighboring counties and the state as a whole.

Labor Force by County and the State of Pennsylvania - 2001-2016					
County	2001	2016	# Gain/Loss	Av.Growth	An. Growth
Berks	196,976	214,132	17,156	8.7%	0.6%
Chester	242,002	281,139	39,137	16.2%	1.0%
Lancaster	255,424	280,499	25,075	9.8%	0.6%
Lebanon	65,926	70,711	4,785	7.3%	0.5%
Lehigh	166,059	188,118	22,059	13.3%	0.8%
Montgomery	418,261	447,689	29,428	7.0%	0.5%
Schuylkill	70,146	67,900	-2,246	-3.2%	-0.2%
Pennsylvania	6,073,000	6,507,000	434,000	7.1%	0.5%

Source: U.S. Department of Labor, Bureau of Labor Statistics

#### Labor Force Participation (LFP) Rate

The LFP rate measures the share of the population that actively participates in the labor market or the total number of people employed and unemployed as a share of that 16-64 age population. The rate continues to decline in Berks County. However, the county rate has been higher than the statewide participation rate.

Between 2001 and 2016, the number of people in the working age population grew 13.3%. However, the number of people actively seeking a job or working grew only 8.7%.

The county LFP will continue to be affected by the aging workforce. Berks County's workforce needs have historically been served by the predominantly native-born population. Over the next ten years, the number of people potentially exiting the workforce (Age 65+) will grow 33% while the number of potential entrants into the workforce (Ages 25-29) is projected to grow only 3.5%. As shown later in this chapter, under employment projections, the county needs to identify ways to attract qualified people to fill these jobs.



## Chapter 8 - Economy

Berks County and State Labor Participation Rates for 1990, 2001 and 2009-2016						
Year	16 + Pop.	Percent Increase in County 16+ Pop.	Labor Force	% Increase in County Labor Force	Participation Rate	State Participation Rate
2001	291,683	*	196,976	*	67.5%	64.4%
2009	315,947	8.3%	203,891	3.5%	64.5%	64.4%
2010	326,204	3.2%	210,138	3.1%	64.4%	63.5%
2011	327,789	0.5%	210,203	0.0%	64.1%	63.2%
2012	328,884	0.3%	211,884	0.8%	64.4%	63.6%
2013	329,884	0.3%	211,449	-0.2%	64.1%	63.3%
2014	330,429	0.2%	210,590	-0.4%	63.7%	62.7%
2015	330,974	0.2%	213,249	1.3%	64.4%	62.9%
2016	330,486	-0.1%	214,132	0.4%	64.8%	63.3%

Source: U.S. Department of Labor, Bureau of Labor Statistics

### Employment

Employment is a component of labor force and reflects the number of people in that labor force that are actively working in the county.

Employed county residents grew by 16,000 between 2001 and 2016. Employment in the county grew more than three neighboring counties and the state, measured by average (Av.) or accounting for time, (An.).

Total Employment by County and the State of Pennsylvania - 2001-2016					
County	2001	2016	# Gain/Loss	Av.Growth	An. Growth
Berks	187,597	203,394	15,797	8.4%	0.5%
Chester	233,753	270,147	36,394	15.6%	1.0%
Lancaster	246,660	268,837	22,177	9.0%	0.6%
Lebanon	63,542	67,529	3,987	6.3%	0.4%
Lehigh	158,719	177,928	19,209	12.1%	0.8%
Montgomery	402,667	429,003	26,336	6.5%	0.4%
Schuylkill	65,567	63,664	-1,903	-2.9%	-0.2%
Pennsylvania	5,786,000	6,144,000	358,000	6.2%	0.4%

Source: U.S. Department of Labor, Bureau of Labor Statistics

### Changes in Full-Time Employment

The number of workers employed full time (in excess of 35 hours per week) is declining not only in Berks County, but nationwide. From 2005-2009, nearly 64% of Berks County workers (between the ages of 16 and 64) reported they worked full time. From 2010-2015, that number dropped to 59.8%. Despite the decline, the county is faring better than the state and nation in regards to this metric.

Percent of Workers that Usually Worked Full Time - 2009 and 2015				
County	2009 Workers	2015 Workers	Difference	% Change
Berks	63.9	59.8	-4.1	-6.4%
Chester	64.5	62.7	-1.8	-2.8%
Lancaster	62.8	59.5	-3.3	-5.3%
Lebanon	67.0	62.1	-4.9	-7.3%
Lehigh	63.7	59.9	-3.8	-6.0%
Montgomery	66.6	63.1	-3.5	-5.3%
Schuylkill	60.6	56.0	-4.6	-7.6%
Pennsylvania	61.3	57.1	-4.2	-6.9%
United States	61.4	58.0	-3.4	-5.5%

Source: U.S. Census, American Community Survey, 5 Year Estimates

### Unemployment

Between 2001 and 2016, the unemployment rate has fluctuated dramatically. During the 2007-2009 recession, Berks County had an average unemployment rate of 8%. By 2016, however, the rate has decreased to 5%. While there are many factors that contribute to fluctuations in unemployment rate, it is noteworthy that almost every other neighboring county has seen more change in this rate than Berks County.

Unemployment Rate by County and the State of Pennsylvania - 2001-2016		
County	2001	2016
Berks	4.8%	5.0%
Chester	3.4%	3.9%
Lancaster	3.4%	4.2%
Lebanon	3.6%	4.5%
Lehigh	4.4%	5.4%
Montgomery	3.7%	4.2%
Schuylkill	6.5%	6.2%
Pennsylvania	4.7%	5.6%

Source: U.S. Census, American Community Survey, 5 Year Estimates

### Earnings

Berks County average earnings are lower than state figures, and in 2015, rank fourth behind Chester, Montgomery, and Lehigh Counties. Between 2001 and 2015, earnings have grown 4.6% on average and 0.3% per year, which puts Berks County in fourth place among its neighbors. However, this is lower than the rate of growth for earnings overall in Pennsylvania.

Average Earnings by Job by County and the State of Pennsylvania - 2001-2015					
County	2001 Inf. Adj.	2015	\$ Gain/Loss	Av.Growth	An. Growth
Berks	51,967	54,337	2,370	4.6%	0.3%
Chester	68,175	74,071	5,896	8.6%	0.6%
Lancaster	51,179	52,349	1,170	2.3%	0.2%
Lebanon	44,780	47,128	2,348	5.2%	0.3%
Lehigh	60,538	59,681	-857	-1.4%	-0.1%
Montgomery	68,790	65,644	-3,146	-4.6%	-0.3%
Schuylkill	43,475	45,876	2,401	5.5%	0.4%
Pennsylvania	54,712	59,591	4,879	8.9%	0.6%

Source: U.S. Department of Labor, Bureau of Labor Statistics

## Chapter 8 - Economy

### Berks County Employment Projections

Jobs result from the relationship that exists among the population, the labor force, and the demand for goods and services. The chart below shows probable job growth and decline in Berks County industry sectors over the next ten years based on an economic forecast provided by Chmura JobsEQ software. Employment projections based on econometric models project future economic behavior based on historical economic trends. The forecast suggests that the Berks County workforce will need to be substantially replenished by those expected to leave the workforce.

Berks County will need at least 45,000 workers over the next decade to fill open jobs resulting from permanent (retirements) or temporary departures (illness, childcare) of people from the labor force. Manufacturing, retail, and health care are the industries with the largest demand for replacement workers. The expected growth of the healthcare industry in the county will not just require replacement workers but will need thousands of additional people to fill jobs created by demand for services as shown in “total growth demand” below.

<b>Berks County Employment Forecast for 2017 to 2027</b>		
<b>Industry Employment Forecast - 10 Years - Berks County</b>	<b>Total Approx. Replacement Demand</b>	<b>Total Growth Demand</b>
Forestry, fishing, and related activities	1,253	-351
Mining	55	-10
Utilities	316	-130
Construction	1,875	805
Manufacturing	6,820	-3,730
Wholesale trade	1,425	6
Retail trade	6,283	221
Transportation and warehousing	2,022	-270
Information	294	-177
Finance and insurance	1,002	-62
Real estate and rental and leasing	453	-47
Professional, scientific, and technical services	1,737	567
Management of companies and enterprises	1,003	-12
Administrative and waste management services	2,452	398
Educational services	2,817	-152
Health care and social assistance	5,997	5,028
Arts, entertainment, and recreation	740	71
Accommodation and food services	4,496	146
Other services, except public administration	2,139	52
Public Administration	1,109	-49
<b>Total</b>	<b>44,288</b>	<b>2,304</b>

Replacement Demand: The number of workers who leave their occupation and need to be replaced by new entrants into the industry.

Growth Demand: The number of workers needed, in lieu of replacement workers, to accommodate expected growth in the industry.

Source: Chmura JobsEQ

### C. Berks County Major Industries

By 2015, the top three industries in terms of overall employment in the county are trade/transportation/utilities, manufacturing, and education/health services. Goods-producing industries in Berks County are largely in the manufacturing sector. Wages from goods producing industries are 25% higher than wages from service providing industries. However, Berks County has shifted to service-providing economy, as there are nearly 5 times the service establishments as there are goods producing ones. This trend is likely to continue.

Location quotients are a useful technique for identifying an industry that is concentrated in the county. It can identify potential sources of competitive advantage or areas of regional specialization. LQs are helpful in identifying areas that have existing concentrations of workers with transferable skills, interconnected businesses, suppliers, and related industries, or in directing them to growing industry areas where concentrated employment in that sector is weak but growing.

An industry with an **LQ of 1.0 or higher** indicates some degree of specialization. Industries with these quotients generate goods and services in excess of what it required inside the county and export them to other counties, throughout the state, nation, and the world. For example, looking at the chart below, Berks County has a significant concentration of manufacturing.

**LQs of 0.8 to 1.0** indicate normal distribution of that industry with little specialization. It serves only the economy inside the county with the exception of Construction. This industry has rebounded from the 2007-2009 recession with an estimated 9,400 jobs in the sector as of 2016.

**LQs of less than 0.8** may indicate that the industry in the region is weak. This means other geographies are generating those goods and services. As a rule, you can interpret location quotients of >1.2 as “high” and <0.8 as “low.”

The chart below shows that in 2016, Berks County has four industry sectors with a location quotient greater than 1.0.

Berks County 2016 Annual Averages						
Industry Sector	Annual Establishments	Annual Average Employment	Total Annual Wages	Annual Average Weekly Wage	Annual Wages Per Employee	Annual Location Quotient
Manufacturing	523	30,662	\$1,744,266,504	\$1,094	\$56,887	2.07
Natural resources and mining	116	2,951	\$113,889,339	\$742	\$38,596	1.31
Education and health services	1,408	27,831	\$1,342,304,538	\$928	\$48,231	1.07
Trade, transportation, and utilities	1,871	32,992	\$1,294,137,948	\$754	\$39,225	1.02
Other services	841	5,133	\$137,173,464	\$514	\$26,722	0.97
Local Government	276	15,975	\$750,392,190	\$903	\$46,972	0.95
Professional and business services	1,313	21,824	\$1,309,153,970	\$1,154	\$59,988	0.91
Construction	838	7,309	\$447,619,927	\$1,178	\$61,244	0.91
Leisure and hospitality	895	14,884	\$229,990,885	\$297	\$15,452	0.80
Financial activities	676	5,777	\$466,679,931	\$1,554	\$80,786	0.60
State Government	30	3,217	\$181,966,790	\$1,088	\$56,557	0.59
Information	73	1,102	\$56,783,274	\$991	\$51,516	0.33
Federal Government	71	916	\$60,259,691	\$1,266	\$65,810	0.27
<b>Goods-producing</b>	<b>1,476</b>	<b>40,922</b>	<b>\$2,305,775,770</b>	<b>\$1,084</b>	<b>\$56,346</b>	1.63
<b>Service-providing</b>	<b>7,076</b>	<b>109,543</b>	<b>\$4,836,224,010</b>	<b>\$849</b>	<b>\$44,149</b>	0.91

Source: U.S. Bureau of Labor Statistics, QCEW

### Change in Goods Producing and Service Providing Businesses

Between 2001 and 2016, Berks County has lost 270 businesses. While all counties with the exception of Lancaster County lost goods-producing businesses, the slow growth in the number of service-producing businesses in Berks County compared to its neighbors is a concern going forward.



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Change in Business Establishments by County - 2001-2016								
County	Goods-Producing				Service-Producing			
	2001	2016	# Change	% Change	2001	2016	# Change	% Change
Berks	1,832	1,476	-356	-19.4%	6,990	7,076	86	1.2%
Chester	2,573	2,243	-330	-12.8%	11,659	12,786	1,127	9.7%
Lancaster	2,674	2,837	163	6.1%	8,571	10,075	1,504	17.5%
Lebanon	557	520	-37	-6.6%	1,898	2,140	242	12.8%
Lehigh	1,377	1,096	-281	-20.4%	6,545	7,365	820	12.5%
Montgomery	4,359	3,321	-1,038	-23.8%	23,871	23,609	-262	-1.1%
Schuylkill	633	441	-192	-30.3%	2,326	2,455	129	5.5%
Pennsylvania	55,962	46,427	-9,535	-17.0%	265,117	293,739	28,622	10.8%

Source: U.S. Bureau of Labor Statistics, QCEW

### A Closer Look at Manufacturing

Despite the decline in goods-producing businesses in the county, manufacturing remains an important and valuable sector of the Berks County and state economy in terms of output and employment.

Statewide, Berks County ranks high among many industry metrics for manufacturing sector employment and wages as show below.

Berks County Manufacturing County Ranking (In State) - 2016	
Number of Establishments	9th
Number employed	5th
Total Wages	5th
Annual Weekly Wage	15th
Location Quotient	16th

Source: U.S. Bureau of Labor Statistics, QCEW

The county's manufacturing sector is diverse as fabricated metals, with the most establishments at 99, only represents 19% of all manufacturing establishments. Due to the continued growth of the county's largest employer, East Penn Manufacturing, the Electrical Equipment and Appliances sector employs the most people and accounts for 26% of all employment in the county's manufacturing industry.



EnerSys in Bern Township

Berks County Manufacturing by Three Digit NAICS Code - 2016 Annual Averages						
NAICS	Sector	Establishments	Employment	Total Wages	Annual Weekly Wage	Annual Wages per Employee
311	Food	56	3,627	180,808,701	959	49,852
312	Beverage and Tobacco	12	239	6,384,382	514	26,704
313	Textiles	10	456	22,761,006	961	49,951
314	Textile Products	9	109	3,144,086	557	28,956
315	Apparel	8	544	18,787,586	664	34,515
321	Wood Products	33	348	13,874,265	767	39,907
322	Paper	13	653	40,504,216	1,193	62,020
323	Printing	37	461	21,714,790	906	47,095
324	Petroleum/Coal Products	3	15	1,403,605	1,830	95,160
325	Chemicals	28	1,002	59,422,422	1,141	59,309
326	Plastics and Rubber Products	26	1,742	95,340,038	1,052	54,720
327	Nonmetallic Mineral Products	18	491	31,636,873	1,239	64,423
331	Primary Metals	32	4,107	318,269,556	1,490	77,499
332	Fabricated Metals	99	2,277	120,353,675	1,017	52,862
333	Machinery	31	827	55,325,369	1,287	66,906
334	Computers and Electronics	11	546	36,785,001	1,296	67,392
335	Electrical Equipment and Appliances	15	7,914	440,834,134	1,085	56,436
336	Transportation Equipment	15	1,823	88,767,510	937	48,702
337	Furniture and Related Products	27	1,893	85,536,463	869	45,188
339	Miscellaneous	40	1,588	102,612,826	1,243	64,611
	<b>TOTAL</b>	<b>523</b>	<b>30,662</b>	<b>1,744,266,504</b>		

Source: U.S. Bureau of Labor Statistics, QCEW

As shown below, Berks County was one of only eight metropolitan areas in Pennsylvania to have growth in their manufacturing gross domestic product output between 2001 and 2015. By GDP, Berks County has the fifth largest manufacturing base of all PA metropolitan areas.

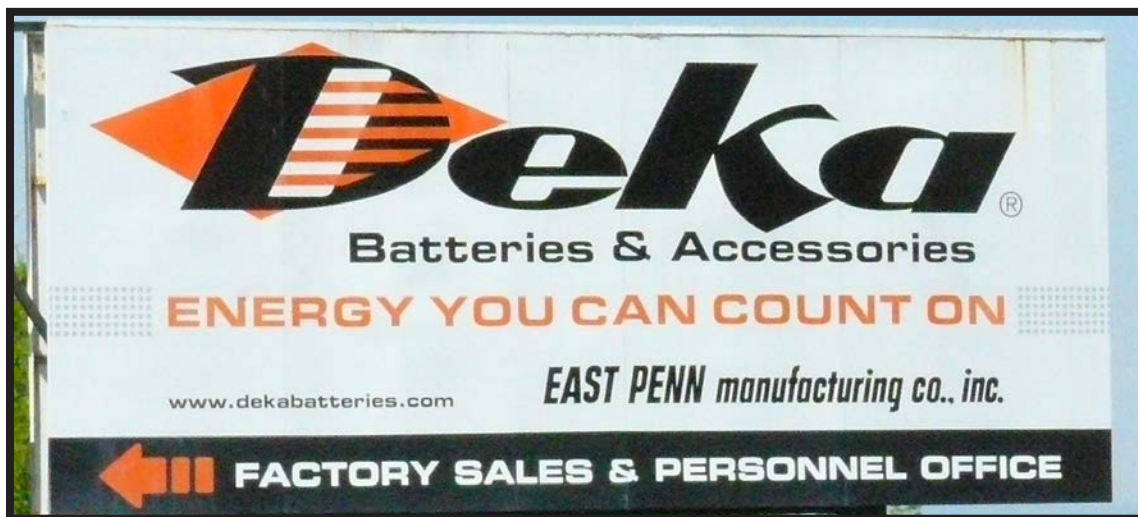


Change in Manufacturing GDP Between 2001 and 2015 by PA Metro Area in Chained 2009 Dollars				
Ranked by Percent Change in GDP Output				
Area	2001 \$	2015 \$	\$ Change	% Change
Pennsylvania	86,865	76,897	-9,968	-11.5%
Philadelphia	40,576	46,941	6,365	15.7%
Pittsburgh	14,312	12,848	-1,464	-10.2%
Allentown/Bethlehem/Easton	6,897	4,936	-1,961	-28.4%
Lancaster	4,405	4,111	-294	-6.7%
Reading	3,228	3,536	308	9.5%
York/Hanover	3,569	3,469	-100	-2.8%
Scranton/Wilkes-Barre/Hazleton	3,308	2,810	-498	-15.1%
Harrisburg/Carlisle	2,629	2,627	-2	-0.1%
Erie	2,707	2,508	-199	-7.4%
East Stroudsburg	833	1,231	398	47.8%
Chambersburg/Waynesboro	688	934	246	35.8%
Lebanon	963	906	-57	-5.9%
Williamsport	1,053	846	-207	-19.7%
Altoona	704	828	124	17.6%
Gettysburg	573	666	93	16.2%
Bloomsburg/Berwick	636	582	-54	-8.5%
State College	417	576	159	38.1%
Johnstown	338	395	57	16.9%

Source: U.S. Chamber of Commerce, Bureau of Economic Analysis  
 Note: The use of chained dollars adjusts real dollar amounts for inflation over time so that numbers from different years can be compared.

### D. Berks County Major Employers

As shown in the chart below, many of the county’s top employers shown in the following table are in industries with high location quotients. Many of these businesses are within minutes of a state highway, interstate or the turnpike.



Top 25 Employers in Berks County - 2009 to 2016 and Net Change in Employment				
Ranked by Number of Employees in 2016				
Company	Industry Type	2009 Employees	2016 Employees	Change
East Penn Manufacturing Company	Manufacturing	5,348	7,145	1,797
Reading Hospital	Health Care and Social Assistance	6,839	6,673	-166
Berks County	Government	2,500	2,400	-100
Carpenter Technology Corporation	Manufacturing	1,917	2,305	388
Reading School District	Education	2,637	2,000	-637
Boscov's Inc.	Retail	1,400	1,750	350
Pennsylvania Government	Government	1,775	1,720	-55
Penske Truck Company, LP	Rental and Leasing	1,200	1,683	483
St. Joseph's Regional Health Network	Health Care and Social Assistance	1,514	1,623	109
Redner's Warehouse Markets	Retail	1,415	1,361	-54
Supportive Concepts for Families	Health Care and Social Assistance	*	1,274	*
Giant Food Stores	Retail	914	1,244	330
Wal-Mart Stores	Retail	1,783	1,213	-570
Morgan Truck Body, LLC	Manufacturing	*	1,200	*
Berks County IU	Education	1,241	1,190	-51
Santander Bank NA	Finance	1,000	1,100	100
Wilson School District	Education	1,195	1,033	-162
Kutztown University	Education	1,146	980	-166
Ashley Furniture Industries, Inc.	Retail	726	958	232
FirstEnergy Corp.	Utilities	986	921	-65
U.S. Government	Government	1,150	900	-250
IWCO Direct	Professional Services	*	826	*
UGI Energy Services, Inc.	Utilities	*	794	*
Boyertown Area School District	Education	1,066	789	-277
Alcon Research, Ltd.	Manufacturing	*	766	*

Source: Reading Eagle

The \* symbol notes the company did not appear in the 2009 rankings.

## E. Berks County Gross Domestic Product

The gross domestic product (GDP) is a general indicator used to gauge the health of an economy, and it represents the total dollar value of all goods and services made over time. Berks County businesses generated nearly \$16 billion in GDP in 2015, up 13.5 percent or \$1.1 billion since 2001. The county's GDP output ranks 132<sup>nd</sup> out of 292 metropolitan regions in the nation. The county's manufacturing and professional business services are the largest sector contributors to GDP. Healthcare has had the most growth in GDP, with 60% growth from 2001 levels. In 2015, services account for 61% of total county GDP, goods-producing industries, 29%, government 11%.

The amount of products exported by Berks County businesses increased a full percentage point between 2001 and 2015, from 12.4% to 13.4%.



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Berks County Real GDP in 2001 and 2015 (millions of chained 2009 dollars)				
Industry Sector	2001	2015	\$ Change 2001-2015	% Change 2001-2015
<b>All industry total</b>	<b>13,920</b>	<b>15,803</b>	<b>1,883</b>	<b>13.5%</b>
<b>Private industries</b>	<b>12,409</b>	<b>14,129</b>	<b>1,720</b>	<b>13.9%</b>
Agriculture, forestry, fishing, and hunting	193	240	47	24.4%
Mining	67	48	-19	-28.4%
Utilities	289	391	102	35.3%
Construction	866	701	-165	-19.1%
Manufacturing	3,228	3,536	308	9.5%
<i>Durable goods manufacturing</i>	1,811	2,471	660	36.4%
<i>Nondurable goods manufacturing</i>	1,430	1,050	-380	-26.6%
Wholesale trade	752	1,021	269	35.8%
Retail trade	978	1,101	123	12.6%
Transportation and warehousing	379	519	140	36.9%
Information	163	229	66	40.5%
Finance, insurance, real estate, rental, and leasing	1,818	1,722	-96	-5.3%
<i>Real estate and rental and leasing</i>	1,011	1,235	224	22.2%
Professional and business services	1,732	2,100	368	21.2%
<i>Professional, scientific, and technical services</i>	774	853	79	10.2%
<i>Management of companies and enterprises</i>	639	723	84	13.1%
<i>Administrative and waste management services</i>	351	526	175	49.9%
Educational services, health care, and social assistance	1,077	1,673	596	55.3%
<i>Health care and social assistance</i>	996	1,582	586	58.8%
Arts, entertainment, recreation, accommodation, and food services	415	435	20	4.8%
<i>Accommodation and food services</i>	304	324	20	6.6%
Other services, except government	474	386	-88	-18.6%
<b>Government</b>	<b>1,506</b>	<b>1,678</b>	<b>172</b>	<b>11.4%</b>
<b>Private goods-producing industries</b>	<b>4,342</b>	<b>4,545</b>	<b>203</b>	<b>4.7%</b>
<b>Private services-providing industries</b>	<b>8,045</b>	<b>9,578</b>	<b>1,533</b>	<b>19.1%</b>
<b>Trade</b>	<b>1,733</b>	<b>2,123</b>	<b>390</b>	<b>22.5%</b>

Source: U.S. Chamber of Commerce, Bureau of Economic Analysis

Note: The use of chained dollars adjusts real dollar amounts for inflation over time so that numbers from different years can be compared.

### GDP Rank by PA Metropolitan Area between 2001 and 2015

In terms of the size of GDP output, Berks County (aka the Reading MSA) ranks seventh out of 18 metropolitan areas in Pennsylvania. In terms of GDP growth between 2001 and 2015, the county placed 11th. Interestingly, Berks County and the York/Hanover area have jockeyed for the seventh largest GDP in this period. Both regions have historically had larger GDP than the sub \$10 billion Erie economy but have been unable to move into the \$19 billion + levels of the Scranton/Wilkes Barre/Hazleton and Lancaster economies.

From 2001 to 2003, Reading held the seventh spot. From 2004 to 2014, the York Hanover area occupied it. By 2015, Reading has reclaimed it.

Change in Real GDP by PA Metro Area Between 2001 and 2015 (millions of chained 2009 dollars)				
Ranked by GDP Output in 2015				
Metropolitan Area	2001 \$	2015 \$	# Change	% Change
Philadelphia	303,035	368,210	65,175	21.5%
Pittsburgh	109,442	130,205	20,763	19.0%
Allentown/Bethlehem/Easton	29,496	33,393	3,897	13.2%
Harrisburg/Carlisle	27,001	30,422	3,421	12.7%
Lancaster	19,061	23,286	4,225	22.2%
Scranton/Wilkes-Barre/Hazleton	19,136	20,961	1,825	9.5%
Reading	13,920	15,803	1,883	13.5%
York/Hanover	13,445	15,429	1,984	14.8%
Erie	9,660	9,708	48	0.5%
State College	5,287	7,346	2,059	38.9%
East Stroudsburg	4,536	5,041	505	11.1%
Altoona	4,116	4,521	405	9.8%
Williamsport	3,798	4,487	689	18.1%
Chambersburg/Waynesboro	3,416	4,484	1,068	31.3%
Lebanon	3,390	4,111	721	21.3%
Johnstown	4,009	3,746	-263	-6.6%
Bloomsburg/Berwick	2,877	3,487	610	21.2%
Gettysburg	2,328	2,699	371	15.9%
Pennsylvania	522,191	644,947	122,756	23.5%

Source: U.S. Chamber of Commerce, Bureau of Economic Analysis

Note: The use of chained dollars adjusts real dollar amounts for inflation over time so that numbers from different years can be compared.

## F. Berks County Commuting and Cost of Living

### Berks County Employment Commuting Patterns

Berks County is a net exporter of labor. This means more residents leave Berks County to work than the amount of people who come into the county to work. In 2002, the deficit was relatively small, with a little over 4,000 people. Lebanon and Schuylkill Counties had far greater numbers of residents leaving for employment. Berks County, however, was competing with neighboring Chester, Lehigh and Montgomery Counties, who in 2002 were significant net “importers” of labor.

Commuting Patterns in 2002			
County	In-Commuters	Out Commuters	Net Flow
Berks	52,930	56,934	-4,004
Chester	109,065	88,380	20,685
Lancaster	52,689	53,063	-374
Lebanon	13,864	32,533	-18,669
Lehigh	78,057	54,848	23,209
Montgomery	251,244	172,526	78,718
Schuylkill	13,495	29,781	-16,286

Source: U.S. Census Bureau, Longitudinal-Employer Household Dynamics Program

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By 2014, these dynamics have changed. The Berks and Lancaster County deficits increase substantially. Lebanon and Schuylkill Counties, while still exporters, have a smaller deficit than they did in 2002. Chester County swings from an importer to an exporter, and Lehigh and Montgomery remain stable as labor importers.

Commuting Patterns in 2014			
County	In-Commuters	Out Commuters	Net Flow
Berks	63,536	83,451	-19,915
Chester	133,549	134,044	-495
Lancaster	70,197	82,624	-12,427
Lebanon	22,746	37,543	-14,797
Lehigh	100,072	76,814	23,258
Montgomery	292,091	211,005	81,086
Schuylkill	20,893	34,831	-13,938

Source: U.S. Census Bureau, Longitudinal-Employer Household Dynamics Program

### Exploring the Cost of Living in Berks County Versus Other Areas of Pennsylvania

Regional Price Parity (RPP) is an index that sets the national average cost of goods and services at 100, with a particular region's RPP showing how the cost-of-living in that region compares to that average. The lower the number, the less expensive it is to live in that particular area. For example, Berks County had an overall 2014 RPP of 96, which means that the county is about 4% less expensive than the national average. Meanwhile, the State of Pennsylvania has an RPP of 98, indicating that goods and services cost 2% less than the national average.

In 2014, Berks County was tied with the Harrisburg/Carlisle area for the 11<sup>th</sup> least expensive place to live out of the 19 metropolitan areas in Pennsylvania. Between 2009 and 2014, the cost of living in Berks County decreased slightly.

Change in Price Parity for All Goods and Services by PA Metro Area Between 2009 and 2014			
Area	2009	2014	# Change
Allentown/Bethlehem/Easton	100.6	100.3	-0.3
Altoona	89.5	90.0	0.5
Bloomsburg/Berwick	92.3	93.0	0.7
Chambersburg/Waynesboro	94.9	94.1	-0.8
East Stroudsburg	99.3	98.8	-0.5
Erie	92.1	92.5	0.4
Gettysburg	96.1	95.6	-0.5
Harrisburg/Carlisle	96.9	96.0	-0.9
Johnstown	82.7	85.5	2.8
Lancaster	98.7	98.4	-0.3
Lebanon	95.5	94.9	-0.6
Philadelphia	109.0	107.2	-1.8
Pittsburgh	92.2	94.8	2.6
Reading	96.7	96.0	-0.7
Scranton/Wilkes-Barre/Hazleton	91.6	91.8	0.2
State College	100.7	102.4	1.7
Williamsport	91.7	93.6	1.9
York/Hanover	96.2	96.1	-0.1
Pennsylvania	98.2	98.2	0.0

Source: U.S. Chamber of Commerce, Bureau of Economic Analysis

On a practical level, RPP's provide a glimpse into the purchasing power of a person's income and how it will change in different parts of the state depending on the costs of living in that region as shown below. For example in Berks County an income of \$41,375 buys \$43,000 in goods and services due to the affordable price of those goods and services in the county. In short, Berks County is an affordable place to live because incomes are keeping pace with the cost of living in the county. On the other hand, in Philadelphia, incomes are not keeping pace with the cost of living.

In 2014, Berks County ranked 12<sup>th</sup> of all PA metropolitan regions in the purchasing power of income. This data has some correlation with the data above regarding commuting patterns. Those who live in Berks County but commute to other counties for work, for presumably higher wages, are maximizing the buying power by combining a higher wage earned elsewhere with a lower cost of living here. Between 2009 and 2014, the county's buying power advantage increased by \$420, and that amount of increase ranks third behind the increases in the Harrisburg and Chambersburg areas.

Buying Power by PA Metro Area in 2014				
Area	2014 Per Capita Income	2014 RPP	2014 Buying Power	Difference
Allentown/Bethlehem/Easton	42,241	100.3	42,115	-126
Altoona	40,040	90.0	44,489	4,449
Bloomsburg/Berwick	38,270	93.0	41,151	2,881
Chambersburg/Waynesboro	39,766	94.1	42,259	2,493
East Stroudsburg	33,913	98.8	34,325	412
Erie	38,619	92.5	41,750	3,131
Gettysburg	41,744	95.6	43,665	1,921
Harrisburg/Carlisle	44,340	96.0	46,188	1,848
Johnstown	39,970	85.5	46,749	6,779
Lancaster	40,196	98.4	40,850	654
Lebanon	40,359	94.9	42,528	2,169
Philadelphia	47,349	107.2	44,169	-3,180
Pittsburgh	47,126	94.8	49,711	2,585
Reading	41,375	96.0	43,099	1,724
Scranton/Wilkes-Barre/Hazleton	39,938	91.8	43,505	3,567
State College	36,370	102.4	35,518	-852
Williamsport	39,288	93.6	41,974	2,686
York/Hanover	41,279	96.1	42,954	1,675
Pennsylvania	44,817	98.2	45,638	821

Source: U.S. Chamber of Commerce, Bureau of Economic Analysis, Berks County Planning Commission

### The Berks County Tax Base

From the perspective of municipal administration, the tax base (real estate that is subject to municipal, county and school district taxes) drives the ability to invest in amenities and provide quality professional services that residents expect. The management and optimization of the existing and future real estate base provides opportunities and constraints for maintaining and attracting homeowners and businesses. Generally, commercial and industrial parcels generate more real estate tax revenues than residential parcels.

As of 2015, the Berks County tax base is comprised of 71% residential property, 17.7% commercial property, 4.2% industrial property and 6.8% in other land uses. The county has slightly more residential and industrial land than the median of all counties combined. Of particular note is that the industrial base in the county increased between 2008 and 2015 while almost every other county's industrial base declined.



Percentage Breakdown of County Tax Base by Category				
2008	Residential	Commercial	Industrial	Other
Berks	70.2	17.5	4	8.3
Chester	76.9	18.1	1.4	3.6
Lancaster	68.4	19.2	4.4	8
Lebanon	67.6	16.7	4.3	11.4
Lehigh	68.6	19.6	8.6	3.2
Montgomery	72.6	22.3	3.6	1.5
Schuylkill	68.9	15.8	4.4	10.9
<b>Median</b>	<b>68.9</b>	<b>18.1</b>	<b>4.3</b>	<b>8.0</b>
2015	Residential	Commercial	Industrial	Other
Berks	71.3	17.7	4.2	6.8
Chester	77.2	17.6	1.3	3.9
Lancaster	69.0	18.7	3.9	8.4
Lebanon	69.8	16.9	2.9	10.4
Lehigh	69.0	24.1	5.8	1.1
Montgomery	73.0	22.3	3.4	1.3
Schuylkill	67.4	18.0	4.5	10.1
<b>Median</b>	<b>69.8</b>	<b>18.0</b>	<b>3.9</b>	<b>6.8</b>

Source: Pennsylvania State Tax Equalization Board Land Use and Market Value Reports: 2008-2015

In 2015, the Berks County tax base had a market value (MV) of \$23.9 billion and an assessed value (AV) of \$18.5 billion. The county has the fifth largest tax base in the region, shown below. The county is collecting 77.6% of the market value.

Tax Base Values by County in Millions - 2015			
County	Market Value	Assessed Value	Ratio
Berks	23,890,621,911	18,545,661,000	77.6%
Chester	56,440,500,731	36,932,071,483	65.4%
Lancaster	35,877,599,284	31,925,370,120	89.0%
Lebanon	8,465,894,041	9,703,275,891	114.6%
Lehigh	26,095,012,816	28,899,231,200	110.7%
Montgomery	89,902,987,978	59,319,401,003	66.0%
Schuylkill	6,157,722,291	2,547,310,525	41.4%

Source: Pennsylvania State Tax Equalization Board Land Use and Market Value Reports – 2015

In the county, Spring Township has the largest tax base (2.0 billion MV, 1.6 billion AV) and Lenhartsville Borough has the smallest (\$10 million MV, \$7.6 million AV). The county last completed an assessment in 1994. All neighboring counties, with the exception of Schuylkill have reassessed since Berks County assessed in 1994.

<b>Largest Berks County Tax Bases - 2015</b>				
<b>Municipality</b>	<b>School District</b>	<b>Market Value</b>	<b>Assessed Value</b>	<b>Ratio</b>
Spring Township	Wilson	2,021,643,900	1,573,902,600	77.9%
Exeter Township	Exeter Township	1,695,038,288	1,319,080,000	77.8%
Reading City	Reading	1,550,309,873	1,404,570,700	90.6%
Muhlenburg Township	Muhlenberg Township	1,399,186,115	1,123,474,300	80.3%
Cumru Township	Governor Mifflin	1,100,141,311	886,774,900	80.6%
Amity Township	Daniel Boone Area	877,183,087	701,056,300	79.9%
Wyomissing Borough	Wyomissing Area	762,805,033	620,223,700	81.3%
Maidencreek Township	Fleetwood Area	607,935,381	481,351,600	79.2%
Robeson Township	Twin Valley	560,557,270	399,333,000	71.2%
South Heidelberg Township	Conrad Weiser Area	498,594,820	397,008,500	79.6%
<b>Smallest Berks County Tax Bases - 2015</b>				
Bally Borough	Boyertown Area	74,117,604	55,587,700	75.0%
Shoemakersville Borough	Hamburg Area	62,332,002	48,099,800	77.2%
Bechtelsville Borough	Boyertown Area	44,421,737	33,896,300	76.3%
New Morgan Borough	Twin Valley	43,087,572	40,404,200	93.8%
Berville Borough	Tulpehocken Area	37,315,911	32,093,000	86.0%
Lyons Borough	Kutztown Area	21,287,334	17,928,600	84.2%
Centerport Borough	Schuylkill Valley	15,139,686	12,205,900	80.6%
Strausstown Borough	Hamburg Area	13,197,899	11,415,400	86.5%
Lenhartsville Borough	Kutztown Area	10,008,290	7,640,100	76.3%
Adamstown Borough (Partial)	Cocalico	306,908	424,900	138.4%

Source: Pennsylvania State Tax Equalization Board Land Use and Market Value Reports – 2015

A significant issue going forward is addressing the stagnation of the county tax base. Between 1995 and 2014, the market value of the Berks County Tax Base grew 47%. Only Schuylkill County had lower growth. Between 1995 and 2014, the assessed value of the Berks County Tax Base grew 5.4%. This is the lowest amount of growth in the seven counties.

## Taxes

In response to slow tax base growth, Berks County municipalities, and school districts have had to raise the tax rate to generate needed revenue to offset growing expenditures. As of 2015, Berks County has the highest tax rates in the seven county area, with especially higher school taxes in most municipalities. However, the school tax burden is disproportionate since the state provides funds to schools at varying levels. For example, school taxes account for 81% of the tax bill in District Township because the school district relies on local municipalities to fund education. However, school taxes only account for 42% of the tax bill for Reading residents since the Commonwealth provides the Reading School District with high levels of state funding.

## G. Agriculture

In addition to commercial, industrial and healthcare, Berks County's agriculture industry is very strong. There are many farms expanding to provide products to local and regional food production facilities. Poultry and duck production are still seeing a steady increase. Local farmers are using a wide variety of tools to expand their marketing to consumers including websites, farm stands, Community Supported Agriculture (CSAs), and farmers markets. The Berks County Planning Commission created a google map to help market the farm products produced in the county. This is found on the county's website [www.countyofberks.com](http://www.countyofberks.com).

## Chapter 8 - Economy

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### H. Tourism

Tourism is becoming an increasingly important part of the economy in Berks County, as tourism-related destinations, venues, and events generate increased economic benefits for the communities in which they are located. In addition to providing direct employment impacts they also produce broader indirect community impacts as visitor spending generates a ripple effect through the hospitality industries (food services, lodging, and transportation sectors).

The different types of tourism that attract visitors to Berks County include:

- Arts/cultural/heritage
- Outdoor adventure/recreation resources/sporting events
- Open space/scenic/wildlife viewing/natural environment (enjoyment and appreciation of nature)
- Festivals/fairs/events/entertainment/attractions/seasonal celebrations
- Agritainment/agrotourism

### I. Economic Development Planning and Implementation

Berks County is served by a large number of economic development-related agencies, organizations, programs, and resources. In terms of focus, some of these organizations are broad-based business organizations (e.g. PA Department of Community and Economic Development, chambers of commerce) while others are targeted to specific industry sectors or activities (e.g. Manufacturers Resource Center or SCORE). Collectively they represent an extensive network of information and resources. The following organizations primarily provide services and resources towards economic development in Berks County.

In recent years, there has been emphasis on a more coordinated economic development approach that attempts to align both economic and workforce development plans at the municipal and county level. The Leak-Goforth Company prepared in-depth site selection studies for the County in 1997 and 2001. In 2003, the Berks Community Foundation, Berks Economic Partnership, and the Initiative for a Competitive Inner City (ICIC) led the community process that created the *Initiative for a Competitive Greater Reading* that looked at market-based strategies and efforts to increase the county's economic competitiveness. The Berks Economic Partnership, in conjunction with Sasaki Architects and The Brookings Institution developed the *Penn Corridor Development Plan* in 2007 that looked at development and redevelopment opportunities along Penn Avenue from Reading to Wyomissing.

In 2010, the organizations listed below collaborated on an economic development plan that built upon those studies titled *Ride to Prosperity: Strategies for Economic Competitiveness in Greater Reading*. These organizations updated the plan in 2013 with *Ride to Prosperity Version 2.0*. Generally, economic development and workforce development have focused on the growth and success of five core clusters: advanced manufacturing, agriculture and food production, business and financial services, energy, and health sciences.

In 2017, the primary economic development agency in Berks County is the non-profit **Greater Reading Chamber Alliance (GRCA)**. This organization is the result of a 2016 alignment of the Greater Berks Development Fund, Greater Reading Economic Partnership and the Greater Reading Chamber of Commerce and Industry. The merger aims to create the county's "one stop shop" for business recruitment, business retention, expansion, and regional promotion.

The **Berks County Industrial Development Authority (BCIDA)** is an authority created by Berks County in 1969. It can finance and acquire land, buildings, machinery, and equipment through the issuance of tax-exempt or taxable bonds, and through other authorized programs. BCIDA's primary focus in recent years has been the development of Berks Park 78 in Bethel Township and Berks Park 183 near the Reading Regional Airport in Bern Township.

The **Berks County Redevelopment Authority (BCRA)** is an authority created by Berks County in 1969 under the auspices of the Pennsylvania Urban Redevelopment Law. Its primary mission is to build a vibrant community through the elimination of blight and dangerous housing conditions. In coordination with other partners, it assists local businesses with obtaining the capital they seek to invest and expand inside the county.

The **Berks County Workforce Development Board** is responsible for the long-term strategic planning to meet Berks County's workforce development needs. This includes planning, analysis, oversight, evaluation and monitoring, and the development and cultivation of partnerships within the Berks County community and/or on a regional basis.

The **Reading and Berks County Visitors Bureau** guides and refers travelers to the specific destinations and information they are seeking in Berks County. They market the county's destinations to visitors, namely the array of accommodations, retail stores, restaurants, heritage sites, museums, and entertainment/recreation venues.

### Preserving Prime Industrial and Commercial Lands

Recognizing the importance and value of a strong manufacturing base and in support of the *Ride to Prosperity* goal of providing a sufficient number of acres to accommodate local business development, the Berks County Planning Commission has created an industrial/commercial land preservation policy.

Under this policy, the Berks County Planning Commission encourages the growth of new and existing manufacturing and production, providing space for new creative businesses, research and development, and emerging technologies and production methods by identifying land across the county most suitable for these present and future opportunities. Planning and preserving the county's industrial development land, particularly in areas with access to major transportation resources and infrastructure, is critical to increasing the region's competitive advantage.

These Economic Development Areas (EDA), as shown in Figures 24 through 29, are carefully identified groups of parcels that provide choice and flexibility to respond to employers' needs and offer a range of development sizes in many parts of the county. In the EDA, it is recommended that municipalities restrict residential development and preservation easements. Municipalities should plan for commercial and industrial development in these areas that:

- Represent significant new private-sector financial investment in the municipality and Berks County;
- Result in net new employment to the municipality and Berks County;
- Provide quality employment opportunities for Berks County residents consisting of a minimum of 25 new full-time on-premises jobs at a pay rate exceeding the median earnings for workers in Berks County as defined by the United States Census Bureau;
- Demonstrate a positive direct and/or indirect fiscal and economic impact to the municipality and Berks County;
- Promote a better use of the property or improves the financial performance and/or viability of the existing property;
- Address a property that has been underutilized, functionally obsolete, or suffers from long term vacancy;
- Represent superior design aesthetics that substantially and significantly exceed current design standards;
- Mitigate any negative impacts to the surrounding area.
- Is consistent with both municipal and county comprehensive plans.

The purpose of these identified areas is to:

1. Emphasize the quality of development over the quantity of development by encouraging municipalities to develop master plans for these areas, with a focus on high quality development that provides significant employment opportunities and tax base generation.
2. Discourage existing industrially zoned land that has a good location, infrastructure/utilities and is land largely free of environmental constraints from being converted to other uses, such as large shopping centers, residential development or agriculture/conservation easements.
3. Protect and facilitate the long-term success of the county's industry and manufacturing industries, supporting their continued evolution into places with a broad mix of businesses with high employment densities.
4. Provide predictability for landowners, economic development agencies, and businesses by identifying these prime areas as they engage in site selection, expansion planning, and incentive decisions.
5. When land identified as an EDA is proposed for any type of land preservation or proposed for development that is inconsistent with this policy, the county will forward this goal by commenting that the preservation or proposed development is inconsistent with the Berks County Comprehensive Plan.



## Chapter 8 - Economy

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### J. Economy Goals and Policies

#### Economy Goals:

To expand and diversify the county's economic base, provide quality employment opportunities for our residents and retain expand, and enhance our existing industry and businesses to assure their continue growth in Berks County.

Facilitate the provision of adequate sites to accommodate new and expanding industries and businesses, including the productive reuse of "brownfield" sites.

The following policies are categorized by the five key themes of the Ride to Prosperity planning documents.

#### a. Entrepreneurship and Innovation

- (1) Maximize the impact of public investments in local private sector innovation & entrepreneurship by supporting initiatives such as the Jump Start Incubator, maintaining, and improving communication with other key stakeholders (private sector companies, investors, higher education providers, local government, and foundations).
- (2) Utilize expertise and talent in the local entrepreneurship community to finalize and maintain a Berks County strategic plan that focuses on innovation & entrepreneurship and would provide input in future public-private investments in such projects in agriculture, technology, and healthcare.
- (3) Encourage and support startup companies to form, locate, and expand in Berks County, especially those related to priority industries or those industries with high or emerging location quotients.
- (4) Encourage regional higher education institutions to expand their focus on entrepreneurship as a strategy to retain graduates in the region.

#### b. Workforce and Talent Development

- (1) Continue to focus on retaining, expanding, and recruiting advanced manufacturing firms to create high-wage jobs and attract new corporate capital investment into the county economy.
- (2) Build a diverse, trained, career-ready pipeline of talent to enhance the productivity and competitiveness of current and future employers.
- (3) Develop and implement attractive career pathways recognized by business and industry that can be implemented as early as middle school and continue to integrate lifelong learning, career planning and skills attainment in the county's key industry sectors.
- (4) Support programs and initiatives that effectively link low- and middle-skill workers to solid employment opportunities.

#### c. Sites and Infrastructure

- (1) Focus on sustained economic development with redevelopment of underused commercial and industrial properties, including brownfields, and promotion of land use patterns that allows for growth of industry and manufacturing that add value to the tax base and provide employment opportunity, while protecting natural resources and agriculture.
- (2) Continue to provide and improve a full range of infrastructure with emphasis on motorized and non-motorized transportation, utilities, and communication that meets the needs of Berks County's present and future businesses and industry.
- (3) Work with partners to develop and preserve an inventory of high quality, competitively positioned real estate sites, and available buildings that are appropriate for a range of companies, in general—and more specifically in the county's target industries.
- (4) Encourage investments in forward-looking infrastructure projects that support economic development priorities, catalyst projects and additional private investment.
- (5) Recommend that new land development fund its fair share of the cost of additional community facilities necessitated by the increased demand for services or capacity that it generates (i.e. transportation, sewer, water, emergency services, etc.).

- (6) Berks County economic and workforce development agencies and municipalities should participate in regional discussions in regards to local economic development opportunities.
- (7) Work with PennDOT and the Reading Area Transportation Study (RATS) to improve and enhance the transportation infrastructure.
- (8) Prioritize and encourage multi-municipal funding requests for infrastructure improvements and support the coordination of multiple infrastructure improvements into single projects.

**d. Quality of Place**

- (1) Support the continued growth and diversification of the county's health care industry, both as a driver of economic growth and as a means for attracting and retaining talent and residents. Encourage efforts to provide affordability and access to quality health care for all residents of the county.
- (2) Careful attention should be paid to the individual and cumulative fiscal, environmental and community impacts of land development projects. Approval of development applications should be dependent upon the ability of the appropriate government entities and developers to address or mitigate the negative impacts of projects on or in communities.
- (3) Support the continued enhancement of public recreational amenities and infrastructure such as parks, trails and other recreational facilities.
- (4) Preserve the county's historical assets while retaining the aesthetic character of the communities in which they are located.
- (5) Expand and support the diversity of arts, culture and tourism opportunities and the avenues and approaches to increase exposure to residents of all ages.

**e. Business Friendly Berks**

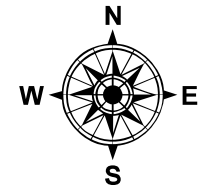
- (1) Continue the collaborative economic development approach within Berks County emphasizing communication, cooperation, alignment of County initiatives, shared assets, and promotion of the region for investment in quality commercial and industrial development (i.e. JEAP – Joint Express Approval Process; further described in Chapter 11).
- (2) The county's business community should plan, develop, and complete a comprehensive economic development strategy that focuses solely on the County's business and industrial sectors and workforce.
- (3) Support initiatives that position business and industry in Berks County for long-term growth over taxpayer-funded incentives geared to one-time job creation.
- (4) Support efforts that monitor the business climate to ensure the county and its municipalities have transparent planning and development processes.
- (5) The county and all county municipalities should strive to keep their planning and permitting processes current and streamlined, eliminating excessive or obsolete requirements, with fee structures for planning services and permitting that recover no more than the actual costs to conduct such programs and reviews.
- (6) Municipalities should maintain zoning appropriate for major employment on infrastructure-served land with good transportation access.





Berks County Comprehensive Plan Update  
Adopted: January 23, 2020

# Economic Development Areas and Future Land Use Berks County, Pennsylvania



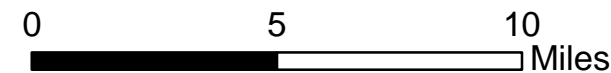
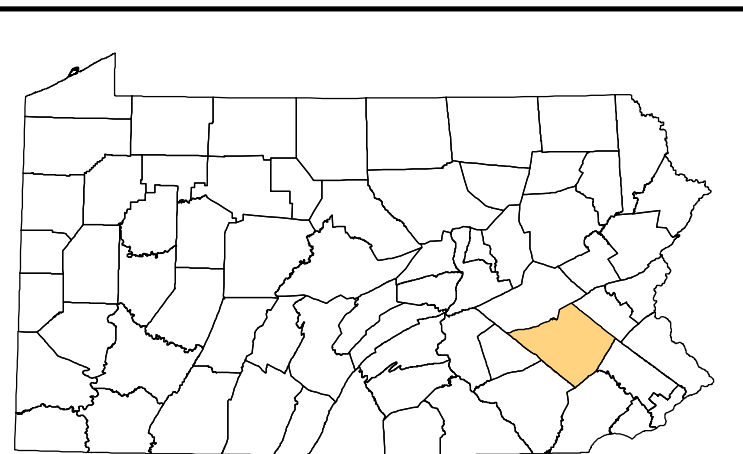
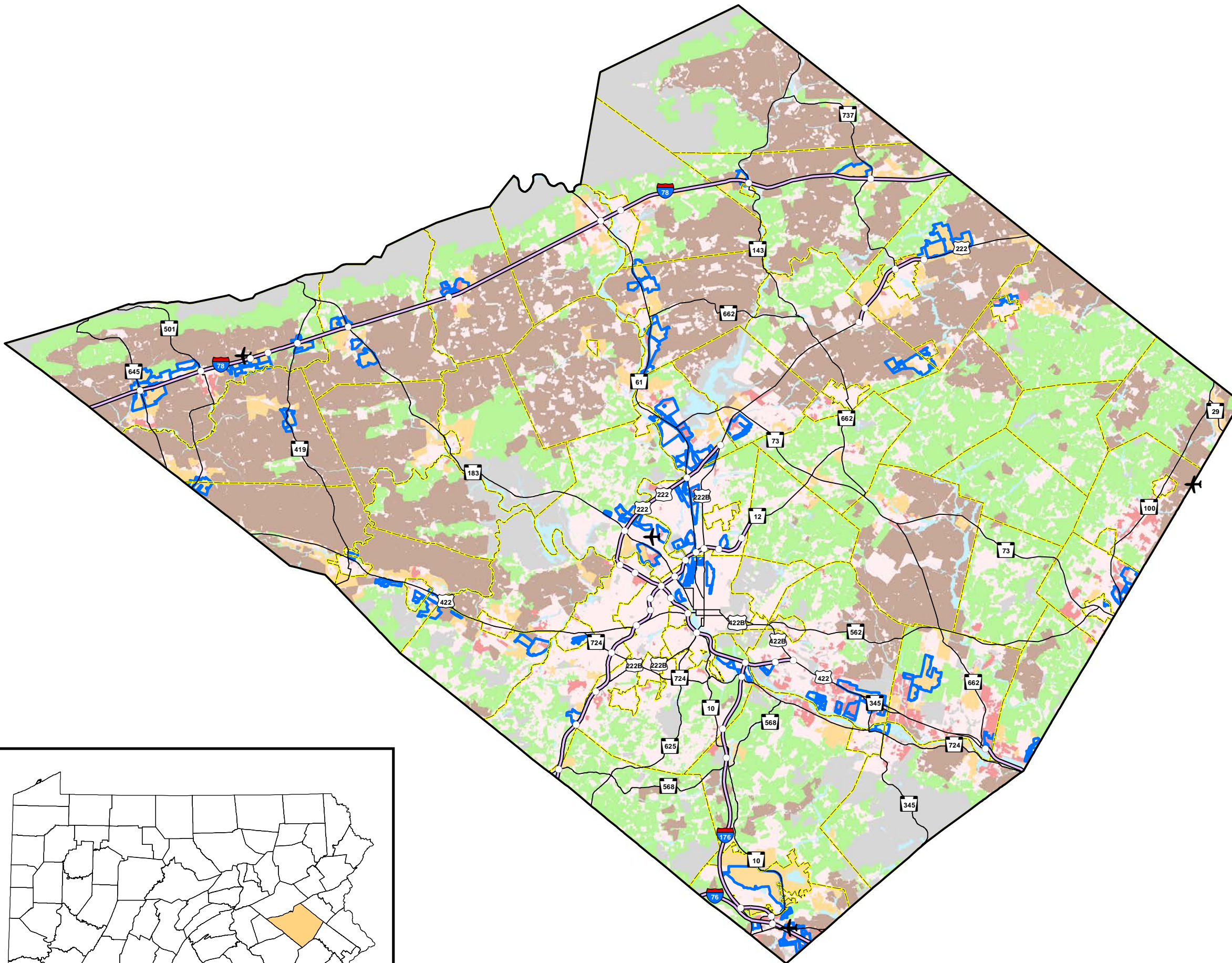
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-  Designated Growth
-  Future Growth
-  Rural Conservation
-  Agricultural Preservation
-  Permanent Open Space and Rec
-  Environmental Hazard
-  Transportation Network
-  Berks County Boundary
-  Municipal Boundaries
-  Limited Access Highway
-  Major Roads
-  Railroads
-  Interchanges
-  Public Airports

Source: Berks County Planning Commission, Berks County GIS, Berks County Mapping, Berks County Department of Emergency Services, FEMA

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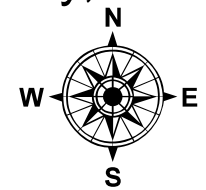





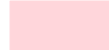









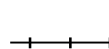


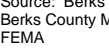


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# Hawk Mountain Region Economic Development Areas and Future Land Use Berks County, Pennsylvania



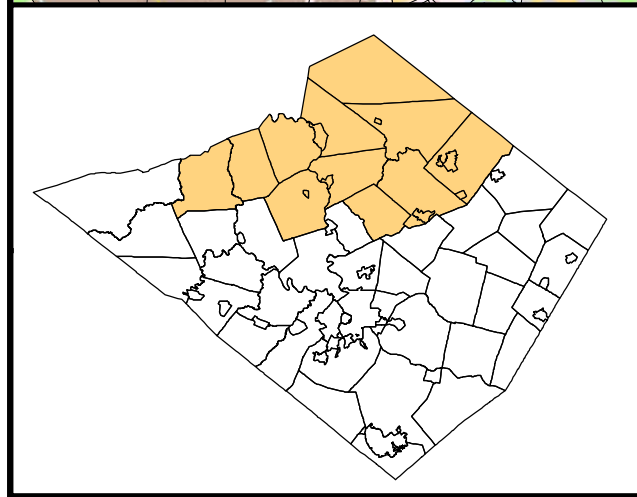
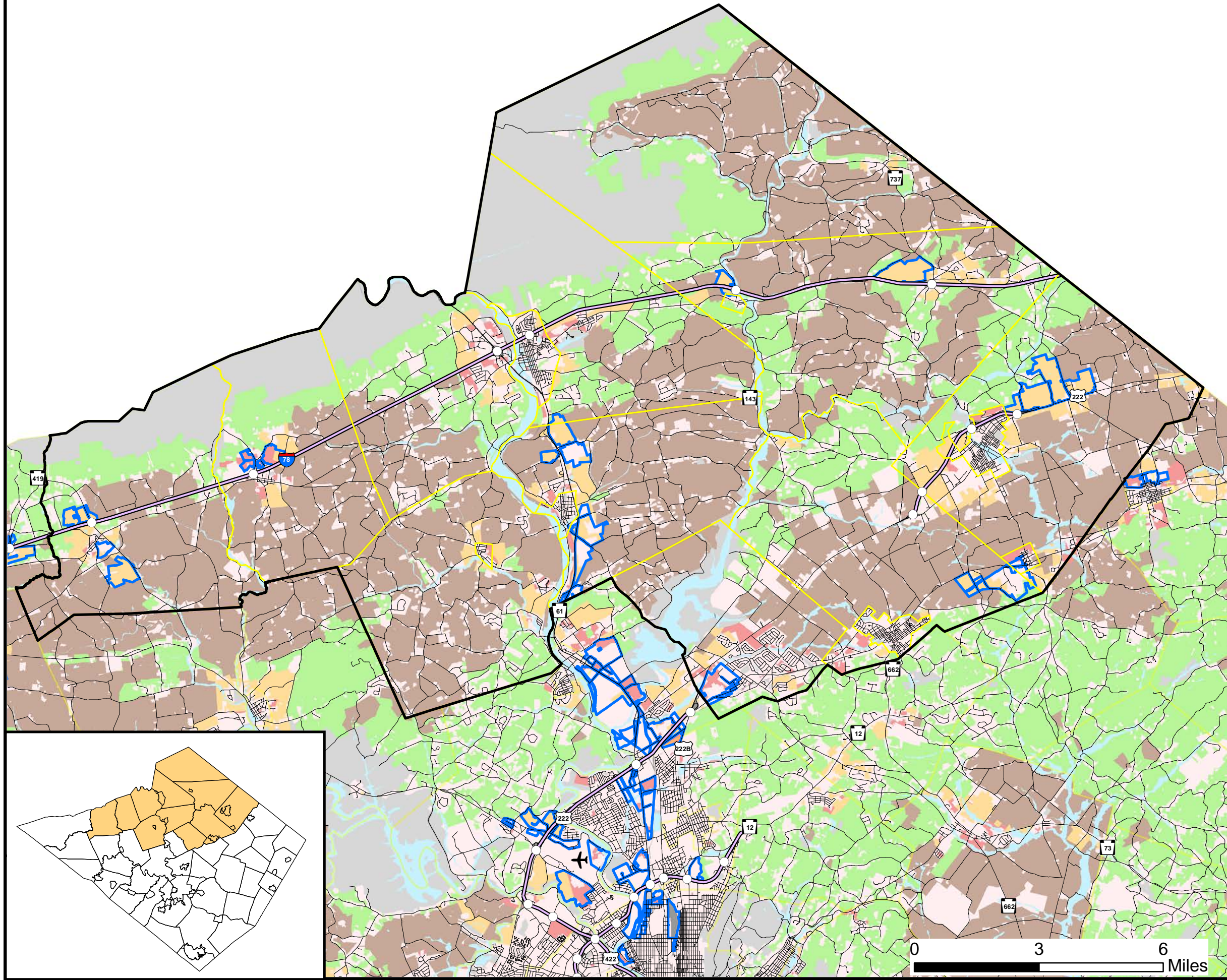
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Source: Berks County Planning Commission, Berks County GIS, Berks County Mapping, Berks County Department of Emergency Services, FEMA

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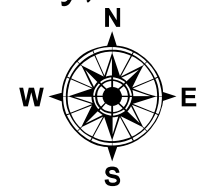















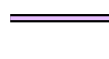
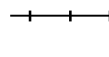

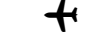


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# Tulpehocken Region Economic Development Areas and Future Land Use Berks County, Pennsylvania



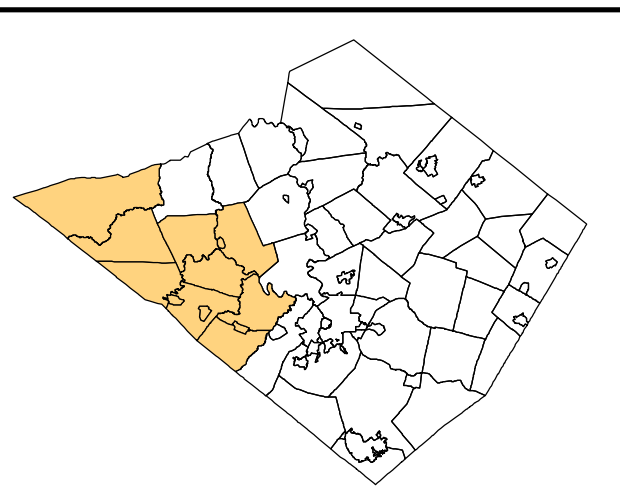
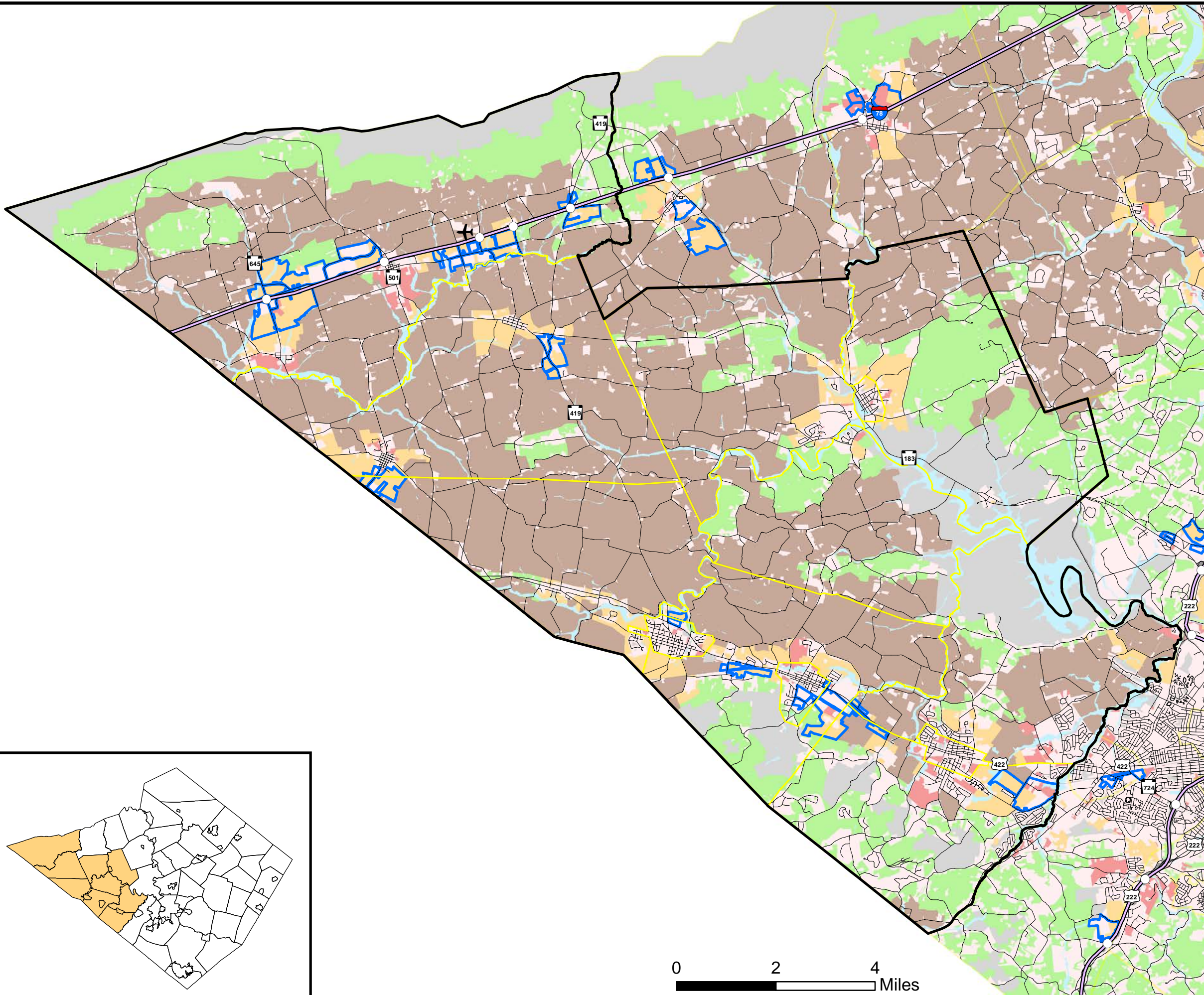
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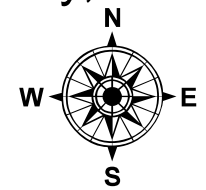




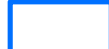








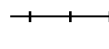




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# Southern Highlands Region Economic Development Areas and Future Land Use Berks County, Pennsylvania



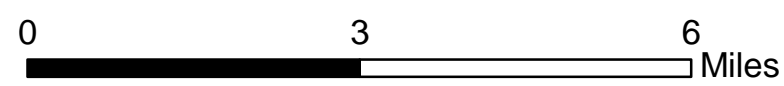
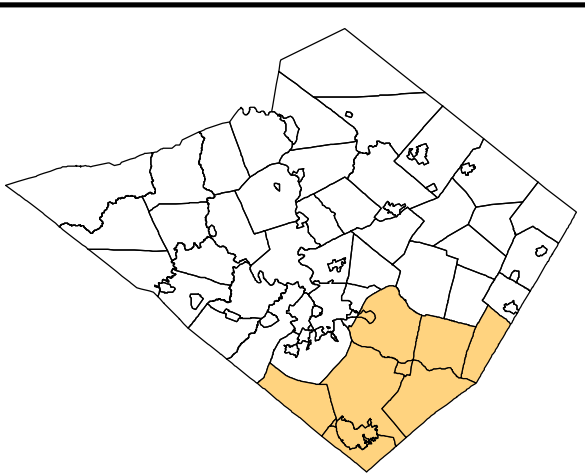
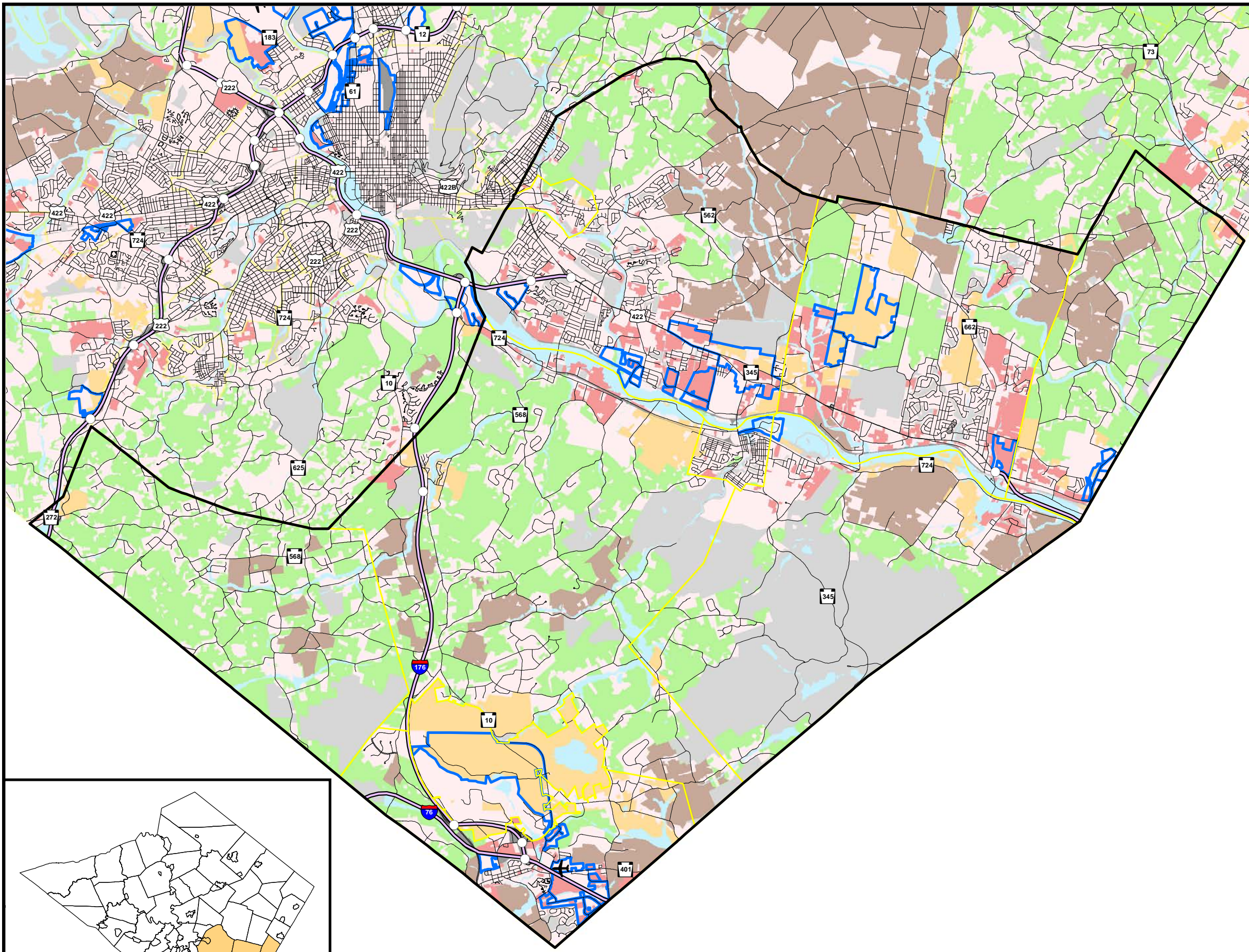
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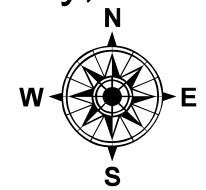




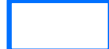
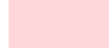









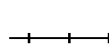


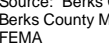


Berks County Comprehensive Plan Update  
Adopted: January 23, 2020

# Oley Hills Region Economic Development Areas and Future Land Use Berks County, Pennsylvania



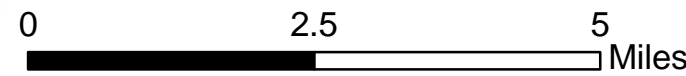
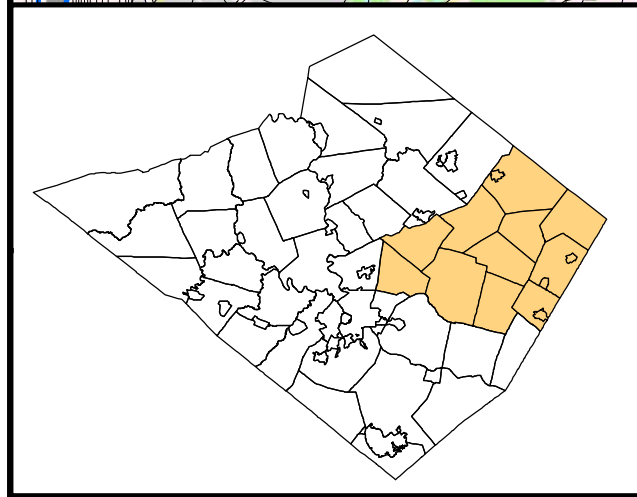
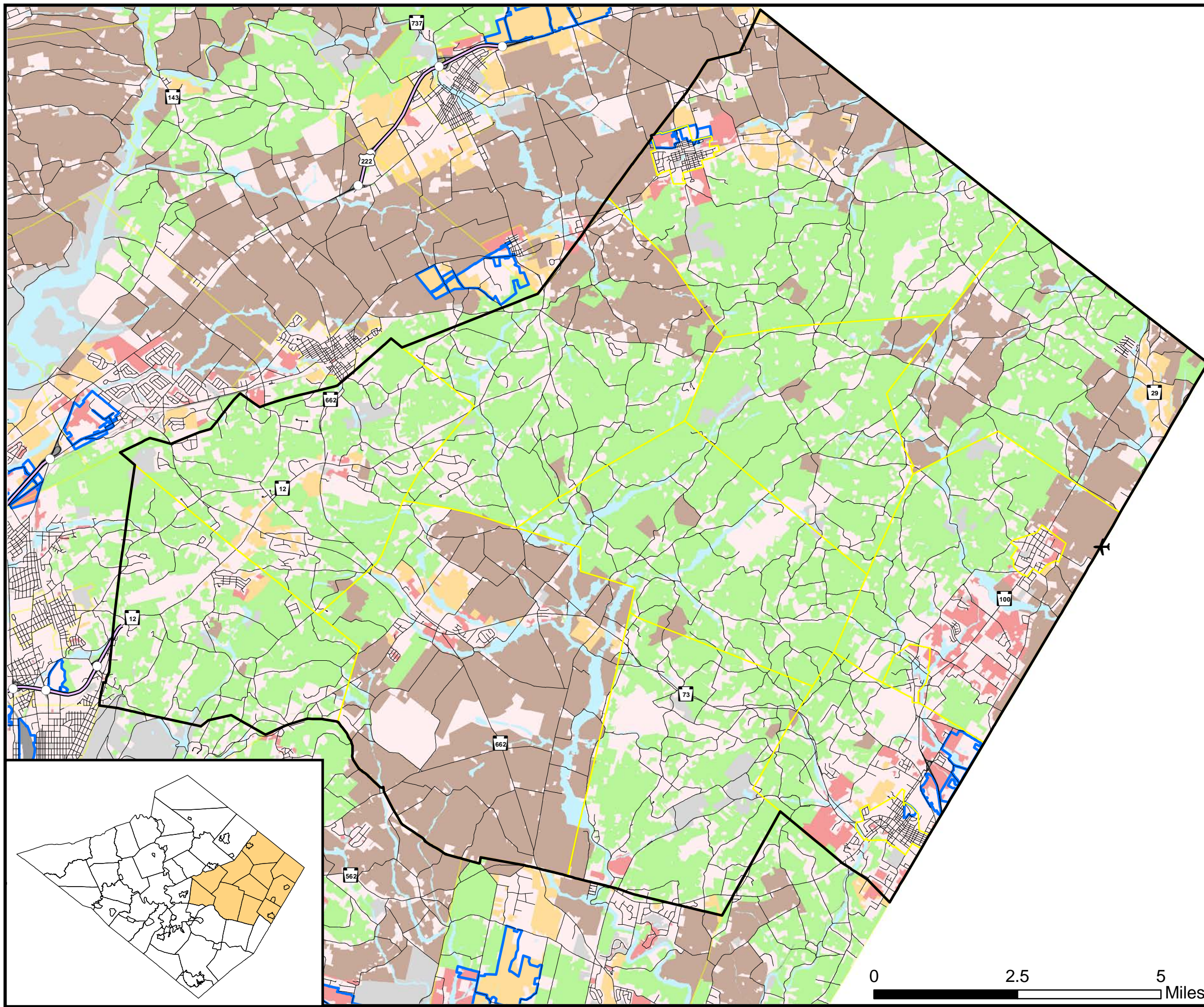
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-  Economic Development Areas
-  Existing Development
-  Designated Growth
-  Future Growth
-  Rural Conservation
-  Agricultural Preservation
-  Permanent Open Space and Rec
-  Environmental Hazard
-  Transportation Network
-  Planning Region Boundary
-  Municipal Boundaries
-  Limited Access Highway
-  Railroads
-  Interchanges
-  Public Airports

Source: Berks County Planning Commission, Berks County GIS, Berks County Mapping, Berks County Department of Emergency Services, FEMA

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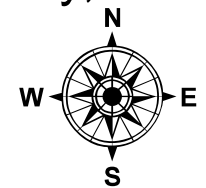




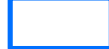






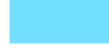



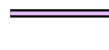
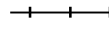




Berks County Comprehensive Plan Update  
Adopted: January 23, 2020

# Metro Region Economic Development Areas and Future Land Use Berks County, Pennsylvania



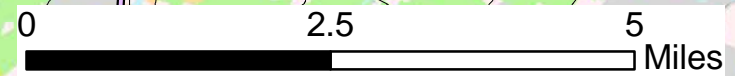
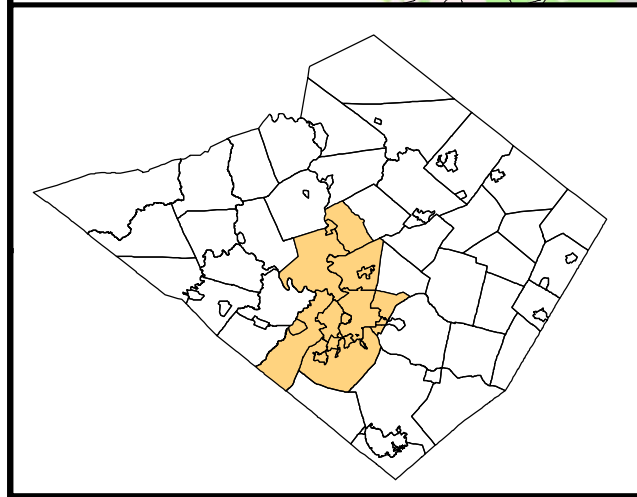
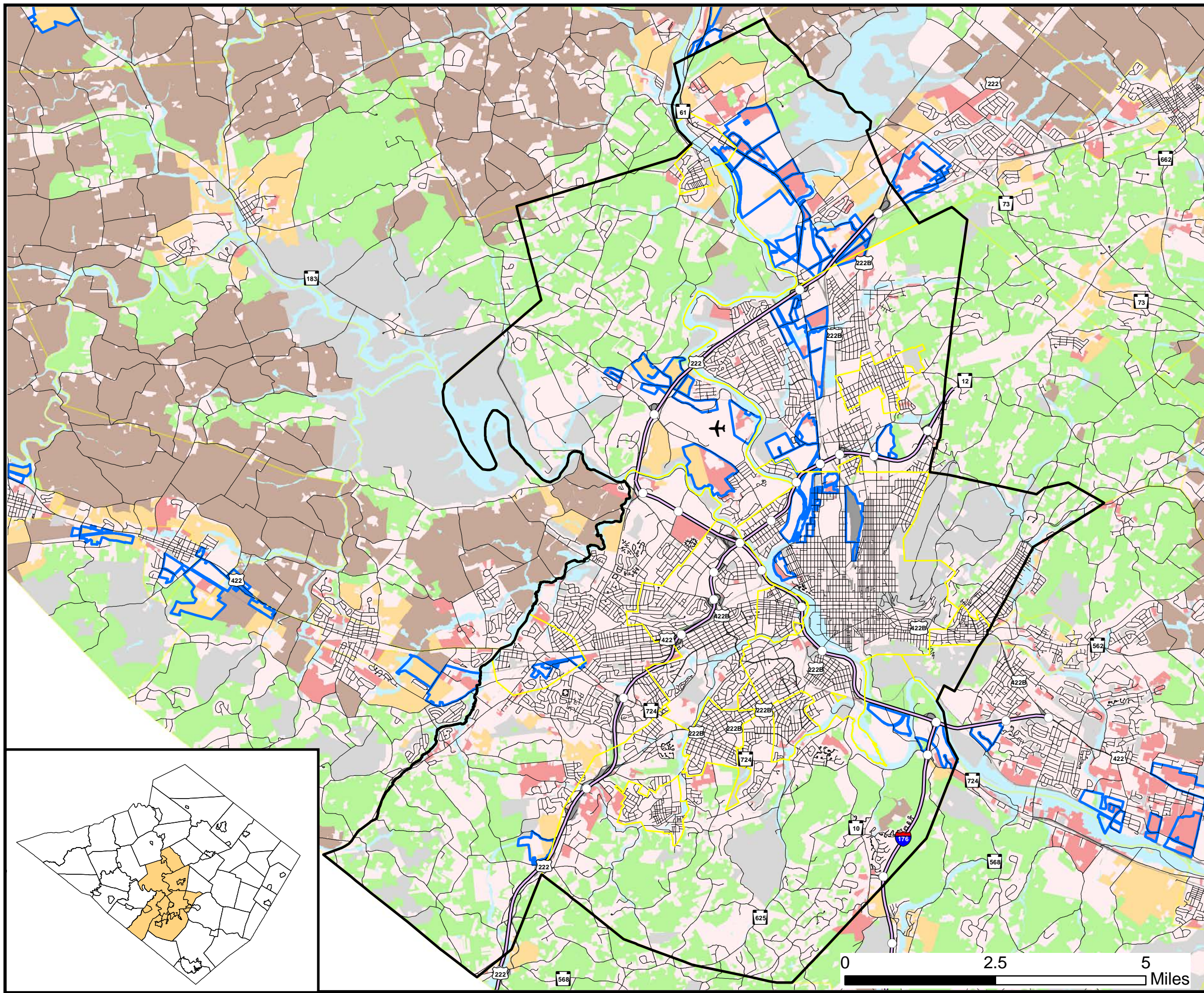
## Legend

-  Economic Development Areas
-  Existing Development
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Source: Berks County Planning Commission, Berks County GIS  
Berks County Mapping, Berks County Department of Emergency Services,  
FEMA

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## TRANSPORTATION

### A. Introduction

Berks County is a large county – at nearly 900 square miles, and as a result has an expansive and complex transportation system with nearly 3,400 miles of roads and 900 bridges. The highway network is the backbone of its transportation system. Although most households have at least one car for transportation, some people remain transit dependent. Local bus service, as well as a paratransit service for persons with disabilities and elderly residents, is provided in and around the Reading metro area. Intercity bus service links the region to adjacent counties, Philadelphia and New York City. Taxi service is available in the region. Although trucks handle most of the region’s freight shipments, rail service is available via Norfolk Southern and several local railroads. The county’s primary aviation facility, Reading Regional Airport, provides general aviation service as well as charter passenger service. Walkways, bikeways, greenways, and other transportation enhancements are growing alternatives to motorized transportation.



Interstate 78

Transportation decision making and funding is spread among many partners in the county — legislators, PennDOT, local governments, this MPO, the Berks County Planning Commission, transit providers, privately owned rail freight operators, transportation stakeholders and many others. Each urbanized area in the United States with a population of 50,000 or more is required by Federal regulation to have a designated Metropolitan Planning Organization (MPO) to facilitate transportation on the local level. In Pennsylvania, there are 19 MPOs. The Reading Area Transportation Study (RATS) is the regional transportation planning organization for the Reading, Pennsylvania metropolitan area. The Reading MPO covers all of Berks County. RATS facilitates the regional, performance based planning process that serves as the basis for spending state and federal transportation funds for improvements to streets, highways, bridges, public transit, bicycle and pedestrian networks allocated to Berks County.

Created in 1964, RATS is comprised of two committees – the Technical Committee and the Coordinating Committee. The Technical Committee reviews items brought before the group and recommends actions to the Coordinating Committee. The Coordinating Committee is the policy body that formally adopts items reviewed by the Technical Committee. The eight-member RATS Technical Committee consists of representatives from PennDOT Central Office in Harrisburg (1), PennDOT District 5-0 Office in Allentown (1), the City of Reading (2), the Berks County Planning Commission (2), the South Central Transportation Authority (SCTA) (1), and the Reading Regional Airport Authority (RRAA) (1). The ten-member RATS Coordinating Committee consists of one representative each from the PennDOT Central Office, PennDOT District 5-0, Berks County Board of Commissioners, Berks County Planning Commission, City of Reading, Boroughs, 1st Class Townships, 2nd Class Townships, SCTA and the RRAA. RATS is responsible for prioritizing approximately \$80 million annually to advance transportation improvement projects throughout the county. PennDOT, SCTA and municipalities are responsible for project implementation. The transportation planning staff of the Berks County Planning Commission serves as the technical staff to RATS. The staff coordinates and administers these committees, their meetings and develops federally required MPO products including: the Long Range Transportation Plan (LRTP), the short-range Transportation Improvement Program (TIP), associated transportation conformity determinations (if required), the bi-annual Unified Planning Work Program (UPWP), and the Congestion Management Process (CMP).

Most of the modern Berks County transportation system was constructed between 1920 and 1970 with some bridges built before the 20th Century; the majority of the interstate highways in the county were constructed in the 1950s and 1960s. Most roads have been incrementally improved or repaired at one point or another; however, they are continuously subject to increased traffic and heavier loads than they were designed to handle.

The highest priority will continue to be to preserve and maintain the existing transportation system with a primary focus on improving roads in poor condition. In 2014, nearly 17 percent of state roads in the county, annually tested by PennDOT, were rated as “poor” and 28 percent were rated “fair.” We must continue efforts to maintain and improve our 881 bridges in the county, of which 194 were classified as structurally deficient. The county and its municipalities are committed to making investments to preserve, maintain, address safety issues on, and maximize the use of the existing transportation system before making investments to expand the capacity of the system.

## Chapter 9 - Transportation

### B. Roads and Bridges

The regional highway system functions as the primary means of distributing people and goods within and throughout Berks County. Fifty-two (52) miles of Interstate and 26 miles of expressways accommodate most of the highway traffic. These roads are shown on Figure 30.

Our experience and perception of the transportation system is largely based on the condition of the roads and bridges we drive on every day. As stated earlier, the primary focus of this plan is to develop and maintain the county's road and bridge network to be satisfactory and safe for existing and planned traffic.

Historically, Berks County has been served by a radial system of five major arterial highways. U.S. 222 is the principal link between Reading and both Allentown and Lancaster, as well as a connection to the Pennsylvania Turnpike. PA 61 is the principal highway connection between Schuylkill County and Reading.

U.S. 422 provides a direct link to the Delaware Valley market center to the east. To the west, U.S. 422 connects Reading to Lebanon, Harrisburg and the Capitol region. Berks County has no Interstate link that crosses through the core urban area; however, Interstate 78 to the north and the Pennsylvania Turnpike (I-76) to the south bound the county. PA 183 and PA 61 act as connectors to I-78, while I-176 and U.S. 222 South link the urban area with the Turnpike. In 2014, Berks County had 3,334 linear miles of roadway, largely owned by local government entities and PennDOT.

The county's roadways accommodate over nine million miles of travel daily, with the majority on PennDOT owned roads. Overall travel demand within the region has been declining, down 3 percent since 2009 due largely to socioeconomic factors. The growth rate of the county population has declined. The county has a growing population of people who drive less or not at all - the elderly, disabled and zero car households. The growth in E-commerce has reduced the necessity to visit malls and stores for goods. Berks County also has a large percentage of people not in the workforce, (not employed and not seeking employment) and a decreasing labor participation rate, which results in declining trips to work.

Change in DVMT between 2009 and 2014								
DVMT by Agency	2009	2010	2011	2012	2013	2014	# Change	% Change
PennDOT	7,441,843	7,313,146	7,314,556	7,140,188	7,049,039	7,082,578	-359,265	-4.8%
Local	1,620,623	1,659,960	1,625,253	1,600,701	1,569,955	1,634,448	13,825	0.9%
Turnpike	186,725	186,715	186,715	186,715	182,058	183,530	-3,195	-1.7%
Other State/Federal	60,072	138,321	138,321	138,321	134,020	134,020	73,948	123.1%
<b>Total</b>	<b>9,309,263</b>	<b>9,298,142</b>	<b>9,264,845</b>	<b>9,065,925</b>	<b>8,935,072</b>	<b>9,034,576</b>	<b>-274,687</b>	<b>-3.0%</b>

Source: PennDOT, Pennsylvania Highway Statistics, 2009-2014

As of 2014, there were 284,815 licensed drivers in Berks County. The rate of growth in licensed drivers has substantially declined since 2009. While people may be driving less, there are nearly 66,000 (21 percent) more vehicles on the roads today than in 2000, with significant increases in the number of passenger cars, motorcycles, and pickup trucks. Passenger cars have been the predominant vehicle on the road – with a steady 67 percent of all vehicles since 2000. With the addition of pick-up trucks, 82 percent of registered vehicles in the County are largely for passenger use.

#### Road and Bridge Conditions

Roadway surfaces in Berks County are mostly comprised of paved surface roadways. Of the paved surface roadways, pavements are either asphalt or concrete. PennDOT assesses pavement surface conditions using a variety of metrics that includes the International Roughness Index (IRI). It measures pavement roughness in terms of the number of inches per mile that a laser, mounted in a specialized van, jumps as it is driven along highway – the lower the IRI, the smoother the ride. PennDOT has allocated considerable resources to the Interstates and major highways on the National Highway System since 2010. Of the four categories of state roads, ones that carry the most vehicles, such as the Interstates, have seen the most improvement in condition and have the best 2014 rating.

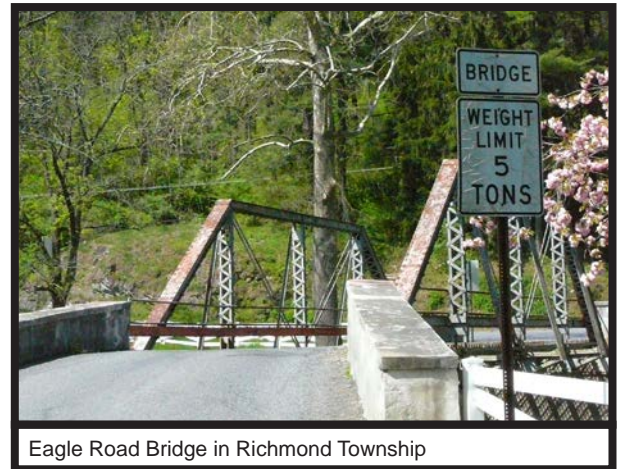
Conditions of State Roads in Berks County from 2010-2014		
Road Types	2014 Rating	Condition Improvement Since 2010
Interstates	Smooth	Yes
National Highway System, Non-Interstate	Smooth	Yes
Roads with more than 2,000 Trips Per Day	Fair	No Change
Roads with less than 2,000 Trips Per Day	Rough	Marginal

Source: PennDOT, Pennsylvania Highway Statistics, 2009-2014

**Bridges**

The Schuylkill River, two lakes and countless streams provide ample recreational activities and commercial activities, but create a transportation challenge to safely and efficiently move people and freight over them in Berks County. In 2014, there were 881 bridges in Berks County, with the majority owned by PennDOT. These bridges are those that require inspections – state bridges longer than eight feet and local bridges longer than 20 feet. Since 2010, the number of bridges increased 2.4 percent, with the majority being bridges owned and maintained by local municipalities. Berks County is responsible for 57 of the 244 local bridges.

The rise in the number of locally owned bridges is largely due to improved data collection and not new development. In recent years, PennDOT expended resources to field verify measurements of bridges, and that resulted in adding bridges to the inspection list.



Eagle Road Bridge in Richmond Township

As Berks County’s bridges continue to age and deteriorate, it is sometimes necessary to close bridges unexpectedly due to problems revealed during routine inspections. **Closed bridges** are deemed unsafe to carry any type of traffic. The number of bridges closed to traffic in the county increased 27 percent since 2010. As of 2014, 14 bridges are closed, with the majority being bridges owned by local municipalities.

**Load posting** a bridge is required by the National Bridge Inspection Standards when a bridge is not capable of safely carrying a legal load. If a bridge is deemed deficient, officials will post a maximum load for the bridge. Bridges may also be posted for other load-capacity restrictions including speed and number of vehicles permitted on the bridge. Almost 100 bridges are load-posted in Berks County. With the majority of those bridges owned by local municipalities, the number of weight-restricted bridges increased 14 percent since 2010.

**Structurally deficient** bridges are characterized by deteriorated conditions of the major components of a bridge. This may include cracked concrete, the bridge deck, the support structure, or the entire bridge itself. A “structurally deficient” (SD) designation does not imply that a bridge is unsafe. However, such bridges typically require significant maintenance to remain in service and would eventually require major rehabilitation or replacement to address the underlying deficiency. Berks County had 194 such bridges in 2014. The number of SD bridges has decreased 3.5 percent since 2010 with major improvement to bridges that are on the National Highway System. Similar to trends in other categories, the number of local SD bridges grew 10 percent since 2010. While many bridges have been repaired or replaced, the pace of deterioration of existing bridges has thus far outpaced these improvements.

A **functionally obsolete** bridge does not meet current design standards. Examples include bridges too narrow, have inadequate under-clearances, load-carrying capacity, poorly aligned with the roadway, or no longer adequately service today’s traffic. Functionally obsolete does not mean the bridge is unsafe or necessarily structurally deficient. It means that the bridge is showing its age and should be upgraded or replaced to improve its function. Berks County has 176 such bridges.



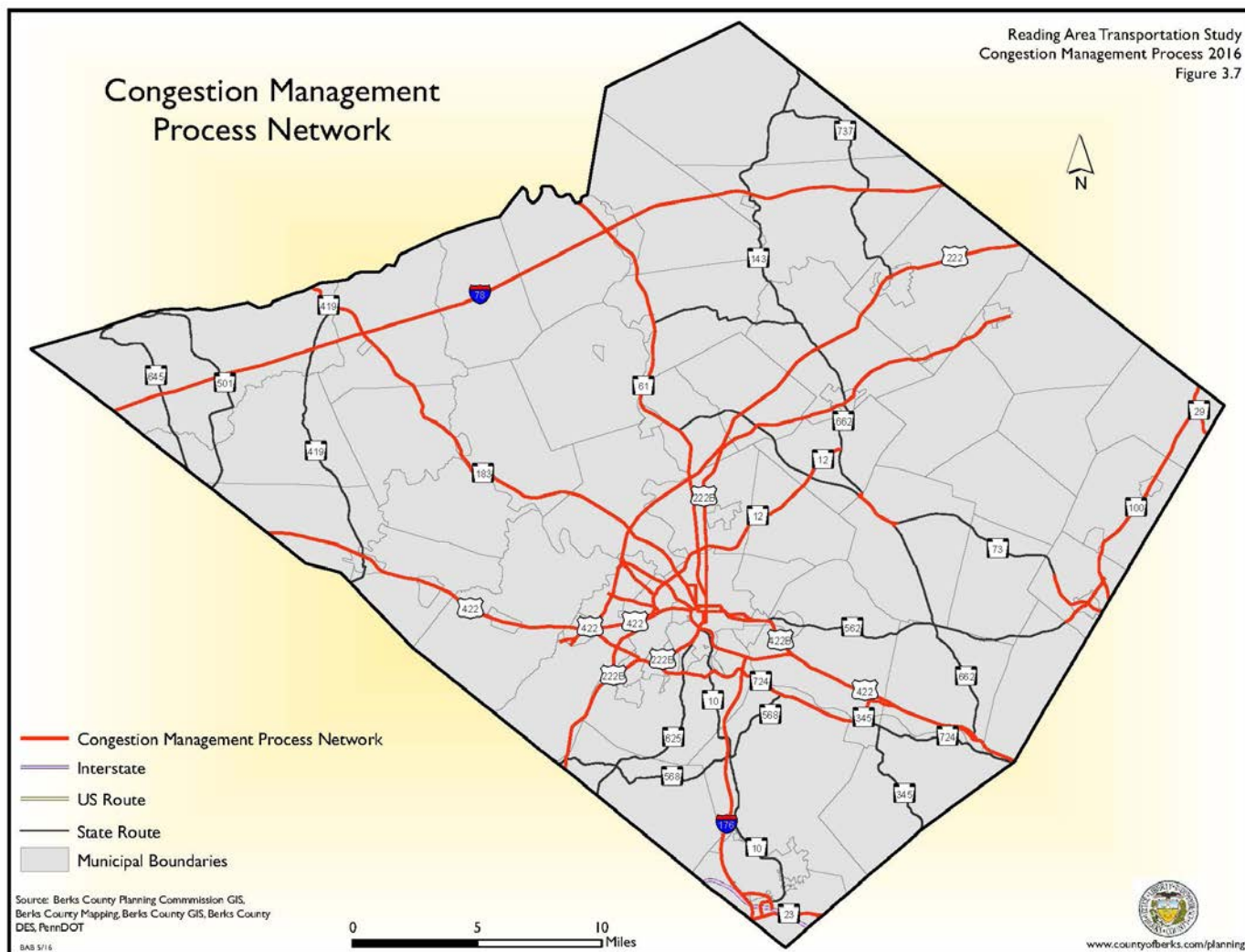
## Chapter 9 - Transportation

### C. Congestion Management

RATS developed a Congestion Management Process (CMP) in 2016. Development and maintenance of a CMP is a requirement for all MPOs in Transportation Management Areas (TMAs) under federal law. A CMP has great benefit - it provides a systematic and continuous method to pinpoint roadway congestion and to help identify improvements that alleviate it.

The CMP and the included CMP Network addresses the multimodal transportation network, consistent with federal guidelines. The CMP Network was defined by analyzing criteria outlined below which reflect traffic volumes and speed, and non-recurring factors (crashes), which are sources of congestion that can occur at any time.

The CMP Network is divided into a series of 33 highway corridors. Each corridor is assessed in detail within the CMP. The most congested corridors in Berks County are shown on the following table. These corridors were ranked using both the Travel Time Index (TTI) and the Average Annual Daily Trips (AADT) in that corridor. Please note that these rankings are not a definitive account of congestion along the network or a representation of prioritizing one corridor over another for improvements. Rather, it is an introduction to useful data and highlights the bottlenecks and most congested segments in Berks County.



Most Congested Corridors Ranked by Travel Time and Daily Traffic			
Rank	Corridor	Peak TTI	Max AADT
1	U.S. 222 (U.S. 222 Business Merge to Lehigh County)	4.74	59,199
2	U.S. 222 Business (U.S. 222 Merge to U.S. 422 West Shore Bypass)	4.42	22,310
3	U.S. 422 Business (U.S. 222 Merge to U.S. 422 Interchange)	3.61	23,473
4	U.S. 422 Business (Penn Street Bridge to U.S. 422 Merge)	3.36	21,904
5	SR 1010	3.00	15,238
6	PA 61 (PA 12 to U.S. 222)	2.38	16,455
7	PA 724 (Sinking Spring to U.S. 222 Business)	2.38	14,301
8	U.S. 422 (Lebanon County to U.S. 222 Merge)	2.27	21,347
9	U.S. 222 Business (PA 12 to U.S. 222 Merge)	2.19	24,705
10	U.S. 422 (West Shore Bypass to Montgomery County)	2.05	36,400
11	PA 61 (U.S. 222 to Schuylkill County)	2.03	28,743
12	PA 183 (U.S. 222 to Schuylkill County)	2.02	23,350
13	SR 3023 (State Hill Road)	1.96	20,801
14	PA 401	1.93	6,398
15	U.S. 222 (U.S. 422 Merge to U.S. 222 Business Merge)	1.92	74,847
16	U.S. 222 Business (U.S. 422 West Shore Bypass to PA 12)	1.90	15,347
17	PA 183 (Washington Street to U.S. 222)	1.89	16,938
18	PA 724 (U.S. 222 Business to Interstate 176)	1.78	12,196
19	PA 662 Eastern side at PA 73)	1.64	10,782
20	PA 12 (Pricetown Road)	1.60	18,218
21	PA 100 (Hereford Bally Area)	1.60	18,002
22	SR 3021 (Paper Mill Road)	1.60	18,002
23	PA 23	1.58	18,371
24	PA 345 (PA 724 to U.S. 422)	1.58	6,183
25	SR 3055 (Van Reed Road)	1.57	12,307
26	PA 724 (Interstate 176 to Birdsboro)	1.57	11,333
27	PA 73 (Boyertown Area)	1.51	11,165
28	PA 662 Western side at PA 73)	1.49	5,491
29	U.S. 422 (West Shore Bypass)	1.44	78,134
30	PA 12 (Warren Street Bypass)	1.44	59,132
31	PA 562 and SR 2067	1.44	11,591
32	PA 61 (U.S. 222 Business to PA 12)	1.40	12,388
33	Interstate 176/SR 2089	1.32	3,722
34	PA 10	1.29	7,845
35	PA 73 (Oley Area)	1.28	14,334
36	PA 29 (Hereford Township)	1.18	8,326
37	Interstate 78	1.10	21,746
38	U.S. 222 (Lancaster County to U.S. 422 Merge)	1.03	44,135

Source: Reading Area Transportation Study Congestion Management Process, May 19, 2016

## Chapter 9 - Transportation

### D. Air Quality

The Clean Air Act Amendments of 1990 (CAAA) mandate improvements in the nation's air quality. The CAAA directs the U.S. Environmental Protection Agency (EPA) to implement regulations that will provide for reductions in pollutant emissions. The Berks County area was originally designated under the CAAA as a moderate non-attainment area for ground level ozone. At present, Berks County is designated as a Marginal Non-Attainment Area for the 2008 standard denoting minimal violation and carrying the least demanding requirements. Berks County is designated as a Maintenance Area for the 1997 ozone standard. The area's maintenance plan, part of the State Implementation Plan (SIP), indicates that ozone concentrations will improve steadily until 2018.

Federal standards for both annual and 24-hour timeframes were established for airborne particles less than 2.5 microns in diameter (PM2.5) in 1997, 2006 and 2012. These fine particles have been shown to collect in the deepest part of the human lung, causing long-term respiratory concerns. Berks County was designated non-attainment for the 1997 annual standard. In 2015, the EPA approved the state's redesignation request and the associated maintenance plan for that standard. Berks County had been a maintenance area for the 1997 annual PM2.5 standard. Berks County is attaining the 24-hour 2006 standard. EPA has not yet designated areas for the more stringent annual 2012 PM2.5 standard. The state's monitoring network indicates that Berks County is attaining the 2012 PM2.5 standard. Effective on October 24, 2016, the EPA finalized rulemaking that revoked the 1997 primary annual PM2.5 standard in areas that have always been designated as attainment and in maintenance of that standard. As such, Berks County no longer has to address the 1997 PM2.5 standard.

Since vehicular emissions contribute to both PM2.5 pollution and ozone formation, the Act requires transportation planners in non-attainment and maintenance areas to consider the air quality impacts of their proposed plans, programs, and projects. These activities, if subject to federal involvement (i.e., funding), must be shown to conform to an applicable State Implementation Plan (SIP). Transportation conformity rules for both ozone and PM2.5 state that emissions analyses need to be performed for years within the period of both Transportation Improvement Programs (TIP) and Long Range Transportation Plans (LRTP).

### E. Safety

Maintaining a safe transportation system is essential to sustaining and enhancing the quality of life for Berks County residents. Deaths and injuries resulting from traffic crashes are a public health concern and impact local communities with medical costs, lost wages, insurance costs, taxes, police, fire, and emergency medical services, legal and court costs, and property damage. Berks County has a significant amount of reportable crashes – ranking sixth in the state in the number of overall crashes and fifth in the number of fatal crashes between 2009 and 2014. Please note that data presented in this subsection discusses reportable crashes only.

Most Crashes in PA by County 2009-2014		Most Fatal Crashes in PA by County 2009-2014	
Allegheny	71,586	Philadelphia	521
Philadelphia	65,895	Allegheny	361
Montgomery	49,817	Bucks	308
Bucks	36,418	Lancaster	289
Lancaster	31,730	<b>Berks</b>	<b>260</b>
<b>Berks</b>	<b>27,777</b>	Westmoreland	231
Delaware	27,203	Montgomery	226
York	27,178	York	222
Lehigh	27,157	Luzerne	209
Chester	26,887	Chester	186

Source: PennDOT, Pennsylvania Crash Facts and Statistics, 2009-2014

Although significant progress has been made, lives are still being lost on Berks County roads. The chart below shows that fatalities have decreased 34% between 2009 and 2014. Crashes that involve injury are also down – 6.6% since 2009. Overall crashes are up 0.5%, with an increase in property damage only events. Nearly 68 percent of all crashes in the county occur on state roads.



Berks County Crashes by Type Between 2009 and 2014									
Type	2009	2010	2011	2012	2013	2014	Total	# Change	% Change
Fatal	50	39	46	50	42	33	260	-17	-34.0%
Injury	2,135	2,133	2,207	2,204	2,094	1,994	12,767	-141	-6.6%
Property Damage Only	2,415	2,320	2,476	2,489	2,458	2,592	14,750	177	7.3%
<b>Total</b>	<b>4,600</b>	<b>4,492</b>	<b>4,729</b>	<b>4,743</b>	<b>4,594</b>	<b>4,619</b>	<b>27,777</b>	<b>19</b>	<b>0.4%</b>

Source: PennDOT, Pennsylvania Crash Facts and Statistics, 2009-2014

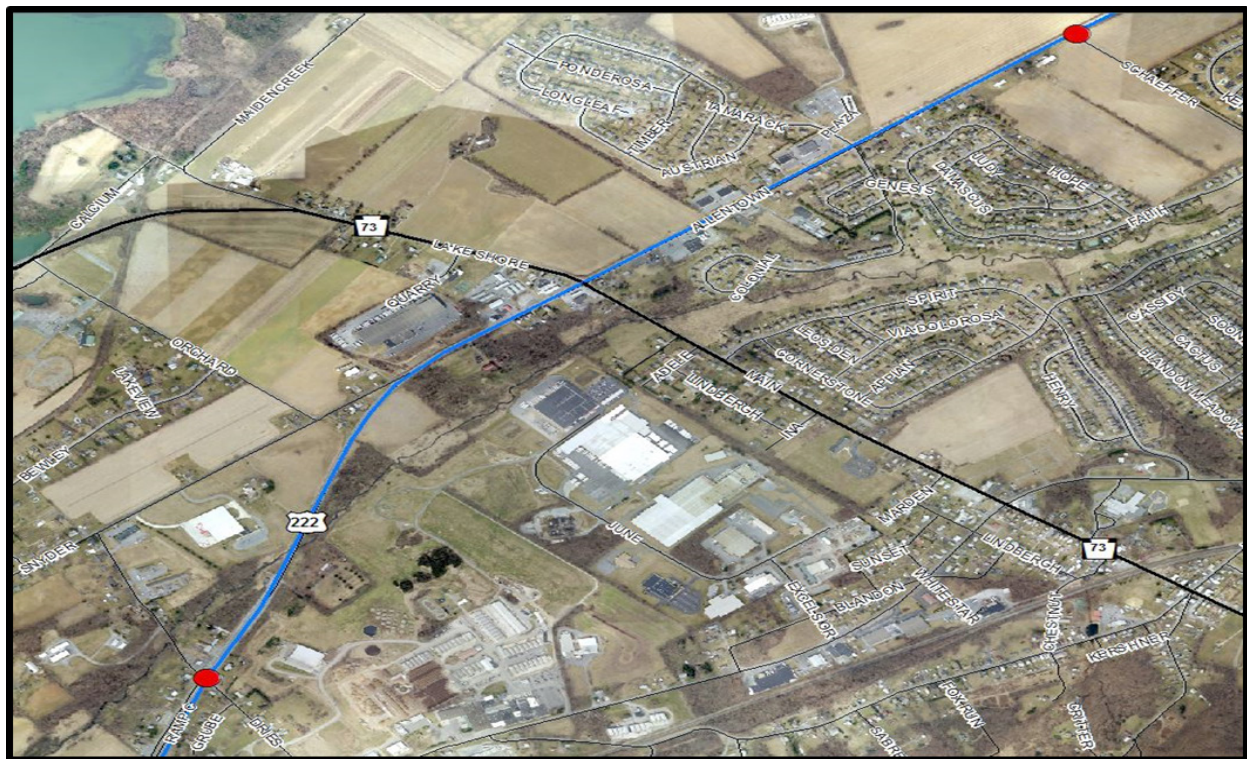
The toll from those crashes in Berks County is significant. Nearly 63,000 people and 47,000 vehicles have been involved in crashes since 2009.

Persons and Vehicles Involved in Berks County Crashes Between 2009 and 2014									
Type	2009	2010	2011	2012	2013	2014	Total	# Change	% Change
Persons	10,429	10,392	10,644	10,869	10,176	10,481	62,991	52	0.5%
Vehicles	7,752	7,726	8,041	8,191	7,805	7,918	47,433	166	2.1%

Source: PennDOT, Pennsylvania Crash Facts and Statistics, 2009-2014

### High Crash Corridors

PennDOT has identified, through data analysis and research, corridors within Berks County that have a high rate of crashes, fatalities, and injuries. The county’s #1 crash corridor (also ranked #82 in the state) is located in Maiden Creek Township on Route 222 between Dries Road and Schaeffer Road. Shown below, this corridor saw 9 fatal crashes and 274 injury crashes since 2007. This corridor is programmed for improvements beginning in 2019.



The Route 222 corridor between Dries and Schaeffer roads in Maiden Creek Township.



## Chapter 9 - Transportation

### Truck Safety

Berks County experiences a significant amount of truck traffic on its roadway system due to the geographic location and proximity to other major warehousing hubs. Interstate 78 carries a significant amount of truck traffic between regional industrial centers and industrial parks located in Berks County such as Berks Park 78. The data below looks at safety trends for large trucks (defined as a truck with gross vehicle weight rating (GVWR) greater than 10,000 pounds). The data also shows where Berks County ranks out of 67 counties in Pennsylvania for frequency of the crashes shown in the following chart.

Overall, Berks County sees many large truck crashes and has been ranked in the top ten for crash frequency for the last five years.

Large Truck Involvement in Crashes				
Year	Berks County	Pennsylvania	% of All State Crashes	County Ranking
2011	228	4,884	4.7%	6
2012	198	3,926	5.0%	5
2013	174	3,957	4.4%	8
2014	273	6,688	4.1%	6
2015	226	5,373	4.2%	5

Source: Federal Motor Carrier Safety Administration (FMCSA), Motor Carrier Management Information System (MCMIS)

Berks County has been ranked no lower than 14<sup>th</sup> in the last five years, and placing 1<sup>st</sup> in 2013, in fatal crashes involving large trucks.

Large Truck Involvement in Fatal Crashes				
Year	Berks County	Pennsylvania	% of All State Crashes	County Ranking
2011	5	153	3.3%	11
2012	8	187	4.3%	7
2013	9	167	5.4%	1
2014	4	166	2.4%	14
2015	4	126	3.2%	10

Source: Federal Motor Carrier Safety Administration (FMCSA), Motor Carrier Management Information System (MCMIS)

The county is also in the top ten for crashes that involve large trucks that result in injury.

Large Truck Involvement in Injury Crashes				
Year	Berks County	Pennsylvania	% of All State Crashes	County Ranking
2011	107	2,182	4.9%	5
2012	88	1,684	5.2%	5
2013	57	1,495	3.8%	9
2014	78	2,474	3.2%	9
2015	81	1,859	4.4%	4

Source: Federal Motor Carrier Safety Administration (FMCSA), Motor Carrier Management Information System (MCMIS)

### F. Access Management

Access Management ties congestion management and safety together as an approach to deal with traffic problems generated by new development before they occur. Generally, they are elements of plan design that minimize/control the number of conflict points such as driveways, on a road or in a busy, heavily traveled corridor. Access Management recognizes that while the landowners have a right to reasonable access, the primary function of arterial roadways is to move traffic.

An effective access management policy/program used while projects are going through the municipal planning process will play an important role in preserving traffic carrying capacity, reducing congestion and crashes, minimizing costly remedial roadway improvements and establishing consistency for pedestrians and drivers.

In regards to access management, this Plan states:

1. Public roads and streets are to be planned, designed and managed to preserve their functional integrity.
2. Access management policies and programs support safe, secure and well-designed transportation infrastructure.
3. Access to land development along major arterial roads shall be preserved using site design opportunities such as parallel roads, side streets, shared driveways and cross access easements connecting adjacent developments.
4. Properties under the same ownership, consolidated for development, or part of phased development plans shall be considered one property for the purposes of access management. Access points to these developments shall be the minimum necessary to provide reasonable access, and not the maximum available, for that property frontage.
5. New residential subdivisions shall include an internal street layout that connects to the streets of surrounding developments to accommodate travel demand between adjacent neighborhoods, without the need to use the major thoroughfare system. Sidewalks should be installed on at least one side of the street in all residential subdivisions if the street is located within two (2) miles of a school, or 0.5 miles of a greenway, park, or shopping area, or if there is an existing sidewalk network adjacent to the proposed development.
6. Municipal zoning and subdivision ordinances and actions taken to rezone properties for commercial and industrial uses shall discourage shallow commercial/industrial strip development where most, or all, access is directed to the abutting major public road or street.
7. Municipalities are encouraged to adopt access management ordinances that limit or restrict driveways and intersections along arterial and regionally significant roads and corridors.

For more information on this subject, PennDOT published the Access Management Model Ordinances for Pennsylvania Municipalities Handbook in 2006. The guidebook discusses access management “best practices” from across the state and includes model ordinance language.

### G. Transit

Public transportation forms a key component of the Berks County transportation system. While most travel in the county is by automobile, there is a growing segment of the population that relies on public transportation to meet their needs. Public transportation is provided by both non-profit and profit organizations, supplying fixed route, and demand response services.

The principal provider of public transportation services in Berks County is the South Central Transit Authority (SCTA). This authority oversees two divisions: the Berks Area Regional Transportation Authority (BARTA) that serves Berks County and the Red Rose Transit Authority (RRTA) that serves Lancaster County.

Headquartered in Lancaster County, the SCTA Board is comprised of five members appointed by Lancaster County Commissioners and five members appointed by Berks County Commissioners. BARTA operates a traditional fixed route bus system operating in the urban area surrounding the City of Reading and a Special Services division that provides demand-response services to elderly and handicapped citizens throughout the county. BARTA buses continue to be identified with the BARTA colors, name and logo and all schedule and service information are provided under the BARTA name.

BARTA provides fixed route services, as shown in Figure 31, in 32 Berks County municipalities and carries approximately 3 million passengers annually. Operating seven days a week, with a fleet of 54 buses, it services 30 bus shelters and more than 1,000 bus stops on 21 routes with over 1.6 million route miles per year. BARTA's main vehicle servicing and administration facility is located on North 11th Street in the City of Reading. The main transfer point is the BARTA Transportation Center located on 8th Street. BARTA also provides service between five (5) Park and Ride lots in the county. According to BARTA, 42 percent of those trips are work related, followed by 23 percent for shopping and 14 percent for personal business.

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The majority of riders (64 percent) are between 18-44 years of age, female (58 percent), and do not have a valid driver's license (68 percent). The most heavily traveled route is Route 1-Temple, which services 5th Street between Reading and Muhlenberg Township.

While the number of fare paying passengers increased 8.4 percent since 2010, BARTA saw the largest ridership loss in passengers using the service to get to and from medical appointments.

BARTA Fixed Route Service								
Customer Type	2010	2011	2012	2013	2014	2015	# Change	% Change
Farepaying	2,259,607	2,425,463	2,496,962	2,507,398	2,562,745	2,449,131	189,524	8.4%
Senior Citizens	462,628	452,387	469,391	465,485	455,012	413,238	-49,390	-10.7%
Transfer	122,270	125,743	133,886	132,375	135,101	128,859	6,589	5.4%
Other-MATP (Medical Assistance)	64,258	64,258	52,577	40,641	44,763	43,724	-20,534	-32.0%
<b>Total Passengers</b>	<b>2,908,763</b>	<b>3,067,851</b>	<b>3,152,816</b>	<b>3,145,899</b>	<b>3,197,621</b>	<b>3,064,952</b>	<b>156,189</b>	<b>5.4%</b>

Source: BARTA

BARTA's Special Services Division is responsible for operating and administering most human service transportation in Berks County and limited service in Montgomery County. These services include the Shared Ride, ADA, and Medical Assistance Transportation Program (MATP). They are specialized, demand-responsive paratransit services and provide public transportation to persons with disabilities who are unable to use fixed route transit.

BARTA provided nearly 245,000 trips in 2015 between their fleet of 42 paratransit vehicles and a contract with Easton Coach. The majority of trips (41 percent) were for medical appointments, followed by work (18 percent) and accessing senior centers (11 percent).

BARTA Special Services								
Customer Type	2010	2011	2012	2013	2014	2015	# Change	% Change
Senior Citizens	45,905	47,204	48,087	45,872	47,764	49,171	3,266	7.1%
DPW-MATP (Medical Assistance)	69,303	77,714	81,629	85,848	85,130	93,621	24,318	35.1%
MH/MR	9,835	9,766	11,634	11,041	11,269	13,108	3,273	33.3%
ADA Services	64,417	64,114	68,850	72,506	67,194	60,946	-3,471	-5.4%
PWD	2,583	3,282	3,435	374	3,057	2,997	414	16.0%
Area Agency on Aging	48,166	42,483	37,543	38,322	30,896	21,761	-26,405	-54.8%
Other Agencies	695	614	1,596	2,048	2,601	2,985	2,290	329.5%
<b>Total Passengers</b>	<b>240,904</b>	<b>245,177</b>	<b>252,774</b>	<b>256,011</b>	<b>247,911</b>	<b>244,589</b>	<b>3,685</b>	<b>1.5%</b>

Source: BARTA

### Inter-City Bus Service

Carl R. Bieber, Inc. headquartered in Kutztown, services customers throughout the United States, but primarily in central and eastern Pennsylvania, New York City, and New Jersey. With a fleet of 66 buses, it maintains a scheduled line of daily runs to various locations, between Berks, surrounding counties, Philadelphia, and New York City.

The company operates two terminals. The Reading Intercity Bus Terminal is located on 3rd Street in the city. This facility has a ticket counter and an enclosed waiting area. The Kutztown terminal is located on Fair Street in Kutztown and has a ticket counter and enclosed waiting area.

### Commuter Services

Berks County joined Commuter Services of Pennsylvania, a program of the nonprofit Susquehanna Regional Transportation Partnership in 2009. The program covers 13 counties. It is locally sponsored by RATS, BARTA, and Greater Reading Chamber of Commerce and Industry and offers transportation demand management strategies and assistance to employers and individuals for finding options other than driving alone to work. The program goal is to reduce the number of vehicle miles traveled and to increase the efficiency of the highway system by reducing congestion and improving air quality. Participation in the program is free. Participation in the program has been successful – increasing involvement and reducing VMT since 2009. The program is funded with federal Congestion Mitigation & Air Quality (CMAQ) funds through participating MPO's.

### Taxi Service

There are four taxicab operators in Berks County as of 2015. All provide 24 hour/7 day service. The importance of the role played by taxi service, for all riders, is likely to grow in the future. Taxicabs operating within Pennsylvania are licensed by the Public Utility Commission, but generally are for-profit enterprises.

### Ride Sharing Services

Ride sharing services in Berks County began in 2015. Current service statistics are unknown.

### Passenger Rail

Berks County is not currently served by passenger rail service. Originally served by both the Reading and Pennsylvania railroads, service was gradually reduced due to the loss of ridership to passenger vehicles and changing land uses along the line along with growing operating costs. The Southeastern Pennsylvania Transportation Authority (SEPTA) provided the last passenger rail service in the county between Reading and Philadelphia. It ended in 1982. Since that time, multiple studies have been undertaken investigating the feasibility of restoring this service. To date no viable approaches have been found. We will continue to work with regional partners to evaluate options as conditions change.

## H. Freight

The effectiveness and efficiency of freight transportation in Berks County is a major factor in manufacturing costs and in retail costs. Manufacturers look for reliability, speed, and quality control in the carriers that deliver their raw materials and finished products. Since the mid-1990s, the retail and wholesale industries use 'just-in-time' logistics management, where retailers assume that the cost of transporting a product will be less than the cost of maintaining large inventories of the product on site. This has prompted the growth of the logistics and warehousing industries, which rely on a network of warehouses and trucks to distribute freight. This change in how retailers manage inventory has had profound transportation and land use impacts in surrounding counties - and is now expanding in Berks - and, as a result, impacts on Berks County roads.

By both weight and value, Berks County is primarily served by truck freight and supplemented by rail service. The county does not have a substantial air freight component as of 2017, as there are no scheduled air cargo carriers currently operating at the Reading Regional Airport.

As shown in the following table, the amount and value of freight coming to and leaving the county is expected to grow significantly in the next 25 years. Truck freight will remain the primary mode by which freight is moved. By tonnage, freight originating from Berks County increases 60% by 2040. Freight arriving to Berks County increases to 70% by 2040.





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2011				
Freight Originating From Berks County (Inf. Adj to 2015 \$)				
Mode	Tons	Value	% Tons by Mode	% Value by Mode
Truck	12,752,722	\$12,390,000,000	91.4%	99.3%
Rail	1,205,138	\$84,000,000	8.6%	0.7%
<b>Total</b>	<b>13,957,860</b>	<b>\$12,474,000,000</b>	<b>100.0%</b>	<b>100.0%</b>
Freight Arriving To Berks County (Inf. Adj. to 2015 \$)				
Mode	Tons	Value	% Tons by Mode	% Value by Mode
Truck	9,312,359	\$13,372,000,000	90.5%	96.6%
Rail	976,215	\$469,000,000	9.5%	3.4%
<b>Total</b>	<b>10,288,574</b>	<b>\$13,841,000,000</b>	<b>100.0%</b>	<b>100.0%</b>

Source: PennDOT Commodity Information Management System (2011), Berks County Planning Commission

2040				
Freight Originating From Berks County (Inf. Adj. at 4% for 25 yr.)				
Mode	Tons	Value	% Tons by Mode	% Value by Mode
Truck	20,419,324	\$50,241,460,461	91.1%	99.0%
Rail	1,986,785	\$487,848,049	8.9%	1.0%
<b>Total</b>	<b>22,406,109</b>	<b>\$50,729,308,510</b>	<b>100.0%</b>	<b>100.0%</b>
Freight Arriving To Berks County (Inf. Adj. at 4% for 25 yr.)				
Mode	Tons	Value	% Tons by Mode	% Value by Mode
Truck	16,448,798	\$68,240,000,000	93.9%	97.7%
Rail	1,070,002	\$1,589,000,000	6.1%	2.3%
<b>Total</b>	<b>17,518,800</b>	<b>\$69,829,000,000</b>	<b>100.0%</b>	<b>100.0%</b>

Source: PennDOT Commodity Information Management System (2011), Berks County Planning Commission

### I. Berks County Freight Network

Trucks move a great majority of freight (in terms of both tonnage and value) within and through Berks County, illustrating the importance of the county's highway network. From Berks County, business can reach more than 35% of the United States population and 50% of Canadian customers within a one-day drive. The county has one of the largest manufacturing concentrations in the seven-county region and serves as a major conduit between warehousing hubs elsewhere in Pennsylvania.

This warehousing and industrial development is generally located along major freight corridors in eastern Pennsylvania, namely the Interstate system. As of 2015, Berks County ranks 9th in overall square feet in large industrial buildings with over 18 million square feet of space inside the county. In addition, Berks is centrally located between industrial centers on Interstate 78. In the majority of counties, vacancy rates are low which indicates high demand for space. The median vacancy rate for all counties shown in the chart is 6.5%, the lowest since 2010. Warehouse and distribution center development along the Interstate 78 corridor is expected to continue to grow, particularly as properties become less available to the east of Berks County in the Lehigh Valley region and New Jersey.

2014 and 2015 Annual Stats: Industrial Buildings Greater than 100,000 sq.ft.				
County	Existing Inventory 2014	Existing Inventory 2015	Percent/Total Inventory 2015	2015 Vacancy Rate
Cumberland	46,048,536	47,997,136	12.3%	6.9%
York	44,514,110	45,762,005	11.7%	8.2%
Lehigh	34,268,039	35,582,119	9.1%	4.9%
Lancaster	32,482,577	34,914,577	9.0%	1.3%
Philadelphia	31,028,988	31,228,988	8.0%	10.4%
Montgomery	30,522,188	30,081,350	7.7%	6.0%
Luzerne	22,113,742	28,176,385	7.2%	5.7%
Bucks	27,534,184	27,491,195	7.1%	5.9%
<b>Berks</b>	<b>17,254,590</b>	<b>18,004,590</b>	<b>4.6%</b>	<b>3.8%</b>
Northampton	11,237,584	14,396,747	3.7%	12.7%
Dauphin	13,700,215	14,240,054	3.7%	9.3%
Lackawanna	7,810,559	12,369,047	3.2%	15.7%
Chester	12,209,553	12,209,553	3.1%	1.3%
Franklin	11,831,160	11,831,160	3.0%	4.9%
Delaware	10,411,735	10,605,300	2.7%	7.7%
Schuylkill	4,044,220	6,734,876	1.7%	8.6%
Lebanon	4,177,193	4,677,193	1.2%	13.8%
Monroe	1,589,217	3,539,901	0.9%	0.4%
<b>TOTAL</b>	<b>362,778,390</b>	<b>389,842,176</b>	<b>100.0%</b>	

Vacancy Rate: The amount of vacant space divided by the total amount of industrial space in the region. Space that is under construction is not included in vacancy calculations.

Source: CBRE Research, Q4 2014 and Q1 2016, Berks County Planning Commission

Truck freight is the region’s most utilized method of transporting goods. Of note, the sections of Interstates 176 (12 percent truck traffic) and 78 (34-43 percent truck traffic) in Berks County are on the Federal Highway Administration’s (FHWA’s) suggested Primary Freight Network (PFN). In the county, the Interstates are the primary routes transporting goods statewide. Routes 422, 222 and 61 are primary inter-county truck freight corridors. Route 422 links the Reading metropolitan area with Lebanon and Montgomery counties while Route 222 North (21 percent truck traffic) links Reading to the western end of Lehigh County. The Fogelsville area has seen explosive growth in warehousing in the last decade. Route 61 provides a north-south route into Schuylkill County. The majority of freight generating businesses are located along these routes.

The rail network in Berks County consists of Class I and short line railroads. Class I railroads are freight railroads with an operating revenue of \$475 million or more. Short line railroads are freight railroads with operating revenues of less than \$475 million. Since 1981, this network has only served freight in the county. Presently, four railroad companies conduct business on 125 linear miles of operational railroad lines inside Berks County. The majority (approximately 101 miles or 81 percent) of the rail line mileage in the county is owned and operated by Norfolk Southern Corporation (NSC). The principal activity center for rail in the county is the Spring Street yard, located in the City of Reading at the junction of the Lebanon Valley Branch Line and the Reading Line. The Reading Line functions as a bridge between the Lehigh Line in Allentown/Bethlehem and the Harrisburg Line in the Dauphin County area. The Reading Line is the most heavily used track in Pennsylvania in terms of both carloads and ton-miles of traffic moved. It is part of the corridor that carries Norfolk Southern rail traffic from the metropolitan New York City area to points west and south. At Reading, rail traffic can continue to Philadelphia, South New Jersey, and Harrisburg. This line is also part of the Strategic Rail Corridor Network (STRACNET).

Several short line railroads provide service in the county. Reading Blue Mountain and Northern Railroad (RBM&N) currently provides service on the line previously owned by Conrail along the west side of the Schuylkill River, north of Reading into northeastern Pennsylvania. The RBM&N also controls the Schuylkill Secondary Line that runs between Temple and

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Hamburg on the east side of the Schuylkill River. Service on this line is currently suspended. The railroad handled 28,940 carloads in 2015, up 19% from 2014.

East Penn Railroad owns and operates the Lancaster Line that runs from Sinking Spring to Ephrata, Lancaster County, and the Perkiomen Branch that runs from Allentown through Hereford Township to Pennsburg. East Penn also provides service on the Kutztown Transportation Authority-owned Kutztown Branch Line that runs between Topton and Kutztown.

The Eastern Berks Gateway Railroad provides freight service on the Berks County owned Colebrookdale Branch Line that runs from the Norfolk Southern Line in Pottstown to Boyertown. The Colebrookdale Railroad, headquartered in Boyertown, is a tourist carrier that also operates on this line between Boyertown and Pottstown.

The Wanamaker, Kempton and Southern Railroad is a tourist carrier which operates between Wanamaker in Lehigh County and Kempton in Berks County, over tracks formerly part of the Reading Railroad's Schuylkill and Lehigh branch. The Wanamaker, Kempton and Southern is rail isolated. It does not connect to other rail lines or haul freight.

The Allentown and Auburn Railroad is a tourist carrier that operates between Topton and Kutztown on tracks owned by the Kutztown Transportation Authority. The railroad is not isolated as it shares an interchange with the Norfolk Southern Reading line in Topton.

### Non-Motorized Transportation

Walking and biking are important parts of the county's overall transportation system as they are two of the most basic and affordable forms of transportation available. The mix of rural roads, city streets, and trails across the county provide bicyclists with varied and challenging routes. Most pedestrian trips are short; therefore, municipalities have the greatest influence on creating viable pedestrian transportation networks. Continuous sidewalks are recognized as the basic network for urban pedestrian transportation.

Berks County has a unique group of non-motorized travelers – the estimated 150 Mennonite households in the Fleetwood/Kutztown area. They do not use cars, relying instead on horse and buggy, bicycle and walking for all of their transportation. Driving in this area of Berks County is different from driving on other roads. In and around Fleetwood, you will see horse-drawn buggies or equipment on rural, sometimes narrow roads with cars and trucks as they travel to town or the fields. Fortunately, in Berks County, the number of crashes involving horse and buggies is low.

Crashes Involving Horse and Buggy in Berks County						
Type	2011	2012	2013	2014	2015	Total
Crashes	0	1	1	0	1	3
Injuries	0	1	2	0	2	5
Fatalities	0	1	0	0	0	1

Source: PennDOT Crash Statistics, 2011-2015

### Bikes

There are active groups and organizations that support and organize biking in Berks County. The Berks County Bicycle Club was founded in 1973 and as of 2015 had 190 members. This club has created an online ride map database available to all looking for biking opportunities in Berks County.

The Schuylkill River Greenways (SRG), a non-profit organization, manages and builds the Schuylkill River Trail in Berks County. SRG promotes bicycle riding for recreation and commuting including a free bike share program and other bicycling events.

Reading has attained national designation from two bicycling organizations. The League of American Bicyclists named the City of Reading a "Bicycle Friendly Community" in November 2015. Reading is one of only five cities in the state of Pennsylvania to be awarded this designation. Additionally, two local employers within the City were named "Bicycle Friendly Businesses" that same year. The county also attained "Bronze Level Riding Center" designation by the International Mountain Bicycling Association in 2015 for its 125 miles of mountain biking trails.

### Sidewalks

The Berks County GIS shows the 1,266 miles of sidewalks in Berks County are limited principally to the boroughs, the City of Reading, and some more urbanized townships. Sidewalks offer a mode of transportation to segments of the population who are less likely to own a vehicle and rely on walking or public transit as their primary mode of transportation. By encouraging the addition of safe and well-placed sidewalks, the county hopes to add more non-motorized users to this critical part of transportation infrastructure.

A majority of existing subdivisions and others that have been under development over the last 15 to 20 years in Berks County have had sidewalks incorporated with infrastructure construction. However, these sidewalks seldom connect to anything outside of the neighborhood. In addition to residential areas, a number of commercial developments in the region have sidewalks in place within the development but there is little to no connectivity to adjacent neighborhoods.

### Trails and Greenways

Berks County has 420 miles of extensive trail system ranging from paved multipurpose trails to more rugged trails suitable for hiking or mountain biking. These trails are often connected to greenways - corridors of open space that can be a small park in a borough or the city to large areas of forest in the townships. The Schuylkill River Trail follows the Schuylkill River and is the backbone of Berks County's interconnected trail system. Both trails and greenways are again discussed in Chapter 10, Community Facilities and more in depth in the Berks County Greenways, Parks and Recreation Plan.

### J. Aviation

The Berks County aviation network is a vital transportation link consisting of 12 airports and 9 heliports. They vary in size and function from small general aviation airports to larger facilities with corporate/commercial air service.

Of the three public airports, the largest is the Reading Regional Airport. This is the county's primary air connection to national markets. Grimes Airport and Morgantown Airport are two smaller, privately owned, public use airports within Berks County.

The Morgantown Airport is a privately owned, public-use airport with 10,250 annual aircraft operations in 2014. The airport has one turf runway, Runway 10/28, which is 2,500 feet long and equipped with low intensity runway lighting (LIRL). Services are provided by the airport, and include fueling and tie-down aircraft parking. The majority of the airport's activity is recreational flying.

The Grimes Airport is a privately owned, public-use airport with 1,550 annual aircraft operations in 2014. The airport has one turf runway, Runway 11/29, which is 2,720 feet long. Services are provided by the airport. The majority of the airport's activity is recreational flying.

The region also has nine private airports in addition to those listed above including Dimascio Field Airport, Cuatros Vientos Airport, The Old Commonwealth Airport, Skyline Airstrip, Don's Place Airpark, Blue Mountain Academy Private Airport, Krill Personal Use Airport, Bert's Airport, and Area 52 Airport.

### Reading Regional Airport

The Reading Regional Airport (RDG) is a Class IV facility located in Bern Township and operated by the Reading Regional Airport Authority. The airport is equipped with a control tower, a passenger terminal building, hangers, maintenance facilities, and crash-fire-rescue facilities. It has two ILS equipped asphalt runways: Runway 13/31 with a length of 6,350 feet and Runway 18/36 with a length of 5,151 feet. The airport had 81,839 aircraft operations in 2014.



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Reading Regional Airport Aircraft Inventory - 2014	
Type	#
Single Engine (SE):	79
Multi Engine (ME):	28
Jet (J):	18
<b>Total Fixed Wing Aircraft</b>	<b>125</b>
Helicopters:	5
Gliders:	1
Military:	0
Ultra-Light:	0
<b>Total Aircraft</b>	<b>131</b>

Source: Federal Aviation Administration

Regular passenger service ended in 2004. In its current role, the airport concentrates primarily on serving general aviation and corporate aircraft. In the future, the airport sees itself serving more flight training activity, along with more recreational, business, and air taxi operations and continues to build and increase its reputation as a recreational and corporate general aviation facility.

In 2013, the Reading Regional Airport Authority conducted a Master Plan Study to determine the needs of the airport for the next 5, 10, and 20 years. This Airport Master Plan Update included a number of changes based on FAA requirements and priorities as well as improvements that will allow the airport to meet forecasted demands. Future projects include upgrades to surface sensor systems and perimeter security fencing.

Despite a difficult operating environment in recent years, the airport has rebounded due to growth in corporate, general aircraft, and charter operations. In 2014, there were 1,703 enplanements at the Reading Regional Airport, an increase of 27 percent since 2010. Based aircraft and total operations are projected to remain steady. The Federal Aviation Administration expects increased interest in the airport due to businesses having concerns about safety and flight delays at other larger airports.

Reading Regional Airport Historic and Forecast Data								
Type	1990	2000	2010	2014	2010 to 2014 % Change	2020 FCST	2030 FCST	2040 FCST
Total Enplanements	65,373	40,268	1,342	1,703	26.90%	1,529	1,529	1,529
Total Operations	84,443	146,074	96,719	81,839	-15.38%	88,489	91,928	95,539
Based Aircraft	170	126	116	131	12.93%	126	145	165

Source: Federal Aviation Administration, APO Terminal Area Forecast Detail Report; January 2015

The airport is part of Foreign Trade Zone #147 and has become a tourist destination as it is home to the Mid-Atlantic Air Museum. The Museum is home to dozens of rare aircraft and hosts a World War II Weekend since 1990 that draws more than 20,000 visitors annually.

The following tables and Figure 32 show the 12 airports and 9 heliports in Berks County and where available, the number of based aircraft.

Berks County Airports			
Name	Municipality	Based Aircraft	Use
Reading Regional Airport	Bern	131	Public
Grimes Airport	Bethel	32	Public
Morgantown Airport	Caernarvon	31	Public
Dimascio Field Airport	Douglass	1	Private
Cuatro Vientos Airport	Albany	n/a	Private
The Old Commonwealth Aerodome	Upper Bern	1	Private
Skyline Airstrip	Perry	1	Private
Don's Place Airpark	Perry	5	Private
Blue Mountain Academy Private Airport	Tilden	1	Private
Krill Personal Use Airport	Bethel	1	Private
Bert's Airport	Amity	n/a	Private
Area 52 Airport	Hereford	2	Private

Source: Federal Aviation Administration

Helicopters serve the Vertical Flight (VF) needs in Berks County. Helicopters operate within a radius of approximately 100 to 150 miles. Since helicopters operate at lower airspeeds and different flight profiles than fixed-wing aircraft, they are assigned to routes away from fixed-wing arrival and departure flows, preventing slow-flying helicopters from delaying faster fixed-wing aircraft. While the county's heliports are largely privately owned, there are four hospital heliports. State and Federal agencies require hospitals to have helipads in order to obtain certification as trauma facilities. These helipads, located in proximity to the respective hospital's emergency room, are a mix of both rooftop and ground level operations.

Berks County Heliports			
Name	Municipality	Based Aircraft	Use
King Air Heliport	Albany	n/a	Private
Lehigh Valley Health Network Kutztown Heliport	Maxatawny	1	Private
Reading Hospital Heliport	West Reading	n/a	Private
Car Tech Heliport	Muhlenberg	n/a	Private
Green Hills Corp Heliport	Cumru	1	Private
Metropolitan Edison Heliport	Muhlenberg	n/a	Private
Reading Hospital & Medical Center Heliport	West Reading	n/a	Private
St Joseph Regional Health Network Heliport	Bern	n/a	Private
GED Heliport	Exeter	1	Private

Source: Federal Aviation Administration

### K. Transportation Policies

One of the biggest challenges for Berks County will be to maintain the flexibility required to meet changing conditions. One area of focus for the planning process has been to identify emerging trends that affect the transportation system, which help to define future needs. Long-range plans are undeniably skewed to meeting the needs of today, given that future projections are notoriously difficult to make and accept. Future needs known or unknown, take a backseat to the most pressing of today's problems. Therefore, we must manage effectively to meet challenges as they arise, rather than becoming locked in to specific policies that attempt to allocate resources precisely over a long period.

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Please note that the 2016 Long Range Transportation Plan (LRTP), of which this section is derived from, is a plan constructed around performance measures. Using performance measures for the first time in an LRTP, RATS used data to establish the basis for measuring progress in plan implementation, facilitate communications on priorities and accomplishments, and provide a means for greater accountability. RATS performs ongoing monitoring and reporting of accomplishments, particularly progress towards the goals listed below - to support implementation of RATS' vision in projects and plans. Certain performance measures and related targets are required by federal transportation planning legislation. **These are identified below in BOLD.** At this time only one has formally been adopted by the State and RATS. As additional measures and targets are adopted, they will be incorporated into the LRTP and this plan.

### Transportation Policies

**Transportation Goal:** The Reading Area Transportation Study will provide and maintain a balanced, multimodal transportation system that will safely and efficiently move people and goods.

#### a. Maintenance

**Goal:** Maintain and improve the transportation system and services we enjoy today where financially feasible.

#### Policies:

- (1) Improve and maintain pavement quality from the 2014 baseline report with positive progress towards the regional long-range goals for all networks specified by PennDOT.
- (2) Reduce the number of structurally deficient bridges from the 2014 baseline report with positive progress towards the regional long-range goals for all networks specified by PennDOT.
- (3) Improve LOS on congested corridors and intersections from the 2016 Berks County CMP report with positive progress towards removing congested corridors with intersection and corridor specific programming and projects.

*Data Sources: PennDOT Annual Performance Measures Reports, RATS CMP reports*

#### b. Safety:

**Goal:** Keep travelers safe and secure, no matter the mode of transportation.

#### Policies:

- (1) **Continue the positive reduction in the annual 5-Year Rolling Average of: 1) Number of Fatalities; 2) Rate of Fatalities; 3) Number of Serious Injuries; 4) Rate of Serious Injuries; and 5) Number of Non-Motorized Fatalities and Serious Injuries with a goal of a 2 percent decrease in each category.**
- (2) Work towards a 50 percent reduction in both fatal and major injury crashes in Berks County by 2034 concurrent with the goals of the 2014 Pennsylvania Strategic Highway Safety Plan to reduce such crashes 50 percent over a twenty-year period.
- (3) Address the safety needs in the top five (5) high crash corridors and have them removed from the list by 2021.
- (4) Improve the safety of work zones by collaborating with PennDOT and local and state police to reduce work zone crashes by 5% between 2014 and 2021.
- (5) Implement at least two projects to add to or improve the ITS infrastructure by 2021.
- (6) Better publicize evacuation and emergency routes in the event of a man-made or natural disaster by 2021.
- (7) Collaborate with PennDOT and the Berks County Department of Emergency Services to plan corridor redundancy around major roads (e.g. Interstate 78, Route 222) in times of inclement weather or emergencies.
- (8) Improve safety where trails and multi-use paths cross roads by installing appropriate safety measures.

*Data Sources: PennDOT Highway/Safety Guidance report, PA Crash Stats report*

### c. Economic Development:

**Goal:** Invest in projects that strengthen the ability of Berks County commerce to access national and international trade markets, and support regional economic development and tourism opportunities.

**Policies:**

- (1) Reduce the number of high crash corridors that are located on the freight network identified by PennDOT.
- (2) Improve LOS on congested corridors and intersections from 2016 Berks County CMP report that are on the freight network.

*Data Sources: PennDOT Commodity Information Management System (CIMS), PennDOT Highway/Safety Guidance report, RATS CMP report*

### d. Improved Connections and Choices:

**Goal:** Give travelers a variety of well-designed transportation choices that are in good condition.

**Policies:**

- (1) Conduct a public opinion survey to gauge overall public satisfaction with the existing transportation system with a follow-up comparison survey.
- (2) Expand regional trails, the county trail network and sidewalk network.
- (3) Increase the miles of dedicated bicycle facilities and signed bike routes in the county.
- (4) Increase BARTA's fixed route fare-paying ridership and the special services ridership.
- (5) Continue to work with local and regional partners to evaluate passenger rail options as conditions change.

*Data Sources: RATS and SCTA Public Opinion Surveys, Berks County GIS, BARTA*

### e. Environmental Sustainability:

**Goal:** Enhance the performance of the county transportation system in environmentally sustainable ways that increase resiliency to both climate change and vulnerability to natural disaster.

**Policies:**

- (1) Maintain the county's attainment status for both ozone and fine particulates (PM 2.5).
- (2) Work with all local, regional, state, and federal organizations and agencies to avoid, minimize, or mitigate impacts from TIP and LRTP projects using the LPN system.
- (3) Assist in identification of potential environmental mitigation issues by acquiring, creating, and updating, as needed, geographic information system data layers for use by the implementing agencies and disseminating them in a readily accessible format to municipalities.
- (4) Work with PennDOT to implement best management practices and mitigation strategies on transportation projects.
- (5) Continue coordination with appropriate agencies to protect the critical transportation infrastructure against disaster by identifying vulnerable assets and prevention strategies through an updated, current hazard mitigation plan.

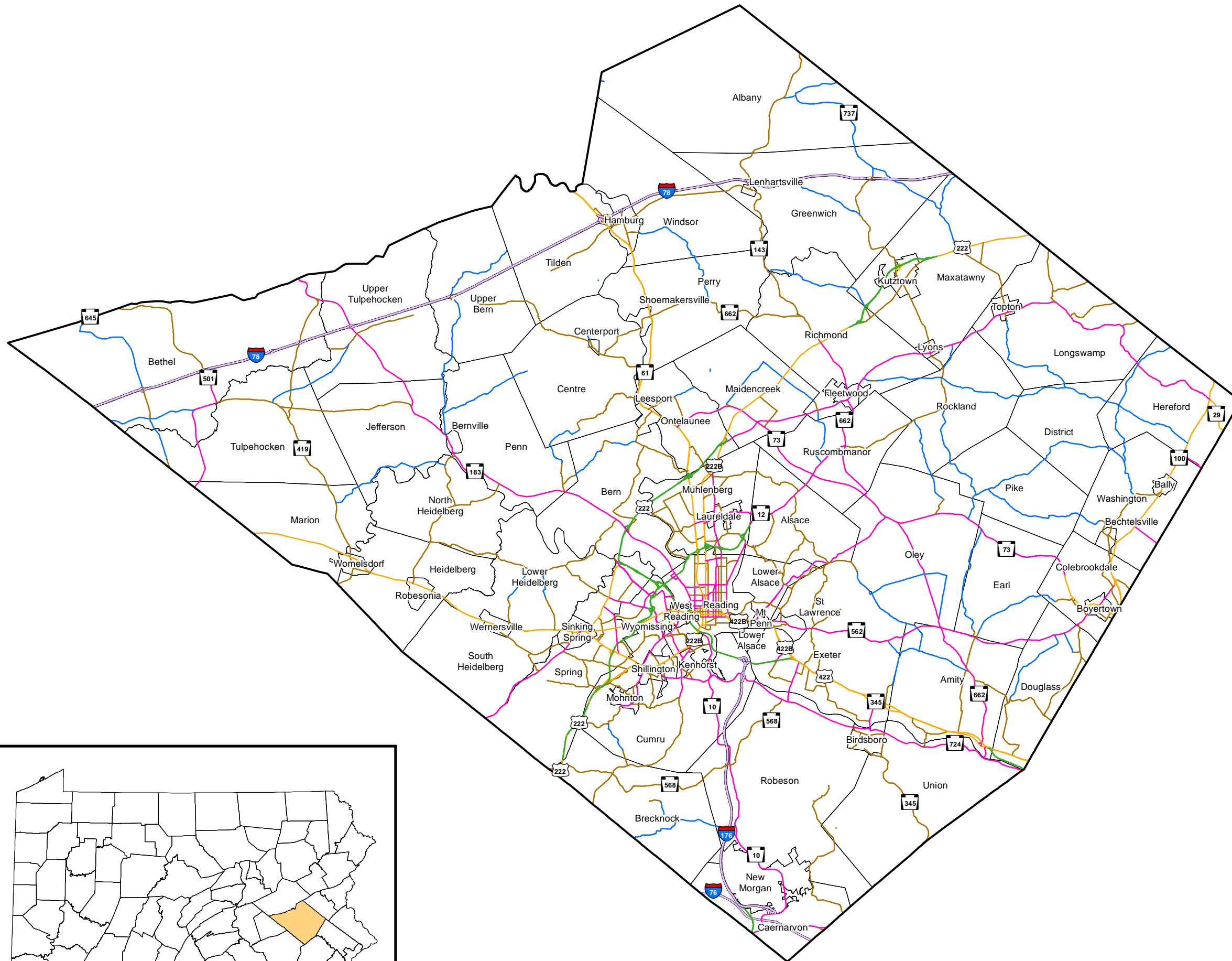
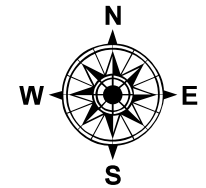
*Data Source: US EPA, PA DCNR, BCPC GIS*





Berks County Comprehensive Plan Update  
Adopted: January 23, 2020

# Major Roads by Functional Class Berks County, Pennsylvania



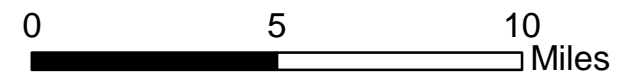
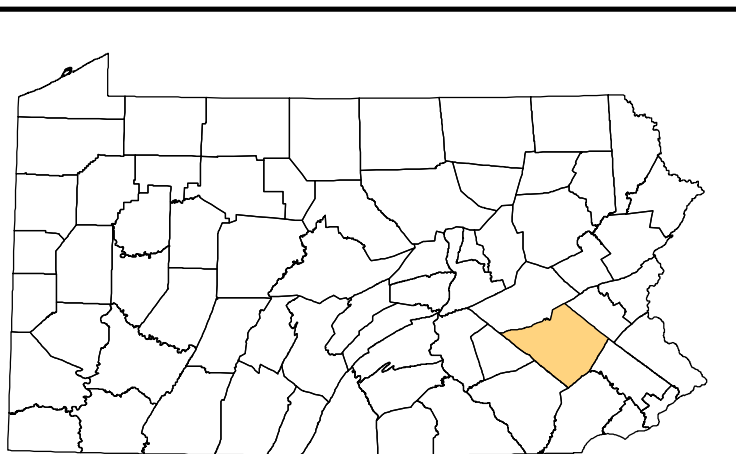
### Legend

- Interstate
- Principal Arterial- Freeways and Expressways
- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Berks County Boundary
- Municipal Boundaries

Source: Berks County Planning Commission, Berks County GIS, Berks County Mapping, Berks County Department of Emergency Services, PennDOT

Published by the Berks County Planning Commission

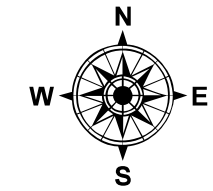
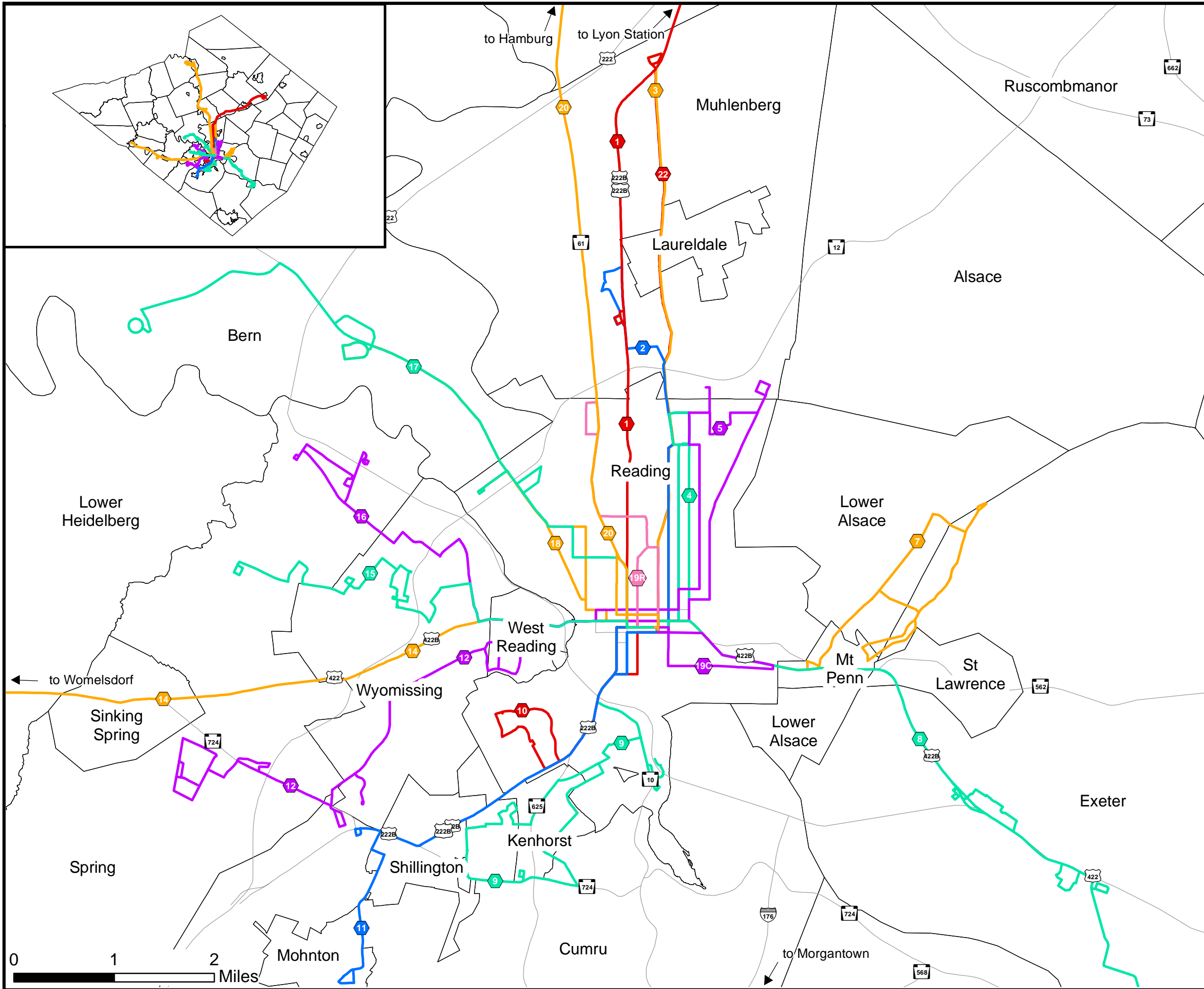
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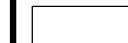



Berks County Comprehensive Plan Update  
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# BARTA Route Service Berks County, Pennsylvania



### Legend

-  BARTA Route Number
-  Municipal Boundaries
-  Major Roads

Source: Berks County Planning Commission, Berks County GIS, Berks County Mapping, Berks County Department of Emergency Services, BARTA

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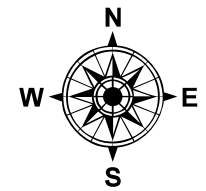






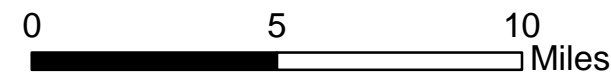
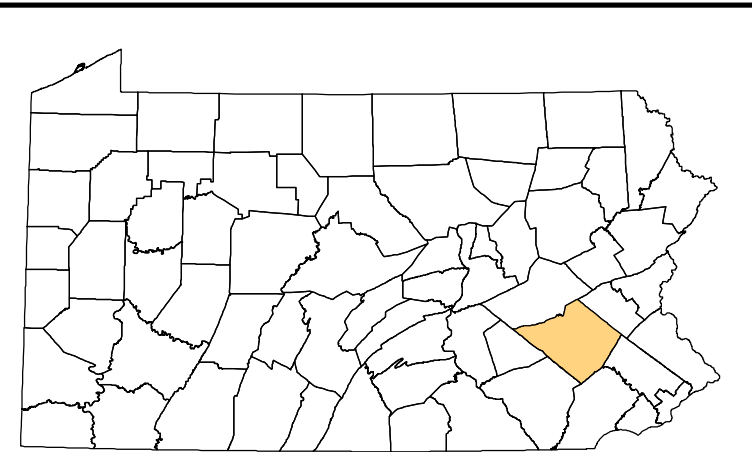
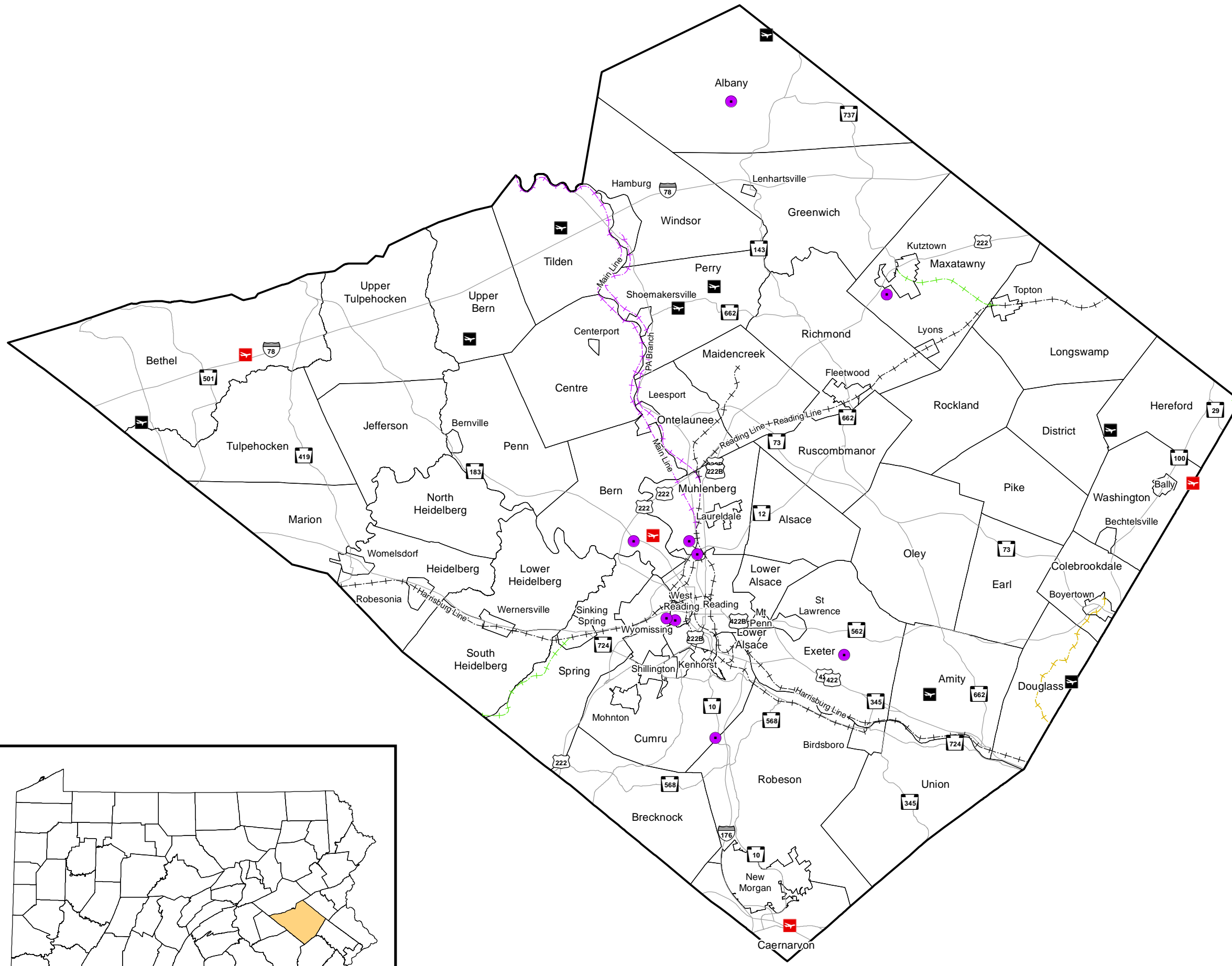
Berks County Comprehensive Plan Update  
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# Railroads and FAA Licensed Aviation Facilities Berks County, Pennsylvania



## Legend

- Public Airports
- Private Airports
- Private Heliports
- Short Line Railroad (Eastern Berks Gateway Railroad)
- Class I Railroad (Norfolk Southern)
- Regional Railroad (Reading Blue Mountain and Northern)
- Short Line Railroad (East Penn Railroad)
- Berks County Boundary
- Municipal Boundaries
- Major Roads



Source: Berks County Planning Commission, Berks County GIS,  
Berks County Mapping, Berks County Department of Emergency Services  
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### COMMUNITY FACILITIES

#### A. Introduction

The most basic and essential services needed by Berks County residents are provided through community facilities. Community facilities include the buildings, facilities, lands, and services to support the public health, safety, and welfare. Efficient provision of high quality community facilities and services impacts property values, taxes, and economic opportunities, and contributes to the quality of life in Berks County. While many community facilities are provided or administered by local government, others are offered by utilities, hospitals, schools, and nonprofits.

These facilities and services require substantial public and private investment to build and maintain them. As a result, their availability is often determined by the level of demand and need for those facilities and services, and the ability to pay for them.

In addition to infrastructure needs, there are also substantial discussions of service level needs that may arise in your municipality, mostly with protective and emergency services. In 2017, for example, there is considerable debate in Harrisburg in regards to rural municipalities paying for state police service, how to fund escalating costs regarding 911 services and the challenging manpower and funding needs for our fire departments.

As our facilities and infrastructure continue to age, we must focus resources to make proactive investments to fully maintain and enhance the infrastructure to avoid costly full replacement and/or closures/delay of services from neglect.

#### B. Government Facilities

Governmental facilities house activities, persons, and records used in the operation of a government - whether local, county, state, or federal. The need for additional governmental facilities is directly related to the growth of a community, since the addition of more people, more houses, and additional businesses and industries create the need for new and expanded governmental services. In some cases, increased services can be accommodated using existing space. However, in some cases, a substantial increase in the level and scope of services requires additional operational space.

Please note that cultural and historic facilities owned by federal, state and local government, are discussed in Chapter 5.

##### Federal

The two most visible types of federal facilities in Berks County are the 46 United States Post Offices operated by the U.S. Postal Service and the 5,000-acre Blue Marsh Lake facility operated by the U.S. Army Corps of Engineers in Bern Township. Other offices and sites that owned or operated by the federal government in Berks County include, but are not limited to the Immigration and Customs Enforcement, Internal Revenue Service, Department of Labor, Social Security Administration, and the Federal Aviation Administration.

##### State

The Commonwealth of Pennsylvania has numerous buildings, parks, and storage facilities in the county. The largest buildings include the Wernersville State Hospital in South Heidelberg Township; Hamburg Center in Windsor Township (under closure order as of June 2017); the State office building located in downtown Reading and the PennDOT maintenance facility in Muhlenberg Township.

##### County

Berks County has a number of facilities around the county, with the two largest located in downtown Reading. The Berks County Courthouse has served Berks County since 1932. The tallest building in Berks County and the second tallest municipal building in the state of Pennsylvania, the 22-story facility serves as the primary court for the 23<sup>rd</sup> Judicial District of Pennsylvania.



## Chapter 10 - Community Facilities

Type	2011	2012	2013	2014	2015
Criminal	5,662	6,848	6,039	6,299	6,782
Civil	5,725	5,064	4,389	3,866	3,508
<b>Total</b>	<b>11,387</b>	<b>11,912</b>	<b>10,428</b>	<b>10,165</b>	<b>10,290</b>

Source: Unified Judicial System of Pennsylvania, 2011-2015 County Caseload Statistics

Type	#
Judges	13
Criminal Cases Processed	6,782
Most Cases Processed by:	Guilty Plea, 62%
Civil Cases Processed	3,508
Most Cases Processed by:	Default Judgement, 41%
Mailed Jury Summons	34,810
Impaneled/Sworn In:	1,336

Source: Unified Judicial System of Pennsylvania, 2015 County Caseload Statistics

The 16-story, 372,250 square foot Berks County Services Center, located adjacent to the Courthouse has served county residents since 1992. Numerous county agencies and departments are located in this building.

The Berks County Jail is located in Bern Township and has a population of 1,037 inmates as of September 2016. The inmate population has decreased 13.5% between 2013 and 2016. The Community Reentry Center, located near the Jail, opened in 2010.

Year	Inmates
2013	1,199
2014	1,187
2015	1,171
2016	1,037

Source: Pennsylvania Department of Corrections for 2013-2015, November 2016 Prison Board meeting minutes

The county's nursing home, fire training center, parks and recycling center are discussed elsewhere in this chapter.

### Municipal

Municipal buildings serve as the administrative and legislative centers of the county's city, boroughs and townships. They may include ancillary uses such as police stations, libraries, firehouses, public works facilities and ambulance stations.

### C. Libraries

Nineteen (19) public libraries serve Berks County residents. The Berks County Public Library System (BCPL), established in 1986, is a department of county government that oversees the network of 19 public libraries. The BCPL and each library have appointed boards. An important responsibility of the BCPL Board is to approve the formula for distributing county and state funds to libraries within the system.

The libraries have nearly 900,000 cataloged items. The Reading Public Library is the oldest and largest library in the county, founded originally in 1762 and as of 2014, has nearly 317,000 cataloged items. The Exeter Community and Sinking Spring libraries are the most used libraries in the county by Circulation/Capita and Turnover metrics shown below.

Berks County Public Libraries - 2014				
System	Population Served	Cataloged Items	Circ./Capita	Turnover
Exeter Community	27,359	51,602	9.73	5.16
Bethel/Tulpehocken	7,386	23,733	15.17	4.72
Spring Township	27,119	34,890	5.65	4.39
Kutztown Community	17,121	28,595	6.34	3.8
Boyertown Community	15,634	39,944	9.65	3.78
Hamburg Public	15,891	17,938	4.17	3.69
Mifflin Community	26,340	32,456	4.51	3.66
Sinking Spring Public	4,008	20,984	17.04	3.25
Wernersville Public	15,278	20,320	3.93	2.95
Boone Area	21,249	27,122	3.74	2.93
Muhlenberg Community	27,290	33,588	3.29	2.67
Wyomissing Public	10,461	34,083	7.94	2.44
Fleetwood Area	16,608	25,291	3.59	2.36
Schuylkill Valley Community	14,784	16,734	2.63	2.32
Brandywine Community	12,863	33,317	5.86	2.26
Robesonia Community	4,999	21,808	9.77	2.24
Womelsdorf Community	2,810	19,678	15.53	2.22
Bernville Area Community	4,881	20,912	8.98	2.1
Village Library of Morgantown	11,293	32,928	6.03	2.07
Reading Public	88,082	316,776	5.14	1.43
Berks County Public Libraries	39,986	28,515	0.24	0.33
<b>Total</b>	<b>411,442</b>	<b>881,214</b>	<b>5.34</b>	<b>2.49</b>

Circ. /Capita: indicates the average number of loans made to each resident annually.  
 Turnover: Indicates how often each item in the collection was lent, thus this measure is relevant to use of the collection.  
 Source: Office of Commonwealth Libraries, Public Library Statistics, Berks County 2014

**Other Libraries**

In addition to the public libraries, private or special interest libraries also serve the population within the county. Academic libraries provided by the public school districts and institutions of higher education serve their respective student populations. The Law Library, located in the Berks County Courthouse, is a department of the 23rd District Court of Common Pleas with over 30,000 cataloged items and serves the judges of the Court, the members of the bar, county departmental staff, and the public. The Berks County Historical Society’s Henry Janssen library contains a wealth of historical materials and data. Wernersville State Hospital and the Hamburg Center have libraries that serve their respective institutions.

**D. Education**

There is a wide range of educational opportunities available for people of all ages in Berks County. The county must continue to encourage education service providers to establish new opportunities to provide people with the skills they need for changing and emerging employment and career opportunities.

**Public Schools**

Berks County has 19 public school districts as shown in Figure 33. As of 2016, they educate over 70,000 students with nearly 4,600 classroom teachers. The Reading School District with 17,388 students is the largest district in the county. The Antietam School District is the smallest district in the county with 1,043 students. Countywide, there has been a 4.7% decrease in student enrollment since 2009, with 15 of the 19 districts seeing declines.



## Chapter 10 - Community Facilities

The Boyertown, Twin Valley and Upper Perkiomen school districts\* include municipalities outside of Berks County. Hereford Township, Berks County is part of the Upper Perkiomen School District in Montgomery County.

Berks County School District Enrollment				
School District	2008-2009	2015-2016	Change	% Change
Antietam School District	1,084	1,043	-41	-3.8%
Boyertown Area School District*	7,134	6,954	-180	-2.5%
Brandywine Heights Area School District	1,855	1,462	-393	-21.2%
Conrad Weiser Area School District	2,987	2,668	-319	-10.7%
Daniel Boone Area School District	3,977	3,438	-539	-13.5%
Exeter Township School District	4,438	4,004	-434	-9.8%
Fleetwood Area School District	2,709	2,568	-141	-5.2%
Governor Mifflin School District	4,269	4,083	-186	-4.4%
Hamburg Area School District	2,556	2,172	-384	-15.0%
Kutztown Area School District	1,658	1,337	-321	-19.3%
Muhlenberg School District	3,500	3,685	185	5.3%
Oley Valley School District	2,010	1,662	-348	-17.3%
Reading School District	17,917	17,388	-529	-3.0%
Schuylkill Valley School District	1,965	2,022	57	2.9%
Tulpehocken Area School District	1,639	1,413	-226	-13.8%
Twin Valley School District*	3,525	3,364	-161	-4.6%
Upper Perkiomen School District*	3,131	3,295	164	5.2%
Wilson School District	5,787	6,031	244	4.2%
Wyomissing Area School District	1,893	1,949	56	3.0%
<b>TOTAL</b>	<b>74,035</b>	<b>70,538</b>	<b>-3,497</b>	<b>-4.7%</b>

Source: Pennsylvania Department of Education Public School Enrollment Reports

Berks County School District Staff in the 2015-2016 School Year	
Administrators	267
Teachers	4,726
Coordinators	587
Other Professional Personnel	113
<b>Total</b>	<b>5,693</b>

Source: Pennsylvania Department of Education Professional Staff Summary Reports

The Berks County Intermediate Unit offers a wealth of services, including alternative and special education, early intervention, childcare, services to at-risk students and students with disabilities, business and information management services, instructional media services, public relations services, pupil transportation, and many other varied services to the private and public schools in the county. The BCIU operates 37 Head Start classrooms, 18 Early Intervention classrooms and 13 Pre-K Counts classrooms at 16 sites across the county.

Three (3) vocational-technical schools serve the county. These schools work together with the Berks County Workforce Development Board to keep the curriculum contemporary to changing industry and technological trends. The curriculum covers a wide range of vocations including automotive subjects, cosmetology, graphic arts, millwork/carpentry/cabinet making, masonry, and welding. Berks Vo-Tech East and Berks Vo-Tech West serve 16 school districts. The Reading and Muhlenberg school districts cooperatively run the Reading-Muhlenberg Vo-Tech School in Muhlenberg Township. Curriculum at the Reading-Muhlenberg Vo-Tech is similar to that at the other two schools.

**Private Schools**

As of 2016, there are 80 private schools educating 6,039 students in the county. Berks Catholic High School (762 students), Holy Guardian Regional School (412 students) and the Saint Ignatius Loyola School (325 students) are the largest, by enrolment, of the private schools.

**Child Care and Senior Care Facilities**

Caring for children and elderly parents can present challenges for working age Berks County residents who can be in the position of caring for children and their elderly parents simultaneously. There are 118 childcare, 9 adult day care, and 10 senior citizen centers in Berks County. Further, Berks County has an overall high proportion of single parent households and an even higher proportion of single parent households in poverty, the provision of child care is an increasingly important community and economic resource as it enables parents to work and/or update their skills by attending trade school or college.



Senior citizen centers and private “adult day care” facilities provide older adults an opportunity to socialize outside of the home and give caregivers an opportunity to work. These facilities generally have services are comprehensive social and health care programs specially tailored to adults who need supervision and assistance during the day.

**Higher Education**

The county has a diverse array of higher education opportunities ranging from business and trade schools to four year colleges offering baccalaureate, graduate and doctoral degrees. Kutztown University is the largest institution by enrollment with nearly 9,000 students.

Berks County - Institutions of Higher Education - 2015					
Institution	Type	Enrollment	Graduation Rate	“Typical” Tuition	Receiving Aid
Albright College	4+	2,267	53%	\$39,850	87%
Alvernia University	4+	2,856	53%	\$31,100	85%
Berks Technical Institute	2-4 years	938	51%	\$10,120	87%
East-West School of Massage Therapy	Less Than 2	*	*	\$7,825	*
Empire Beauty School	Less than 2	100	67%	\$15,429	67%
European Medical School of Massage	Less than 2	*	*	\$6,875	*
Kutztown University	4+	8,995	55%	\$9,411	50%
New Horizons Computer Learning Center of Reading	Less than 2	*	*	\$4,995	*
Penn State - Berks	4+	2,906	57%	\$14,160	82%
Reading Area Community College	2-4 years	4,090	10%	\$8,850	67%
Reading Hospital School of Health Sciences	2-4 years	362	48%	\$16,875	58%

Source: National Center for Education Statistics, IPEDS Data Center, Institutional Profiles; Pennsylvania Department of Education, Private Licensed Schools Database  
 \* means data is unavailable.

**E. Healthcare**

Due to the aging of the county’s population, advances in medical technologies and the extension of life expectancies, all types of health care facilities ranging from urgent care to hospitals are in demand. The county’s aging population will play a major role in shaping health care employment and the location and number of facilities in coming decades. Health care use varies by age and gender, and as the county’s demographics continue to shift, the health care needs and demands will change accordingly.

Berks County has two (2) primary acute care hospitals shown below. Reading Hospital’s primary facility is located in West Reading and Wyomissing boroughs. Reading Hospital is now part of the Tower Health System, which owns and operates

## Chapter 10 - Community Facilities

a number of facilities in South East Pennsylvania and has various campuses throughout Berks County. The Penn State-Health - St. Joseph's facility is located in Bern Township. Each hospital has a system of physicians, outpatient centers, and diagnostic facilities in the county. St. Joseph's is currently working with Good Shepard Rehabilitation to add a rehabilitation center to their facility. Nearly 62% of the admissions to the hospitals in 2015 were for treatment and recovery from a broad range of illnesses, injuries, and surgeries. Penn State Health - St. Joseph also operates other facilities around the county including the St. Joseph Downtown Medical Center in the City of Reading. Given Reading's young and ethnically diverse population the major healthcare focus of the Downtown Campus is on ambulatory and primary type, (family practice, immunizations, prevention and wellness, diabetic care, etc.) In addition to the hospitals shown below, the Lehigh Valley Region based Lehigh Valley Hospital Network and St. Luke's University Health Network have several facilities each located in the county.

Berks County General Acute Care Hospitals - 2015								
Facility	Total Staff	Physicians	Beds S/S	Admissions	Discharges	Days of Care	Avg. Length of Stay	Occupancy Rates
Reading Hospital	6,206	247	630	29,678	29,718	148,415	5.14	64.5
Penn State Health - St. Joseph	1,638	68	180	7,645	7,715	33,553	4.33	51.5
<b>TOTAL</b>	<b>7,844</b>	<b>315</b>	<b>810</b>	<b>37,323</b>	<b>37,433</b>	<b>181,968</b>	<b>4.97</b>	<b>61.5</b>

Note: Beds S/S means beds that are set up and staffed.

Source: Pennsylvania Department of Health, Division of Health Informatics

Berks County General Acute Care Hospital Admissions and Days of Care - 2015		
Type	Admissions	Days of Care
Medical Surgical	23,073	105,424
Medical Rehab.	1,529	17,479
Obstetrics	4,554	11,848
Psychiatric (17 and Older)	1,314	11,776
Special Care 1	1,888	11,171
Intensive Care	2,542	9,095
Neonatal Level 2	382	6,780
Mixed ICU/CCU	645	3,746
Pediatric	1,373	3,255
Neonatal Level 3	23	1,394
<b>Total</b>	<b>37,323</b>	<b>181,968</b>

Source: Pennsylvania Department of Health, Division of Health Informatics

Other major hospital facilities in the county include the Commonwealth's 266-bed Wernersville State Hospital and 121-bed Hamburg Center that provide housing and treatment services to mentally ill and mentally disabled individuals. The Hamburg Center is slated for permanent closure in 2018.

There are numerous urgent care facilities located around the county. Also, the Berks Community Health Center, a federally qualified health center, operates two facilities within Reading and is in the process of opening a 3<sup>rd</sup> facility on Rockland Street in North East Reading. The health center has grown from 5,969 patients in 2013 to 10,991 patients in 2017 and cares for all patients regardless of their ability to pay. Over 80 percent of their patients live in households at or below the poverty level. They are headquartered on Penn Street in Reading.

### Ambulatory Surgical Centers

Ambulatory surgical centers (ASCs) are major facilities that provide outpatient surgical services. They may be either hospital-operated or independently owned. ASCs may perform surgeries in several specialties or dedicate their services to one specialty, such as eye care or sports medicine. Of the nearly 54,000 surgeries and procedures conducted in 2016, nearly 33% of them were related to digestive issues at the Berks Center for Digestive Health.

Berks County - Ambulatory Surgery Centers - 2016		
Facility	Visits	Operating Rooms
Berks Ambulatory Surgery Center	618	1
Berks Center For Digestive Health	17,356	0
Berks Urologic Surgery Center	4,904	1
Berkshire Eye Surgery Center	3,209	2
Pennsylvania Eye and Ear Surgery Center	5,466	3
Premier Podiatric Surgery Center	119	1
Progressive Laser Surgical Institute	1,238	1
Prosperi-Schlechter Center for Plastic Surgery	203	1
Reading Hospital Surgicenter at Spring Ridge	8,289	8
Reading Surgery Center of the Surgical Institute of Reading	7,376	3
State Hill Surgicenter	1,298	1
Wyomissing Surgical Services	3,334	2
<b>Total</b>	<b>53,410</b>	<b>24</b>

Source: Pennsylvania Department of Health, Division of Health Informatics

### Drug and Alcohol Treatment Facilities

There are 18 licensed drug and alcohol treatment facilities in the county, 12 of which are outpatient only facilities. These facilities treated nearly 1,490 individuals in 2015. Over 60% sought treatment for alcohol abuse, 37% for drug abuse, and 3% for treatment of other conditions.

### Long Term Care Facilities

As the “baby boom” generation ages, the amount of elderly population in the region will increase which will have a significant impact on community facilities, especially healthcare facilities, as discussed in Chapter 6.

As of 2016, the county has 15 registered long-term care facilities with nearly 2,400 beds that provide short- and long-term skilled nursing and rehabilitative care. The overall occupancy rate of the facilities is high – at nearly 96% and features a variety of public and privately owned facilities. The largest and most utilized facility is Berks Heim, owned by Berks County and located on the county’s North Campus in Bern Township. Constructed in 2005, the 420-bed facility has the second highest occupancy rate of all long-term care facilities in the county at 98.2%.



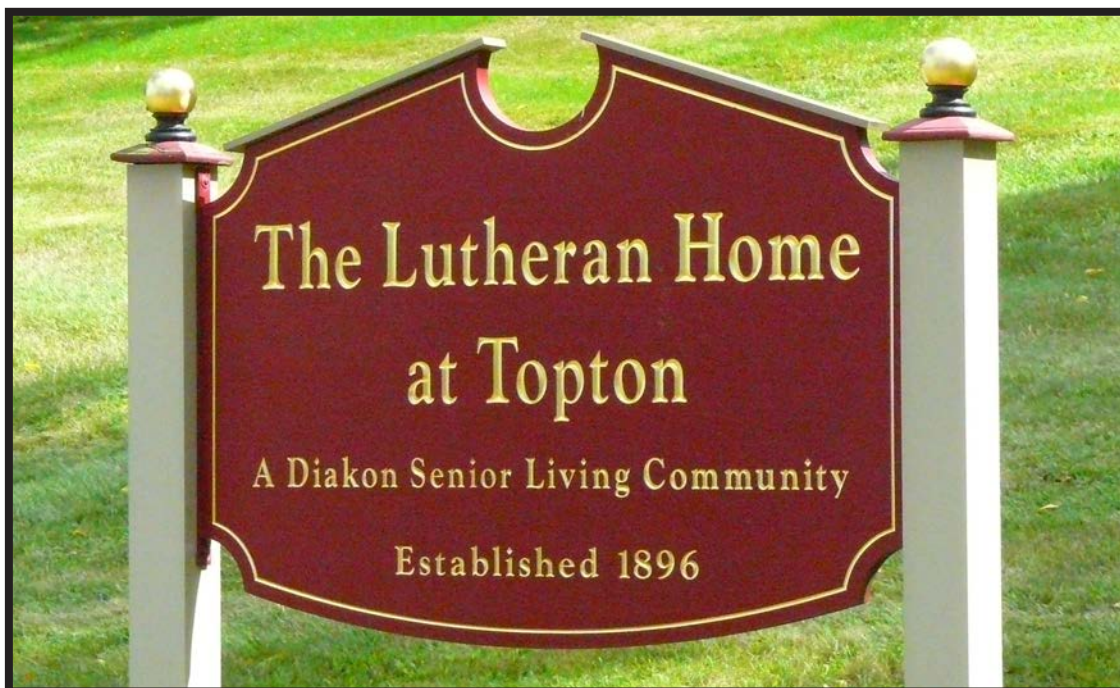
## Chapter 10 - Community Facilities

Berks County Long Term Care Facilities - 2016			
Facility	Licensed Beds	Patient Days	Occupancy Rate
Berks Heim	420	150,999	98.2%
Berkshire Center	130	46,214	97.1%
Golden Living Center - Reading	124	37,860	100.0%
Highlands at Wyomissing	80	27,441	93.7%
Kutztown Manor	140	49,784	97.2%
Laurel Center	130	45,828	96.3%
Lutheran Home at Topton	194	69,277	97.6%
Manorcare Laureldale	198	67,340	92.9%
Manorcare Sinking Spring	214	73,760	94.4%
Manorcare West Reading	176	61,082	94.8%
Mifflin Center	136	46,247	92.9%
Phoebe Berks Health Care Center	120	34,059	97.6%
Spruce Manor	184	63,928	94.9%
Transitional Sub-Acute Unit	50	17,500	95.6%
Wyomissing Health and Rehab	103	31,743	84.2%
<b>TOTAL</b>	<b>2,399</b>	<b>823,062</b>	<b>95.6%</b>

Source: Pennsylvania Department of Health, Division of Health Informatics

### Personal Care Homes and Assisted Living Communities

There are 30 facilities in Berks County that provide a range of elder and nursing care ranging from personal care to assisted living. A Personal Care Home is a facility for people who do not require the services in or of a licensed long-term care facility, but who do require assistance or supervision in activities of daily living or instrumental activities of daily living. These types of facilities, unlike the long-term facilities listed above; do not provide acute medical care.



<b>Personal Care Homes and Assisted Living Facilities - 2016</b>	
<b>Facility</b>	<b>Capacity</b>
Amity Place	100
Berks Leisure Living	49
Berkshire Commons	75
Buehrle Center at Lutheran Home at Topton	92
Chestnut Knoll	119
Columbia Cottage	50
Country Meadows of Wyomissing	246
Colonial Manor Adult Home	20
Elmcroft Senior Living of Reading	70
Evans Retirement Center	28
Evergreen Eldercare at The Villa St. Elizabeth	92
Grand View Manor	54
Green Hills Manor	80
Harmony Crest Personal Care	12
Harmony Hill Personal Care Home	17
The Hawthorne	48
Highlands at Wyomissing	75
Keystone Villa at Douglassville	168
Keystone Villa at Fleetwood	65
Laurel Center	38
Liberty Square	19
Maidencreek Place	75
Manor at Market Square	65
Mifflin Court	67
Miller Personal Care Home	18
Morris Pace Personal Care Home	63
Phoebe Berks Village Commons	91
Rittenhouse Village at Muhlenberg	104
Sacred Heart Villa	100
Stabon Manor	160
<b>Total</b>	<b>2,260</b>

Source: Berks County Area on Aging, Pennsylvania Department of Human Services

## F. Protective and Emergency Services

The personnel, facilities, equipment, and services established to protect the safety and property of the public are among the most essential community resources. The Berks County Department of Emergency Services oversees emergency management coordination and response. The county's Communications Center employs a form of computer-assisted-dispatch to send the appropriate response units. Approximately 40 municipal/regional Police Departments, 12 federal, state, and county law departments, and 65 fire companies are dispatched from the Berks County Communications Center in Bern Township. The City of Reading maintains its own 911 service.

Emergency response to natural/man-made disasters and declared emergencies are directed from the department and coordinated with municipal emergency management coordinators, police, fire, and ambulance services. In addition, the

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department oversees disaster/hazard mitigation and preparedness, civil defense and emergency response activities with both PEMA (Pennsylvania Emergency Management Agency) and FEMA (Federal Emergency Management Agency).

### Police Service

Part 1 crimes include murder, manslaughter, rape, robbery, assault, burglary, larceny, motor vehicle theft and arson decreased slightly between 2011 and 2015. Of the two categories, property crimes decreased 24%.

Berks County Part 1 Offenses - 2011-2015				
Year	Total	Rate per 100,000	Violent Crimes	Property Crimes
2011	10,458	2,416	1,270	9,188
2012	10,979	2,531	1,381	9,598
2013	8,982	2,171	1,221	7,761
2014	8,739	2,112	1,356	7,383
2015	8,300	2,005	1,282	7,018

Source: Pennsylvania State Police, Crime in Pennsylvania: Annual Uniform Crime Report (UCR), 2011-2015

Note: Part 1 crimes include murder, manslaughter, rape, robbery, assault, burglary, larceny, motor vehicle theft and arson.

Part 2 offenses (e.g. forgery, stolen property, vandalism, DUI and disorderly conduct) reported in the county have remained consistent from 2011-2015 with a marginal 1.6% decrease in offenses.

Berks County Part 2 Offenses - 2011-2015		
Year	Total	Rate per 100,000
2011	19,658	4,541
2012	19,515	4,499
2013	19,227	4,646
2014	18,812	4,545
2015	19,347	4,673

Source: Pennsylvania State Police, Crime in Pennsylvania: Annual Uniform Crime Report (UCR), 2011-2015

Note: Part 2 crimes include all other offenses not classified as Part 1 offenses.

There are four types of police organization in Berks County – municipal, county, state and university. The majority of Berks County municipalities have either municipal (individually funded or contracted with another municipality) or regional municipal police coverage. Only 28 of the 72 municipalities in Berks County rely on the Pennsylvania State Police for coverage as of 2015. Most municipal police departments have formal mutual aid agreements with neighboring police departments. Practical, real time coordination of mutual aid is handled by the Berks County Communications Center.

The Reading Police Bomb Squad serves the entire county. Forty officers from several Berks County police departments and the county Sheriff's Office staff the Berks County Emergency Response Team (BCERT).

Berks County Police Coverage by Type - 2015		
Type	# of Municipalities	% of Municipalities
Own Municipal Service	32	44.4%
State Police	28	38.9%
Regional	8	11.1%
Contract	4	5.6%
<b>Total</b>	<b>72</b>	<b>100.0%</b>

Source: Pennsylvania Department of Community and Economic Development, Municipal Statistics

As of 2015, there are 823 police officers in Berks County, a 3% increase from 2011 levels.

Berks County Police Officers - 2011-2015			
Year	Total	Male	Female
2011	799	747	52
2012	808	760	48
2013	763	717	46
2014	801	748	53
2015	823	767	56

Source: Pennsylvania State Police, Crime in Pennsylvania: Annual Uniform Crime Report (UCR), 2011-2015

The Berks County Sheriff’s Office provides security to the courts and all county agencies/ offices and is responsible for serving civil and criminal court warrants, transporting prisoners, issuing permits for firearms, and conducting the sale of tax delinquent real estate and personal property.

The Berks County Office of the District Attorney provides law enforcement services at the county level. The Office of the District Attorney prosecutes criminal court cases and has a Detectives Bureau within it that conducts investigations, assists local police and provides training for local police officers.

Troop L of the Pennsylvania State Police is headquartered in Berks County. Troop L has five stations, with two in Berks - Reading, Hamburg, Jonestown, Frackville and Schuylkill Haven. With 259 officers, it provides full-time police services to 57 municipalities and part-time services to 47 municipalities; spread over 2,000 square miles in Berks, Lebanon and Schuylkill Counties.



Kutztown University’s Public Safety and Police Services Unit police the campus grounds. The unit has 19 police officers who are commissioned as police officers in Pennsylvania. The Penn State Berks campus is policed by the Police and Safety Services Department. The department has nine officers who are also commissioned as police officers in Pennsylvania. Albright College employs 14 full-time officers and 25 auxiliary officers in their department of Public Safety. Four of those officers are commissioned as police officers in Pennsylvania. Alvernia University employs public safety officers but they are not commissioned police officers.

**Fire Service**

Fire protection in Berks County is provided by 57 fire departments. Most departments are primarily staffed by volunteers. The City of Reading Fire Department is mostly staffed by full-time career service firefighters.

These departments, deployed from 83 fire stations, respond to a variety of emergencies that include structure fires, forest fires, and crashes involving all modes of transportation and natural disasters such as severe storms and flooding. Most fire departments are not directly affiliated with, or fully funded by the municipalities they serve. Municipalities may provide some funding to the fire companies but the volunteer fire departments in Berks County raise funds through private donations and grants.

Berks County Fire Departments by Type - 2016	
Type	#
Mostly Career	1
Mostly Volunteer	7
Volunteer	49
<b>Total</b>	<b>57</b>

Source: United States Fire Administration, National Fire Department Registry



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Firefighter response to incidents is handled through the Berks County Communications Center and the Reading 911 system for incidents in the city. The Center will dispatch additional departments if the incident warrants additional manpower and equipment. Although the majority of the companies are equipped and trained to handle most incidents, hazardous materials spills require the assistance of specialized Hazmat Teams. The Berks County's response team is rated at the highest category, Level III, and is qualified to handle emergencies involving large quantities of hazardous materials. The county also has four (4) Level II teams at local departments.

The Berks County Department of Emergency Services operates the Berks County Fire Training Center, which trains and certifies firefighters in the county and from surrounding counties. The Center, located on Morgantown Road, has a variety of structures and simulations available to train firefighting personnel in live fire exercises.

### Ambulance/EMS

Ambulance and Emergency Medical Services (EMS) are provided both privately and publicly in Berks County. There are 18 providers of EMS in the county. Public service operates similarly to fire protection service, usually in the form of volunteer departments. EMS units are often located in fire department facilities. Units are dispatched to emergencies through the county's Communication Center.

Besides ambulance service, advanced emergency medical assistance is provided through paramedic and emergency air transport services. Paramedics, while able to offer varying degrees of medical assistance are usually unable to transport victims and are dispatched in conjunction with an ambulance. Reading Hospital (PennSTAR 4), Penn State Health - St. Joseph's (Life Lion) and the Lehigh Valley Hospital (MedEvac) all have heliports in Berks County. Emergency air transport is provided primarily through helicopters. These units are dispatched to situations where a victim is in immediate need of medical assistance at a hospital but cannot be accessed or transported quickly enough by ambulance.

### G. Solid Waste

Berks County has an overabundance of landfill capacity. Berks County has more landfills than any other county in Pennsylvania, and there is not a public need for additional waste disposal capacity in Berks County. Currently, there are four landfills within Berks County, and they accept waste from the county, other counties and/or from outside Pennsylvania. With the exception of the Western Berks Community Landfill, all landfills within Berks County accept the majority of waste from other counties and/or states. In 2018, for example, the Conestoga Landfill accepted 1,134,819 total tons of waste, 996,995 tons (88%) of which came from outside Berks County. Additionally, there are concerns related to heavy truck traffic through vital economic corridors, odors and the loss of farmland and open spaces as a result of landfill activities and proposed expansions of landfill facilities. The solid waste disposal facilities within Berks County have more than enough capacity to serve the county for the life of this plan. Due to this fact, no further expansion of landfill facilities is needed. We would encourage municipalities to implement joint zoning ordinances limiting the expansion of landfill facilities. We would also encourage the Pennsylvania Department of Environmental Protection to consider this Berks County Comprehensive Plan Update 2030 when reviewing applications for the funding or permitting of landfill facilities as required by the Municipalities Planning Code.

Berks County Solid Waste Authority is the primary agency charged with waste planning in Berks County. The Solid Waste Plan of 2014 guides countywide planning of both waste and recycling operations. For detail in excess of what is provided below on solid waste operations, the reader is referred to this document.

In 2018, nearly 79% of trash disposed of in Berks County was from out of county sources. All waste is deposited in one of the four (4) active landfills in Berks County. The Conestoga Landfill near Morgantown took in the most waste.

Berks County Landfills - 2018 Activity					
Facility	Total Tons	Berks County Tons	Out of County Tons	% of County Tons	% of Out of County Tons
Conestoga Landfill	1,134,819	137,864	996,995	12%	88%
Western Berks Community Landfill	236,738	118,571	118,571	50%	50%
Rolling Hills	770,263	148,438	621,825	29%	71%
Pioneer Crossing	317,596	115,540	202,056	36%	64%
<b>Total</b>	<b>2,459,416</b>	<b>520,413</b>	<b>1,939,447</b>		

Source: PA Department of Environmental Protection, Bureau of Waste Management, 2018 County Waste Destinations Report

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Berks County receives host fees from the Conestoga, Rolling Hills and Western Berks landfills. The Conestoga and Western Berks Landfills pay the County \$3.00 per ton for all waste generated outside of Berks County with Rolling Hills paying \$2.00 per ton for all waste generated outside the county.

<b>Berks County Landfill Waste Breakdown 2018</b>		
<b>Waste Type</b>	<b>Tons</b>	<b>% of Total</b>
Municipal	259,317	50%
Residual	192,439	37%
Construction	30,615	6%
Medical	15,219	3%
WTE Ash	0	
Sewage Sludge	22,179	4%
Asbestos	644	<1%
<b>Total</b>	<b>520,413</b>	<b>100%</b>

Source: PA Department of Environmental Protection, Bureau of Waste Management, 2018 County Waste Destinations Report

Between 2013 and 2018, the amount of waste generated in Berks County increased 12.1%.

<b>Berks County Waste Generation 2013 - 2018</b>		
<b>Year</b>	<b>Tons</b>	<b>Annual % Change</b>
2013	463,986	*
2014	521,990	12.50%
2015	512,084	-1.90%
2016	440,106	-14.10%
2017	580,192	31.80%
2018	520,413	-10.30%

Source: PA Department of Environmental Protection, Bureau of Waste Management, 2013-2018 County Waste Destinations Reports

### Recycling

The majority of Berks County municipalities offer recycling services as shown below and the county, as a whole, recycled 62.5% of its waste stream as of 2018. The county manages seven (7) of the 11 drop off facilities, including the county recycling center on Hilltop Road in Bern Township.

<b>Berks County Recycling 2018</b>		
<b>Facility</b>	<b>#</b>	<b>% of Municipalities</b>
Curbside Pickup	35	48.6%
Drop Off Facilities	11	15.3%
No Recycling Program	26	36.1%
<b>Total</b>	<b>72</b>	<b>100.0%</b>

Source: Berks County Solid Waste Authority 2018 Annual Report

### H. Utilities

Berks County is served by electric, natural gas, land and cellular telephone, broadband Internet, and satellite/cable television; however, not all services are available in all parts of the County. It is anticipated that many of these services will continue to be provided by the private sector.

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Many small businesses in the rural areas have expressed the need for additional broadband coverage due to the changing market and reliance on the internet to conduct business. The Federal and PA State Government are beginning to address the lack of access to high-speed internet in rural areas through incentive programs.

National carriers provide cellular service throughout the county. Cell towers and transmitters are located on private and government property. Due to the varied topography of Berks County, there are areas with no or marginal coverage within the county, an issue which is being addressed in most areas. As residents become increasingly dependent on cellular service for timely communication and data, communications companies are seeking to increase service and signal quality through the upgrade of existing towers and installation of new cellular towers. To ensure that existing communications towers are utilized to their maximum extent, it is important that Berks County municipalities continue to encourage communications companies to co-locate their equipment on existing or shared towers.

Verizon, Frontier Communications, and Windstream Communications provide the majority of landline telephone services. Regional carriers Comcast and Service Electric, provide the majority of cable and internet services throughout the county. Each municipality is responsible for approving cable franchise agreements with providers.

First Energy/Met-Ed serves 59 or 82% of county municipalities with electricity. Pennsylvania Power and Light (PPL) serves 12 municipalities and Kutztown Borough, dba as Hometown Utilitcom, is one of 35 municipally owned electric providers in the state, providing electricity to borough residents.

Natural gas for heating and other uses in the county is largely supplied by the United Gas Improvement Corporation (UGI). The Reading Gas Division of UGI Corporation serves the demand within the City of Reading, 24 Boroughs, and 26 townships surrounding the City with low- (up to 1 psi), medium- (to 60 psi), and high- (400 psi) pressure gas for various residential and industrial customers. The Central Penn division of UGI Corporation supplies natural gas and liquid petroleum (LP) gas to customers in the northern section of Berks, in Hamburg and Shoemakersville boroughs and Centre, Perry, Tilden and Windsor townships.

Four (4) existing facilities in the County generate electricity. The fifth, the 450 MW Birdsboro Power plant, is proposed for construction in the Borough of Birdsboro on the former Armorcast property and is expected to be operational in 2019.

Electric Generating Facilities in Berks County - 2016			
Facility	Operating Capacity (MW)	Online	Fuel Type
Ontelaunee Energy Center	599	2002	Gas
Birdsboro Power (Proposed)	450	2019	Gas
Evergreen Community Power Plant	25	2009	Biomass
Pioneer Crossing Landfill	8	2008	Biomass
Morgantown Solar Park	1.6	2011	Solar

Source: Pennsylvania Utilities Commission, Electric Power Outlook for Pennsylvania, 2015-2020

### I. Recreation

Berks County's system of nearly 72,000 acres of parks and recreational facilities is one of its greatest assets. The county's image and character are defined largely by the high quality of these resources. Recreation in Berks County is a mixture of public and privately owned resources and includes both active and passive recreational areas. A network of 420 miles of regional and local trails is anchored by the Schuylkill River Trail, the Appalachian Trail, the Union Canal Trail and the Horse-Shoe Trail, which form the foundation for this trail network. These recreation trails for pedestrians, bicyclists, and equestrians, span the county creating an outlet for residents and visitors to enjoy. In 2015, the Schuylkill River Trail was voted "Best Urban Trail" by USA Today. It is the backbone of the Schuylkill River National Heritage Area which was designated through an Act of Congress in 2000. Also in 2015, the Greater Reading Trail System was named a Bronze Level Ride Center recipient from the International Mountain Bike Association (IMBA) in recognition of extensive trail network for mountain bikers combined with community amenities and services, and the City of Reading was named a "Bicycle Friendly Community" by the League of American Bicyclists.

The Commonwealth of Pennsylvania owns nearly 43% of the recreation assets in the county. State gamelands and the Nolde and French Creek State parks are large facilities, mostly managed by the Pennsylvania Game Commission and the PA Department of Conservation and Natural Resources.

Recreation Facilities by Type in Berks County - 2017		
Ownership	Acres	% of Total
State	30,670	42.9%
Municipal	16,285	22.8%
Non-Profit	8,167	11.4%
Federal	7,501	10.5%
Private	6,316	8.8%
County	1,440	2.0%
School	1,169	1.6%
<b>Total</b>	<b>71,548</b>	<b>100.0%</b>

Source: Berks County Planning Commission

Listed below are the largest facilities by type in the county.

Largest Recreation Facilities by Type in Berks County - 2017		
Ownership	Facility	Acres
State	French Creek State Park	6,292
Federal	Blue Marsh Lake	5,360
Municipal	Lake Ontelaunee	3,304
Non-Profit	Hawk Mountain Sanctuary	1,624
School	Schuylkill Valley Ed. Complex	1,169
County	Antietam Lake Park	650
Private	Maple Grove Raceway	450

Source: Berks County Planning Commission

The Berks County Greenway, Park and Recreation Plan, adopted in 2007, set specific goals for the direction the county should take to provide future open space, greenways, and recreation for its citizens. The Plan is adopted as an addendum to the Berks County Comprehensive Plan. The Plan also provides recommendations for the identification, protection, and preservation of the county’s historic sites, historic districts, and ecological resources.

New recreational trends are constantly emerging. While interest in golf and swimming are on the decline with golf courses proposed for redevelopment and pools being closed due to lack of membership and escalating costs of maintenance, interest in biking, hiking and skateboarding are rising. To address the need for new facilities, additional study is required. When testing the potential of new types of facilities, it is recommended that a limited number be constructed in order to observe how they are used before committing to large-scale development. This approach will allow the county and its municipalities to move slowly and methodically toward meeting demand, thereby reducing the possibility of creating underused facilities or acquiring land not desirable for recreation.



Visitation to the Berks County Parks and Recreation systems programs and facilities is steadily growing. It is estimated that nearly 715,000 people visit the park system annually looking for closer to home outdoor recreation, events, and fun free family activities. The most attended large events are Go Fly A Kite Day; Heritage Festival, Holiday Lights at Gring’s Mill (month long program), and the Summer Solstice Celebration. Also very popular are environmental education and cultural history programs and hikes. Paddling, kayaking, geo-caching and orienteering programs have seen a marked participation increase as well.

Since 2007, the county has hired a full time Parks Resource Manager, Park Ranger Supervisor and Environmental Educator. These positions are key with the many upgrades that are now completed and proposed in the future for Antietam Lake Park and the Angora Fruit Farm, along with the rest of the county Park System. The county has also divested itself of certain



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active recreation activities that are better suited for operation by others, along with some outlying facilities that were difficult to maintain due to their location.

### J. Cemeteries

There are nearly 500 cemeteries in Berks County. Cemeteries are a unique community facility in that they vary greatly by size by interments and acreage, nearly every municipality has one or more, most are privately owned, and some are historic sites. When planning for the expansion or relocation of infrastructure such as roads or sewer and water utilities, cemeteries often can change the route or design of the utility since cemeteries are extremely difficult to move or relocate.

Largest Cemeteries by Interments - Berks County - 2016		
Name	Interments	Location
Charles Evans Cemetery	44,239	Reading
Gethsemane Cemetery	24,312	Laureldale
Aulenbach's Cemetery	19,378	Mount Penn
Forest Hills Memorial Park	13,511	Reiffton
Laureldale Cemetery	10,710	Laureldale

Source: FindAGrave.com, County Lookup

Note: Interment means the burial or final placement of remains.

### K. Sewage Treatment Facilities

The availability of sewer service is critical to supporting higher density residential development, as well as the location or expansion of business and industry. Municipalities in Pennsylvania are required by the Pennsylvania Sewage Facilities Act (Act 537) to adopt a plan for sewage services (on-lot management districts and public sewage service districts) for areas within their jurisdiction. All municipalities in Berks County have adopted Act 537 plans.

The most densely developed portions of Berks County are served by public sanitary sewerage systems, as indicated on Figure 35. Of all utilities, public sanitary sewer service is the most critical for future development in the county. Locations of existing sanitary facilities and planned expansions, will guide the direction of physical growth within the county. Of the 43 plants in the county, the largest sewage treatment facility is owned and operated by the City of Reading. This plant processes 28.5 million gallons a day from twelve municipalities.

Residential and other urban development not served by public sanitary sewerage systems rely on private onsite wastewater treatment systems. There are a number of types of such systems, including but not limited to, small package treatment plants, conventional soil absorption systems, in-ground pressure systems, mound systems, and holding tank systems.

### L. Water Supply Systems

Access to water service plays an important role in the development patterns in the county. Many businesses and industries require the reliability and access to water that only a public utility can provide.

Water supply infrastructure consists of public and private systems that serve existing urban and rural land use development. As of 2017, 72 suppliers, municipal and private, provide water in Berks County. The sources of drinking water include rivers, lakes, streams, ponds, reservoirs, springs and wells. Larger systems in the county primarily rely on surface water for a source while the smaller systems that serve mobile home parks or subdivisions rely on groundwater sources. In some public systems, fluoride is added. For areas not served by public or private systems, individual, on-lot wells provide water to the use on site.

### M. Source Water Protection

Amendments to the Safe Drinking Water Act Amendments in 1996 required states to develop and implement a Source Water Assessment and Protection (SWAP) program. The Pennsylvania SWAP plan was approved in 2000. The plans and programs were designed to evaluate the vulnerability of public drinking water systems to possible sources of contamination, and encourage states to work with water providers in developing local protection and management plans. In Berks County, 16 water systems have individual plans, nine systems have substantially implemented program according to PA DEP and four systems have plans in progress. The Berks County Water and Sewer Association (BCWSA), in conjunction with PA DEP, has prepared a countywide Source Water Protection Program. The Program was finished in June 2017 and is currently being implemented through a Municipal Source Water Protection Committee that is coordinating with the Berks County Conservation District's Watershed Coordinator.

**N. Community Facilities Policies****Overall Community Facilities Goals:**

- A. Provide and maintain community facilities and services that meet the basic needs of county residents and support the land use policies of this plan.
- B. Recognize the importance and necessity of emerging utility and community facilities technologies, incorporate these technologies into utilities and community facilities where feasible and appropriate, and develop regulatory measures to ensure benefit to the county and its municipalities.
- C. Consider anticipated demographic changes and the importance of aging in place in all land use, transportation, and community service planning and decisions.

**a. Government Facilities****Policies:**

- (1) Encourage co-location of community facilities and services when and where feasible to provide residents and businesses easily accessible and convenient services.
- (2) New government facilities should be located on existing transportation routes, designed, and sited to be accessible and walkable by the residents it serves.
- (3) Prior to the disposal of any existing but obsolete facilities and sites, determine the value of maintaining them for potential reuse by other services and facilities.
- (4) Continue to design and construct public facilities that are energy efficient, environmentally responsible and accessible to all residents.

**b. Education****Policies:**

- (1) Expand educational opportunities to meet the need for skilled and professional workers in Berks County.
- (2) Support secondary and higher education curriculums and programs that meet anticipated future careers and employment opportunities.
- (3) Enhance partnerships between the business and education communities to strategically focus educational programs with employment needs.
- (4) Strengthen the use of high quality continuing adult education programs and work retraining programs available through the Berks County Workforce Development Board.
- (5) Explore opportunities for county business, labor, and educational institutions to collaborate to expand career development for county residents.
- (6) Encourage communities and school districts to locate new schools near other community facilities and existing transportation routes.
- (7) Encourage municipalities and school districts to collaborate in the development of the community. Municipalities should regularly inform school districts of planned development areas and pending development proposals and school districts should regularly inform municipalities about enrollment projections and facilities planning.
- (8) Continue to support the Berks County Library System.
- (9) Libraries should monitor technological changes that may offer ways to improve service for patrons in a less expensive way than constructing and operating new libraries.

## Chapter 10 - Community Facilities

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### c. Health Care

#### Policies:

- (1) Encourage health care providers to consider locating near multiple modes of transportation when making decisions about location and siting of facilities.
- (2) Promote transit accessibility for health and human service facilities.
- (3) Plan and provide facilities for safe, affordable, and quality elder care and childcare to meet the needs of Berks County's aging population and families.

### d. Emergency Services

#### Policies:

- (1) The county should work with municipalities to develop mutual aid agreements for fire, police, emergency medical services, and public works.
- (2) The county and municipalities should establish minimum standards for equipment purchases for fire, police, and emergency medical services.
- (3) The county and local municipalities should explore how to help fire companies and emergency medical services improve their financial structure and recruit volunteers.
- (4) Encourage less populated municipalities to explore joint service agreements with neighboring municipalities where consolidating and coordinating services will result in better services and/or cost savings.
- (5) The county should support UCC codes and promote the enforcement of adopted building, maintenance, and rental codes.

### e. Solid Waste

#### Policies:

- (1) Provide and maintain solid waste management facilities sufficient to serve the needs of county residents and business establishments, as well as create a program to address the clean-up of areas that are affected by pollution problems.
- (2) Continue to support the Berks County Solid Waste Management Plan processes and recommendations including regular updates to the plan.
- (3) The Authority should continue to operate and expand the household hazardous waste program, tire disposal program, Pharmaceutical program and paper shredding events.
- (4) The Authority should continue to operate and expand the Recycling Center, while researching new markets for recyclable materials including the expansion of the electronic waste recycling facility.
- (5) The county should encourage municipalities to develop programs that will identify illegal dump sites, identify ways to prevent future illegal dumping, and work to clean up existing illegal dump sites with assistance from other organizations such as PA Cleanways and the Berks County Solid Waste Authority.
- (6) The county should actively promote Conservation, Nutrient Management, and Odor and Fly Abatement Plans on all farms.
- (7) Sewage sludge application should only be applied to land within Agricultural Preservation Areas in accordance with appropriate standards.
- (8) The county should continue to track and seek the cleanup of all Superfund sites in the county.
- (9) The county should work with economic development agencies and municipalities to create a listing of all countywide Brownfield sites and identify funding sources available for cleanup and redevelopment.

### f. Other Utilities

#### Policies:

- (1) The county and its municipalities should develop procedures and standards to ensure that any future siting decisions for energy generation, transmission, and distribution facilities will be evaluated to ensure consistency with local and regional comprehensive plans, and the overall protection of public health, safety and the environment.
- (2) Encourage Berks County municipalities to adopt enforceable guidelines for siting and removing telecommunications facilities.
- (3) The county should investigate programs that will help to bring additional broadband internet services to the rural underserved areas of the county.
- (4) The county should investigate programs that will help to bring expanded public Wi-Fi internet services to the urbanized areas.

### g. Recreation

#### Policies:

- (1) The county and its municipalities should provide an integrated system of public parks, trails, and related open space areas that will provide county residents with adequate opportunity to participate in a wide range of outdoor recreation activities that meet or exceed national standards for parkland and open space.
- (2) The county and its municipalities should continue to maintain and improve the existing recreational trail systems and park infrastructure with an emphasis on trails that connect communities and recreation resources.
- (3) The county and its municipalities should develop and support partnerships between federal and state government, municipalities, non-profits, developers, and landowners to implement the *Berks County Greenway, Park and Recreation Plan*.
- (4) The county should maintain a current *Greenway, Park and Recreation Plan* and make changes as necessary to maintain the current plan.

### h. Cemeteries

#### Policies:

- (1) Ensure that existing cemeteries, public and private, are protected from development including transportation corridors.
- (2) Municipalities are encouraged to collaborate with their local churches regarding the need for additional cemeteries or cemetery expansion during updates of comprehensive plans and zoning ordinances.

### i. Sewer and Water Facilities

#### Policies:

- (1) Improve, maintain, and provide sanitary sewer and water systems in Economic Development Areas, Existing Developed Areas where appropriate, Designated Growth Areas, and Future Growth Areas.
- (2) Continue to implement the policies and recommendations of the Berks County Sewer and Water Regionalization Plan Update, the Berks County Source Water Protection Program and the Pennsylvania State Water Plan.
- (3) The county will encourage the continued implementation of the Berks County Source Water Protection Program through the Berks County Water and Sewer Association.
- (4) Encourage cooperative effort for municipalities and agencies to work closely with one another to plan the extension of infrastructure, so that such services efficiently complement, rather than conflict with one another.
- (5) The county should direct development to areas that currently have public sewer and/or public water, some level of excess capacity, or to areas that can build additional capacity through expansion(s).



## Chapter 10 - Community Facilities



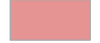








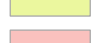
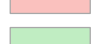

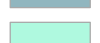
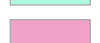

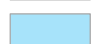
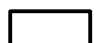
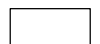


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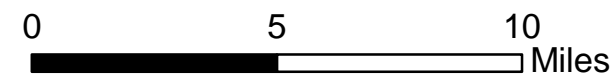
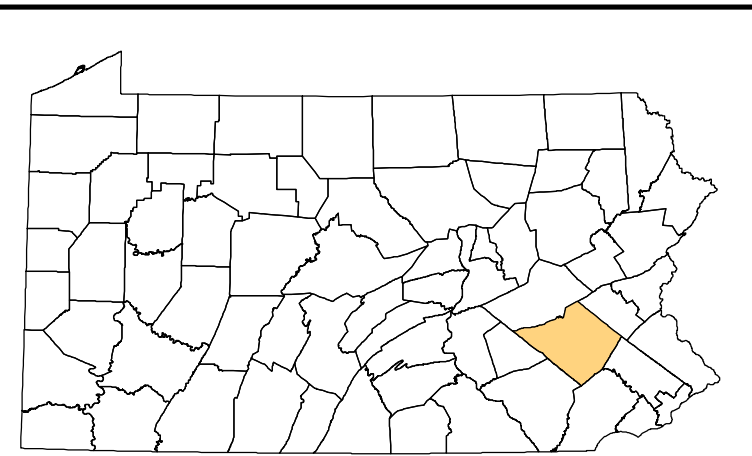
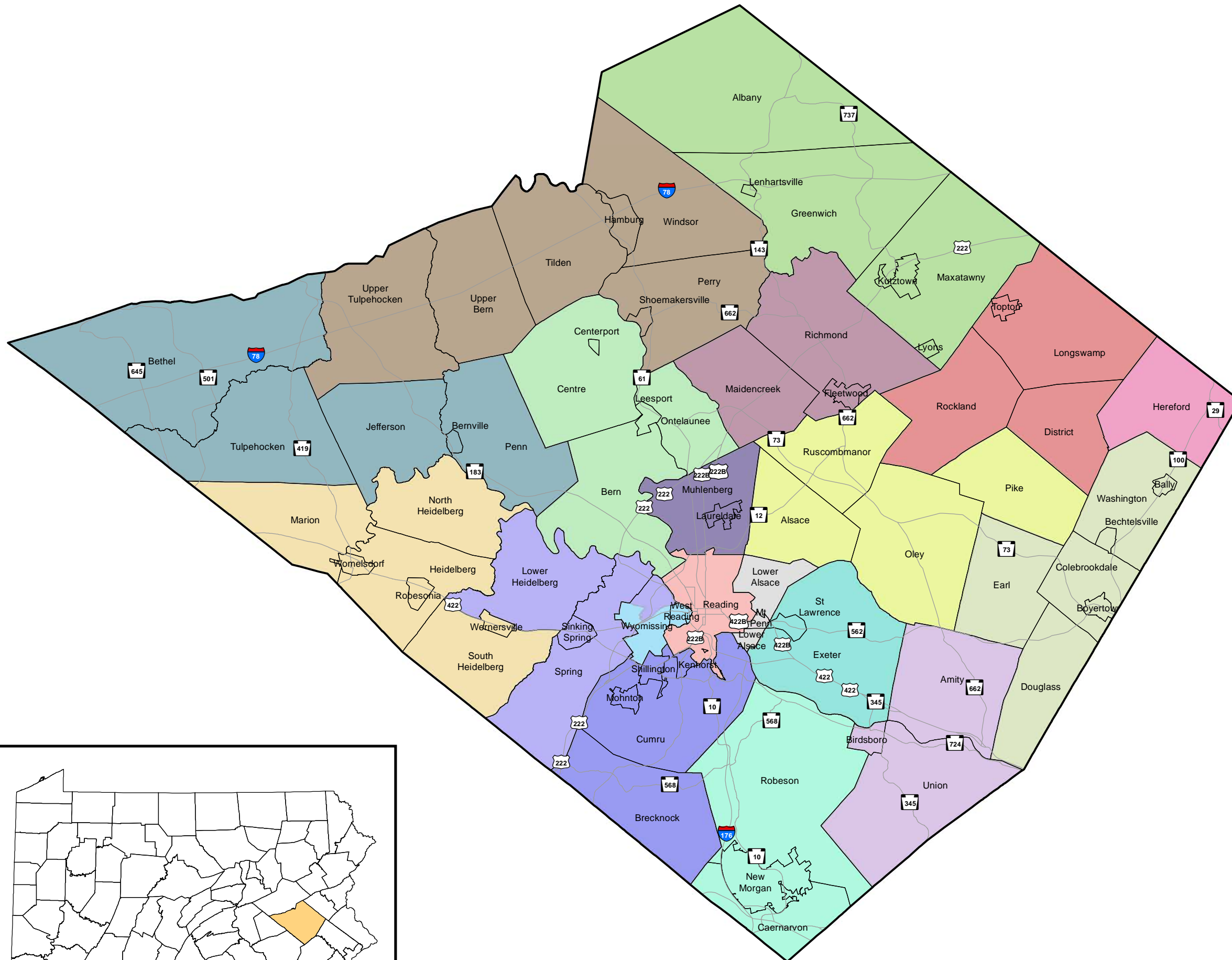
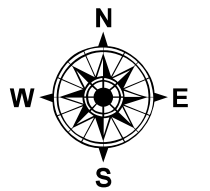
- (6) The county will work with municipalities to promote higher density development in areas with existing or proposed sewer systems.
- (7) The Berks County Planning Commission will only endorse new sewer systems or extensions of existing sewer systems into the Agriculture Preservation Areas if the following three requirements for expansion are met:
  - a. The Municipalities Act 537 Sewage Facilities Plan identifies the area as having a high concentration of existing mal-functioning septic systems;
  - b. The identified mal-functions cannot be corrected on site;
  - c. Any new sewer system or extension of an existing system will serve only those existing developed areas as identified by the Act 537 Plan, or a regional economic development project;
- (8) The county will encourage connecting areas with malfunctioning on-lot systems, areas with contaminated water supplies, and small privately owned sewer or water systems to existing sewer or water systems where economically and physically possible.
- (9) The county supports municipalities maintaining an up-to-date Sewage Facilities Plan (Act 537). This includes implementation of an On-Lot Disposal Ordinance that promotes the maintenance of on-lot septic systems.
- (10) The county supports the preservation of sewer capacity by maintaining sewer lines, joint facilities, and by following a maintenance schedule for inflow and infiltration.
- (11) The Berks County Planning Commission will not endorse projects that fail to comply with this Comprehensive Plan, in accordance with the Pennsylvania Municipalities Planning Code (Act 247), the Sewage Facilities Plan (Act 537), and any other review processes.
- (12) The county should work with the appropriate agencies to create a program to provide sewer and water infrastructure for economic development.
- (13) The county will encourage the Penn State Cooperative Extension, the Berks County Conservation District, and other appropriate agencies to work with farms near water sources to develop nutrient management and other plans that minimize nitrates and other contaminants.
- (14) The quality and quantity of existing ground and surface water in Berks County should be protected through source water protection planning and ensuring any proposed water withdrawals are accomplished without adversely affecting water resources.
- (15) Berks County will support water systems that encourage water conservation by maintaining water lines, promoting water conservation, and implementation of an incremental fee schedule.
- (16) The county will encourage small water systems to increase their reliability by adding wells or storage tanks and to complete Surface Water Infiltration Protocol (SWIP) testing on all of their water sources.
- (17) In areas recommended for future growth, the establishment of new privately owned small water companies that only serve a specific development or small geographic area should only be allowed if it is interconnected with a larger, publicly owned public supply or serves as a backup supply to that larger public system.

Berks County Comprehensive Plan Update  
Adopted: January 23, 2020

# School Districts Berks County, Pennsylvania

### Legend

-  Antietam
-  Boyertown Area\*
-  Brandywine Heights Area
-  Conrad Weiser Area
-  Daniel Boone Area
-  Exeter Township
-  Fleetwood Area
-  Governor Mifflin
-  Hamburg Area
-  Kutztown Area
-  Muhlenberg
-  Oley Valley
-  Reading
-  Schuylkill Valley
-  Tulpehocken Area
-  Twin Valley\*
-  Upper Perkiomen\*
-  Wilson
-  Wyomissing Area
-  Berks County Boundary
-  Municipal Boundaries
-  Major Roads

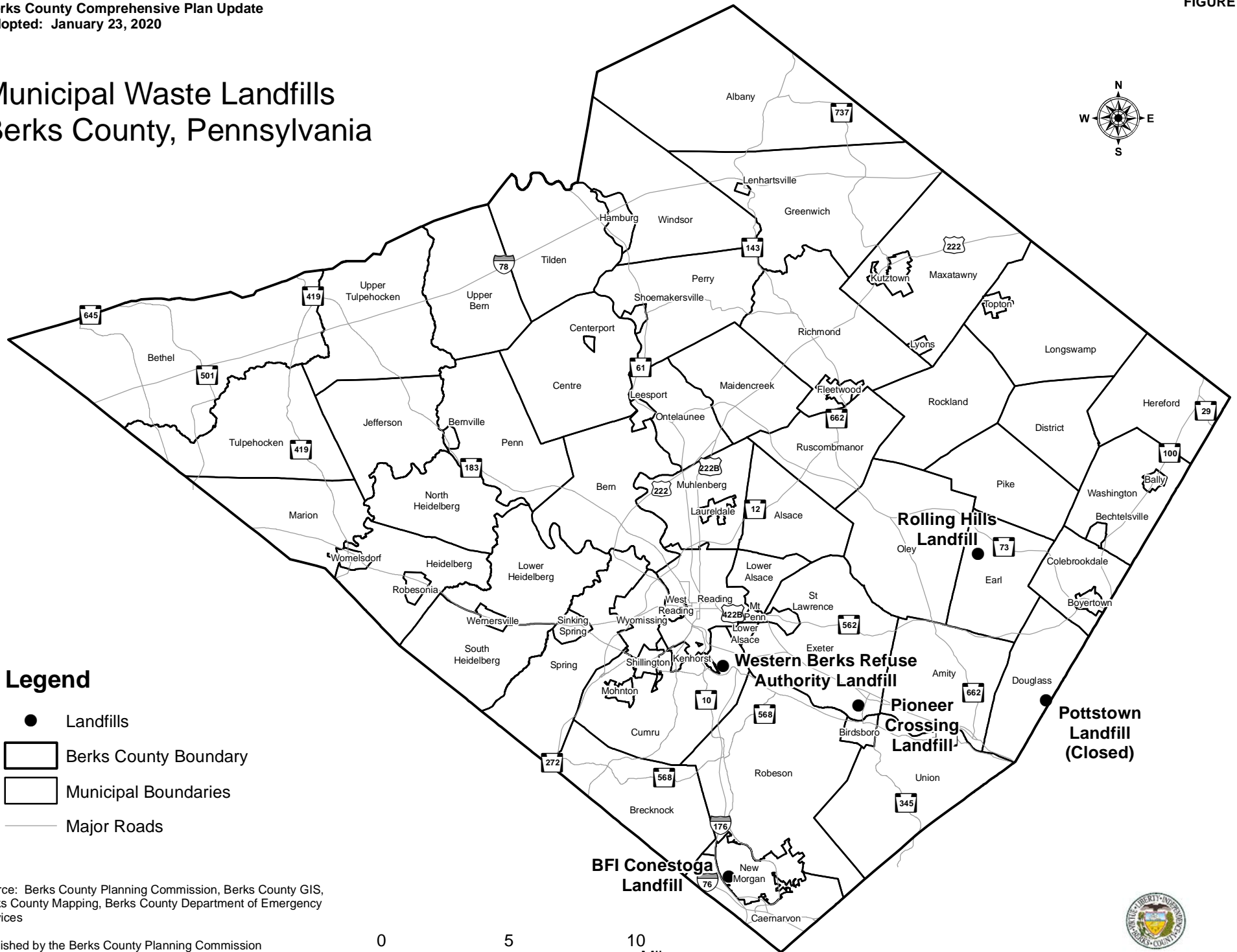
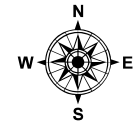


\* Berks County portion of the School District only.  
 Source: Berks County Planning Commission, Berks County GIS,  
 Berks County Mapping, Berks County Department of Emergency Services  
 Published by the Berks County Planning Commission





# Municipal Waste Landfills Berks County, Pennsylvania

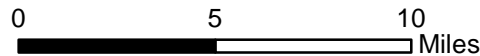


## Legend

- Landfills
- ▭ Berks County Boundary
- ▭ Municipal Boundaries
- Major Roads

Source: Berks County Planning Commission, Berks County GIS, Berks County Mapping, Berks County Department of Emergency Services

Published by the Berks County Planning Commission

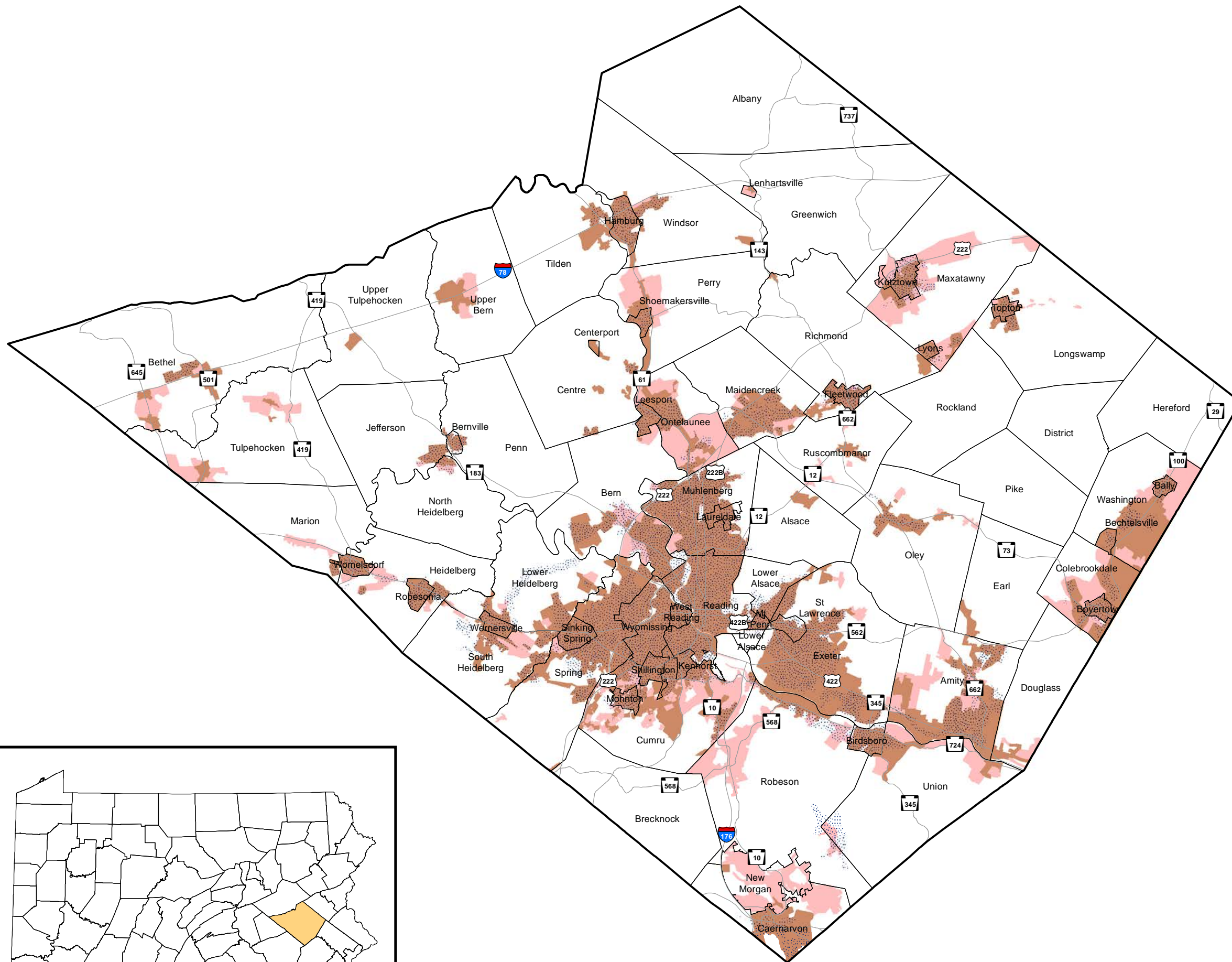
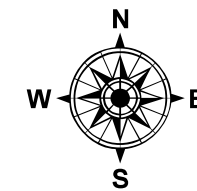







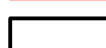
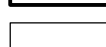



Berks County Comprehensive Plan Update  
Adopted: January 23, 2020

# Public Sewer and Water Service Areas Berks County, Pennsylvania

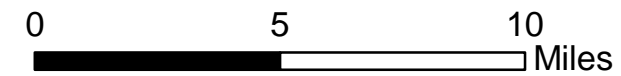
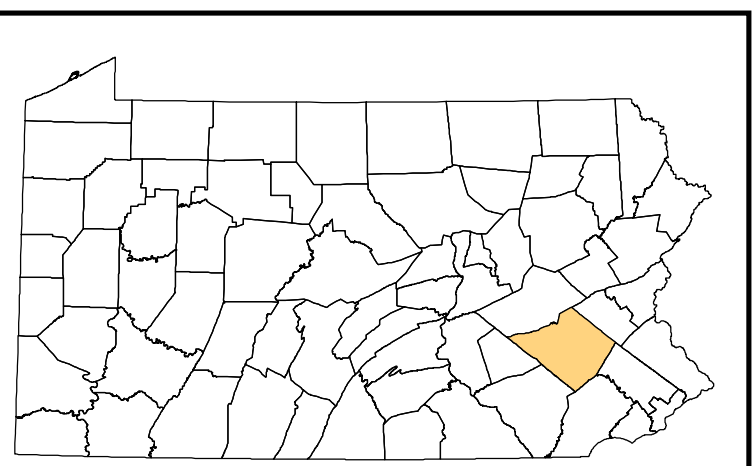


### Legend

-  Existing Water Service
-  Existing Sewer Service
-  Proposed Sewer Service
-  Berks County Boundary
-  Municipal Boundaries
-  Major Roads

Source: Berks County Planning Commission, Berks County GIS, Berks County Mapping, Berks County Department of Emergency Services  
Published by the Berks County Planning Commission

BAB 1/20





# Chapter 11 - Intergovernmental Cooperation/Participation



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### INTERGOVERNMENTAL COOPERATION/PARTICIPATION

#### A. Overview

Since 1997, the Berks County Planning Commission, on behalf of the County Commissioners, has been promoting and implementing cooperation, partnerships, coordination and intergovernmental initiatives among municipalities throughout Berks County. As costs have increased and the availability of funding decreased municipalities are finding it harder and harder to continue to provide the same level of public service to their populations as they once were without raising taxes. Intergovernmental cooperation has become more important than ever as municipalities try to explore methods of delivering those services and administering programs, at less cost to the tax payer while still trying to balance their budgets.

#### B. Programs, Partnerships and Coordination

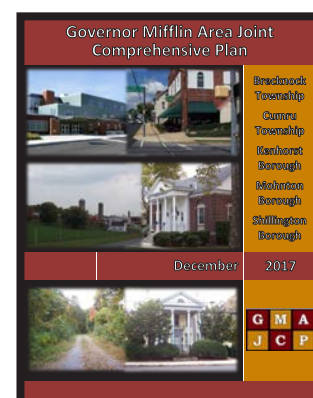
As stated above, municipalities are finding it difficult to provide the same levels of public services to their growing populations. Municipalities are also finding that there are many opportunities and resources for them to explore methods of delivering services and administering programs at less cost to the tax payer. Coordination of efforts, between municipalities, authorities, the County of Berks and others accomplish these goals. Entering into partnerships with other municipalities, emergency service providers, or the private sector may be the only way that municipal governments can provide these services and remain financially secure.

There are many ways that municipalities can work together to provide better services and potentially save money. Sharing of equipment, resources, information, or even staff can go a long way when municipal budgets are stretched to their limits. Besides the budgetary savings, the sharing of information and equipment can also improve public safety and welfare through more efficient law enforcement, emergency and fire protection services, and infrastructure repair and maintenance.

The Berks County Planning Commission staff is responsible for supporting the initiatives of multiple groups and government entities looking at promoting regionalization and intergovernmental cooperation. The following is a list and brief summary of each of the various types of programs, partnerships, and coordination taking place in Berks County:

**Berks County Municipal Planning Program** – The overall goal of the municipal planning program is to continue the positive regional cooperative efforts of the previous programs, and also; continue to ensure the quality of local joint comprehensive plans and joint zoning ordinances; continue existing and encourage new regional cooperative efforts; ensure the consistency of local planning documents and the Berks County Comprehensive Plan while continuing to build a greater dialogue between county and municipalities during the planning process.

**Joint Planning Program** - The Berks County Planning Commission's Joint Planning Program, as shown on Figure 36 was established in 1992. Since that time, 60 municipalities have cooperated, successfully, to complete 19 joint comprehensive plans. The success of this program led to the establishment of the Joint Zoning Program in 1997. Currently there are fourteen municipalities that are part of 5 joint ordinances. These programs continue to this day. Currently planning commission staff is updating three joint comprehensive plans that were originally completed under this program.



**Albright College's Center for Excellence in Local Government (CELG)** - CELG's main objective has always been to maintain and enhance the quality of life in Berks County by assisting municipal leaders in meeting the changing needs of their communities. The Berks County Planning Commission and CELG have partnered in a number of projects that promote regionalization and cooperative initiatives among municipal governments:

- **Berks County Cooperative Purchasing Council (BCCPC)** - The Council is an unincorporated association of public entities organized and existing under the applicable provisions of P.L. 526 of April 29, 1937 (53 P.S. section 5431 et seq.), as amended, and Act 57 of May 15, 1998, as amended, (Title 62 Pa C.S. 1902) known as the Commonwealth Procurement Code for the purpose of joint purchases of materials, equipment, supplies, services, and/or construction. For more information, please [visit the BCCPC web site](#).

## Chapter 11 - Intergovernmental Cooperation/Participation

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- **Berks Municipal Partnership (BMP)** - The Partnership was established by the Center for Excellence in Local Government as a forum for discussing common issues that can be addressed on a regional level or county-wide basis, obtaining local officials' comments on proposed cooperative initiatives; providing a focal point for communication between regions of the county and county government; fostering pilot projects on a regional level; and linking regions to resources.
- **Governor Mifflin Area Coordinating Council** - the Council was established by the Center and the participating public entities to foster on-going communication among the five municipalities (three boroughs and two townships) and the School District on issues of common interest.
- **Berks County Police Study** - The Berks County Board of Commissioners contracted with the Police Executive Research Forum (PERF) to examine the police organizations currently operating in Berks County and provide alternatives, including a countywide option, for delivering police services to the community.
- **Berks County Sewer and Water Regionalization Study Update** - The Berks County Commissioners and the Berks County Planning Commission previously prepared a Sewer and Water System Regionalization Study in 1998. The purpose of the 1998 Study was to determine what opportunities existed for improving water quality, reliability, customer service and economic development by strengthening the water and sewerage systems in Berks County. The Study then determined both the current status of the sewer and water systems in the county and what strategies might be implemented to help achieve the goals stated above.

This plan was updated in 2011 to determine whether the original recommendations of the 1998 Study are still valid and to include any new opportunities that would allow the sewer and water systems to achieve these goals.

- **Berks County Water and Sewer Association (BCWSA)** - The formation of the BCWSA was encouraged through the Berks County Sewer and Water Regionalization Study update. The organization's mission is to advance the theory and practice of the design, construction, maintenance, administration and operation of water and sewer services; disseminate information and share experiences to promote improved practices in water and service providers and the economic development community; and encourage adherence by water and sewer officials to a continually higher standard.
- **Municipal Mergers** – Berks County leads the State in the number of municipal mergers. This is where one municipality, for one reason or another determines that it is better for the municipality to merge into another municipality. The remaining municipality then assumes jurisdiction over the municipality which has been terminated. In order for this to occur, both municipalities must put the merger on a ballot and have a majority of the residents from each municipality agree.

There have been 4 municipal mergers in the county since late 1999. Temple Borough merged into Muhlenberg Township in 1999; Wyomissing Hills Borough merged into Wyomissing Borough in 2001; West Lawn Borough merged into Spring Township in 2006; and Strausstown Borough merged into Upper Tulpehocken Township in 2016. A number of other municipalities and school districts have studied the benefits of merging with their neighbors.

### C. Uniform Construction Code (UCC) Board of Appeals

The Planning Commission coordinated a countywide approach to meeting the requirements for UCC regulations. This coordination involves contacting each municipality annually to verify participation and collection of a nominal yearly fee for the cost of coordination. The cost of an appeal is paid for by the requesting applicant. Out of the 72 municipalities in Berks County, 47 municipalities are participating in the 2017 Berks County UCC Countywide Board of Appeals. This initiative saves municipalities money and is more efficient, since the Board of Appeals must have appointed members that are experts in the field of construction.

### D. The Reading Area Transportation Study (RATS) Metropolitan Planning Organization (MPO)

Created in 1964, RATS is comprised of two committees – the Technical Committee and the Coordinating Committee. The Technical Committee reviews items brought before the group and recommends actions to the Coordinating Committee. The Coordinating Committee is the policy body that formally adopts items reviewed by the Technical Committee. The

## Chapter 11 - Intergovernmental Cooperation/Participation

eight-member RATS Technical Committee consists of representatives from PENNDOT Central Office in Harrisburg (1), PENNDOT District 5-0 Office in Allentown (1), the City of Reading (2), the Berks County Planning Commission (2), the South Central Transportation Authority (SCTA) (1), and the Reading Regional Airport Authority (RRAA) (1). The ten-member RATS Coordinating Committee consists of one representative each from the PENNDOT Central Office, PENNDOT District 5-0, Berks County Board of Commissioners, Berks County Planning Commission, City of Reading, Boroughs, 1st Class Townships, 2nd Class Townships, SCTA and the RRAA. RATS is responsible for prioritizing approximately \$80 million annually to advance transportation improvement projects throughout the county. PennDOT, SCTA and municipalities are responsible for project implementation.

The transportation planning staff of the Berks County Planning Commission serves as the technical staff to RATS. The staff coordinates and administers these committees, their meetings and leads development of the package of federally required MPO products including: the long-range transportation plan (LRTP), short-range transportation improvement program (TIP), associated transportation conformity determinations (if required), the Unified Planning Work Program (UPWP), and the Congestion Management Process (CMP).

### E. Local Technical Assistance Program (LTAP)

This program started locally in Berks County in late 2016, although it has been around statewide since the early 1980s. The Pennsylvania Department of Transportation (PENNDOT) LTAP, in partnership with RATS and the BCPC, is designed to help municipalities, which maintain over 68,000 miles of roadways, make the best use of their roadway maintenance dollars. LTAP provides free technical information and proven technologies dealing with roadway maintenance and safety methods to meet the growing demands on municipal governments. So far this program has been well received in Berks County. In 2017 the county held four LTAP courses, all of which were filled to the maximum attendance levels.

### F. Merging Transit Providers

The idea of regionally connecting and consolidating PA transit systems has been a topic of discussion between state officials and transit leaders for some time. In January 2015, those ideas became more of a reality with the formation of The South Central Transit Authority (SCTA). Throughout most of 2014 discussions took place to merge The Red Rose Transit Authority (RRTA), Lancaster, PA and Berks Area Regional Transportation Authority (BARTA), Reading, PA into one transit authority. A consolidation of the Lancaster and Berks transit authorities became serious when BARTA Board members had to consider leadership options after the unexpected passing of their Executive Director, Dennis Louwerse, in Fall 2013. Originally, the consolidation of RRTA and BARTA was to be a full merger to create one transit authority. However, due to existing state and federal regulations governing the authorities a full merger could not occur. Instead the administrative staff from both BARTA and RRTA consolidated into SCTA, which now oversees both BARTA and RRTA staff and services. With the consolidating of the administrative staff, SCTA is able to combine purchasing products and services at a lower cost, ultimately saving tax-payers over \$800,000 dollars.

Due to the cost savings of the merger, both Berks and Lancaster Counties are able to forgo the payment of the required local match for state operating funding for the next five years. This was an incentive provided under State Act 89 for transit systems to consider merging. Over this five year period, both counties will save the taxpayers a combined \$4 Million in local funds.

**Council of Governments (COGs)** - A COG is an association that consists of elected public officials who come from the major local governments within an urban or metropolitan area. COGs were developed during the 1970s and '80s as an appropriate tenet of public governance concerning local and regional issues. Their purpose is to establish a consensus about the needs of an area and the actions needed to solve local and regional problems.

COGs are voluntary associations that represent governments, but they are not governments themselves. They are voluntary because local units cannot be forced to join these associations and can resign at any time. The council membership is drawn from the county, city, and other government bodies within its area. Councils of governments lack general government authority in that they are not directly elected, they do not have direct taxation powers, and they do not have police powers or regulatory authority.

In the spring of 2018 the county, along with the City of Reading, Mount Penn Borough, Lower Alsace Township and Alsace Township joined a COG for the continued operation, planning and support of the Mount Penn Preserve and the Reading



## **Chapter 11 - Intergovernmental Cooperation/Participation**

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Pagoda. The Pagoda, as well as the land around it, have traditionally been the most prominent landmarks in Berks County and with the support of a COG the goal is to continually market, promote and maintain these valuable regional assets.

### **G. Joint Expedited Approval Program (JEAP)**

The JEAP expedites the permitting process for priority economic development projects by bringing together all the necessary players to coordinate the complete permitting process. When presented with commercial and industrial development projects that would create significant investment and jobs, the JEAP process is enacted to help expedite permit reviews and approvals. County and local permitting agencies meet and agree to a schedule of permit milestones. The Berks County Commissioners, the Community Development Office, Greater Reading Economic Partnership and local governments along with private industry work together resulting in private development being able to start up and create jobs more quickly. The process saves time and money.

The JEAP process has received statewide recognition by the State Planning Board as an example of expediting permitting and something after which to model future processes.

### **H. Blighted Property Review Committee (BPRC)**

The BPRC was created in 2015 to eliminate blighted conditions upon certain derelict properties that individually and collectively constitute a blight and nuisance in County neighborhoods. The Committee is comprised of 5 members.

Municipalities refer subject properties to the Committee who works with property owners to voluntarily remove blight. If conditions are not removed, the Committee can certify the property as blighted and submit it to the Berks County Redevelopment Authority (BCRA). The Redevelopment Authority can acquire such properties through the power of eminent domain and then hold, clear, manage, or dispose of such properties for reuse.

### **I. Berks County MS4 Steering Committee and Cooperative Education Program**

The Berks County MS4 Steering Committee (BCMS4SC), originally formed in 2003, was formalized through an Intergovernmental Cooperation Agreement in 2013 to address the proposed new NPDES permit requirements on a regional level. The committee is comprised of 38 MS4 permitted municipalities. Municipal members share costs jointly for the Cooperative Education Program which is implemented by the education partners. The education partners include the Berks County Planning Commission, Berks County Conservation District and Berks Nature. The education partners seek to provide education and outreach to and on behalf of the member municipalities that addresses requirements for MCM'S 1, 2 and 6, although education is provided for all MCMs. Additional information about MS4 and NPDES is found in Chapter 3.

### **J. Intergovernmental Cooperation/Participation Policies**

#### **Intergovernmental Cooperation/Participation Goal:**

To develop and expand cooperation and communication among municipal officials and citizens to provide for increased participation in the planning process, and to create a more efficient mechanism to meet governmental responsibilities.

#### **a. Partnerships and Coordination**

##### **Goal:**

To develop and expand partnerships, communications, and coordination among municipal officials, the private sector, and citizens during the planning process.

##### **Policies:**

- (1) The county will continue to encourage and identify avenues for intergovernmental cooperation. Every aspect of county government will be explored for potential cooperative efforts.
- (2) The county will continue to maintain and keep updated the Berks County Web Page.
- (3) The county will continue to work with all groups and organizations interested in intergovernmental cooperation.

## Chapter 11 - Intergovernmental Cooperation/Participation

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- (4) Collaborate with the City of Reading to determine the city's and county's most appropriate role in the operation and maintenance of regional assets.
- (5) Increase the number of cultural and entertainment events occurring within the city. Increase suburban participation and tourism.
- (6) Maintain and expand the city's position as a regional education, and training center.

### **b. Inter-municipal Initiatives**

#### **Goal:**

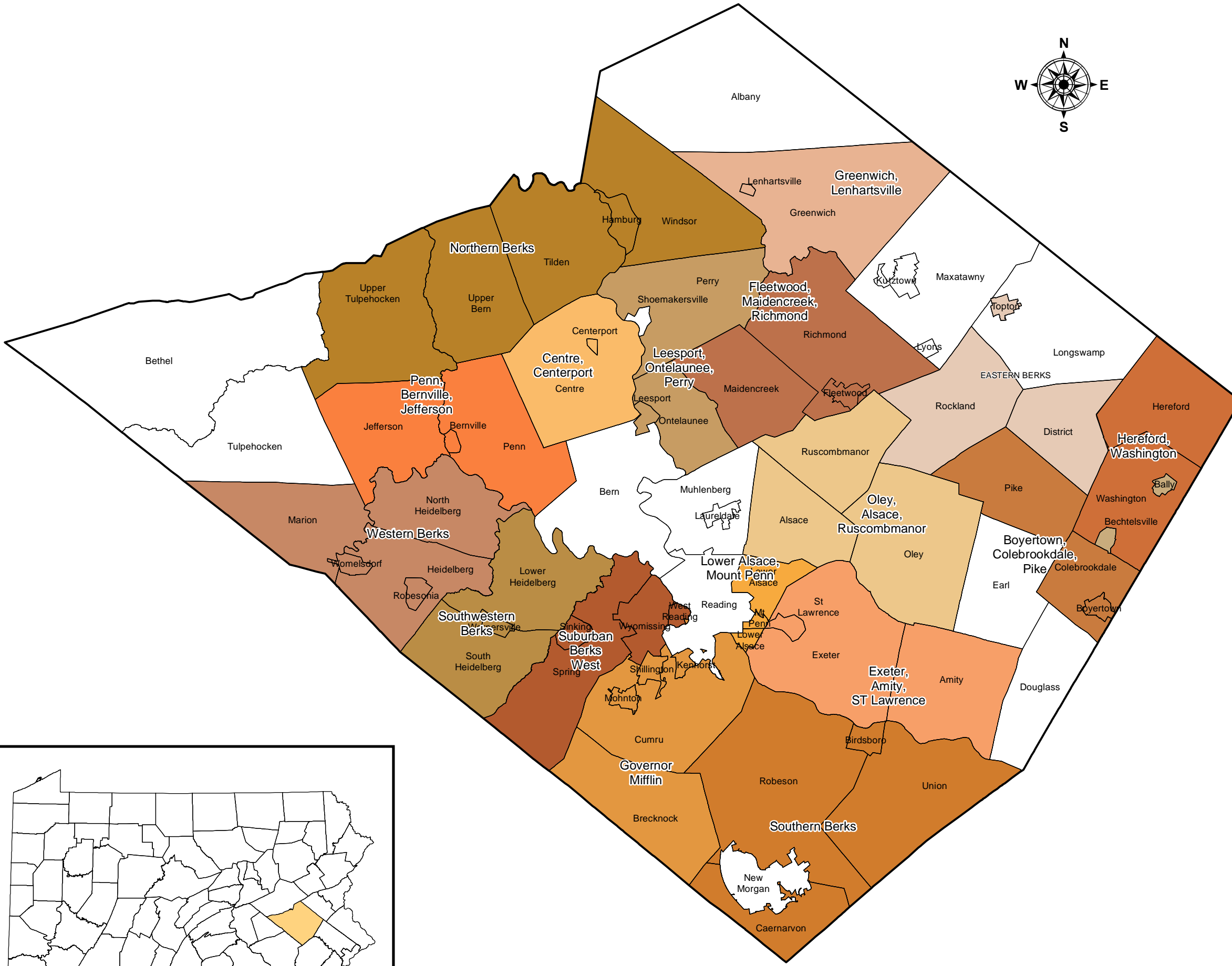
To take an intergovernmental approach to planning, zoning, and municipal service projects.

#### **Policies:**

- (1) The Berks County Planning Commission will continue to encourage inter-municipal cooperation through the Berks County Municipal Planning Program.
  - (i) The Planning Commission staff will continue to administer the Joint Comprehensive Planning Program. Staff will continue to encourage municipalities to maintain existing joint planning efforts and to expand these where possible.
  - (ii) The Planning Commission staff will continue to encourage and facilitate updates, when needed, of existing joint comprehensive plans to bring them into compliance with amendments to the Municipalities Planning Code.
  - (iii) The county will continue to encourage implementation of joint comprehensive plans through joint zoning ordinances.
  - (iv) The Planning Commission staff will, upon request by municipalities, complete updates to joint comprehensive plans.
- (2) The county will implement the Municipal Merger Program. The County Redevelopment Authority and Albright College's Center for Excellence in Local Government (CELG) will provide assistance to help complete economic studies for municipalities interested in merging. The county will notify municipalities of the availability of this assistance.
- (3) The County Redevelopment Authority will assist developed boroughs and townships with site specific redevelopment concept plans to assist in the redevelopment of vacant buildings within developed areas.
- (4) The County Redevelopment Authority, through the Berks County Blighted Property Review Committee, will continue to assist municipalities in identifying blighted properties and assist homeowners in voluntarily rectifying their neglected condition.
- (5) The county will explore implementing Specific Plans as a demonstration project, in accordance with the Pennsylvania Municipalities Planning Code. All municipalities that have participated in the Berks County Joint Comprehensive Planning Program will be eligible to complete a Specific Plan.
- (6) The county will continue to include and solicit comments from local municipalities and other county agencies when reviewing projects of local and regional significance.
- (7) The Planning Commission staff will continue to coordinate the Berks County Uniform Construction Codes Countywide Board of Appeals. Each year Planning Commission staff will send outreach to all Berks County municipalities, regardless if they participated previously, and encourage them to participate with the Countywide Board of Appeals.
- (8) Planning Commission staff will continue to coordinate and administer the Berks County MS4 Steering Committee. This brings a regional approach to planning for the development of MS4 related materials, documentation and planning.
- (9) The county will support efforts that implement the Berks County Sewer and Water Regionalization Study. The Planning Commission staff will maintain and update the Study as new information is received.
- (10) Assess legal constraints to cooperation and seek to change where necessary.
- (11) Identify appropriate funding mechanisms.

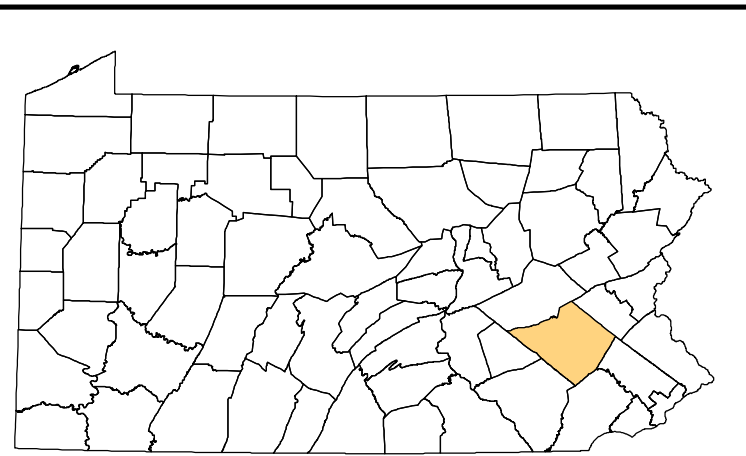


# Joint Comprehensive Planning Berks County, Pennsylvania



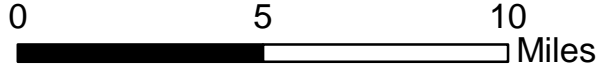
**Legend**

- Bally, Bechtelsville (1994)
- Boyertown, Colebrookdale, Pike (2005)
- Centre, Centerport (1997)
- Eastern Berks (2015)
- Exeter, Amity, St Lawrence (2005)
- Fleetwood, Maiden creek, Richmond (2011)
- Governor Mifflin (2017)
- Greenwich, Lenhartsville (2009)
- Hereford, Washington (2018)
- Leesport, Ontelaunee, Perry (1996)
- Lower Alsace, Mount Penn (2006)
- Northern Berks (2005)
- Oley, Alsace, Ruscombmanor (2009)
- Penn, Bernville, Jefferson (2008)
- Southern Berks (2004)
- Southwestern Berks (2011)
- Suburban Berks West (2018)
- Western Berks (2000)
- Berks County Boundary
- Municipal Boundaries



Source: Berks County Planning Commission, Berks County GIS,  
Berks County Mapping, Berks County Department of Emergency Services

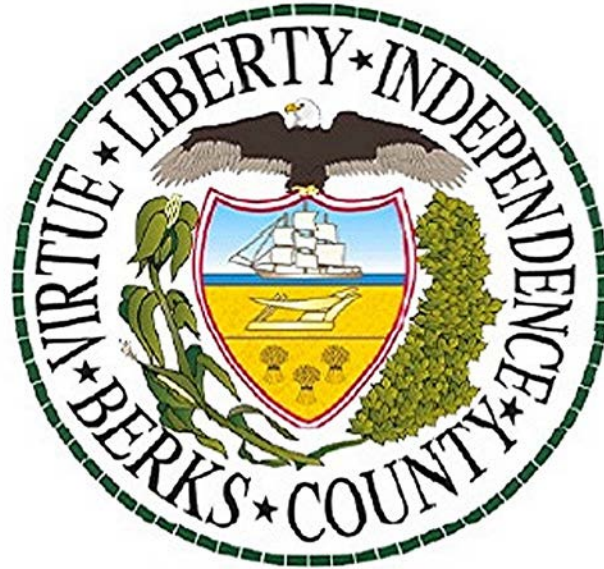
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# Chapter 12 - Plan Interrelationships



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**PLAN INTERRELATIONSHIPS****A. Statement Regarding Improvement of Planning, Implementation Procedures, and Government Efficiency**

Prior sections of this Plan offered recommendations and suggestions to be accomplished within the existing growth management framework. Those proposals comply with and are limited by the current legal and financial mechanisms authorized within the Commonwealth of Pennsylvania. This section recommends legislative initiatives and other actions that include changing certain governmental priorities, procedures, and operations to further assist with implementation of this Plan. The recommended actions are intended to supplement recommendations contained elsewhere within this Plan and should not be construed as the only recommended activities for the specified level of government. However, the recommendations listed below are considered of such significance as to warrant special mention.

**Federal Actions**

- (1) Provide the financial resources to fund community development and environmental protection in a flexible manner to permit the county and its local municipalities the opportunity to implement developmental goals and improve environmental quality in accordance with area wide goals and objectives.

**State Actions**

- (1) The Commonwealth should ensure that the activities of all state agencies are consistent with county plans. Efforts to link funding proposals and permitting to county plan consistency should continue.
- (2) The Commonwealth should allocate funds for the development of local plans, regulations and municipal training.
- (3) Once municipalities have formulated effective local plans, the state should provide adequate funds and/or the tools to locally finance plan implementation. The Commonwealth should ensure that municipalities with up-to-date plans and controls are not subjected to problems due to either inadequate state funding or the absence of legislation authorizing local methods to finance the construction or expansion of infrastructure concurrent with development pressure. Furthermore, municipalities with current and effective planning should receive priority consideration for state infrastructure and improvement funding. This would also serve as an incentive for municipalities to undertake and update local plans. The state should create a technical and financial assistance program similar to what was previously known as the Land Use Planning and Technical Assistance Program (LUPTAP).
- (4) The Commonwealth should explore mechanisms to provide a more equitable revenue structure for counties. County government is continually burdened by additional responsibilities without concurrent increase in state funds or the authority to adopt flexible revenue options.

**County Actions**

- (1) The county will continue to participate in multi-county planning processes for matters of regional importance, as well as expand and improve our contacts and communications with other counties.
- (2) The county will employ the mandated and optional review processes to advance projects that comply with the Comprehensive Plan and disapprove projects that promote needless duplication of efforts or are inconsistent with the Plan. Throughout these reviews, the Berks County Planning Commission will consider regional solutions as a stated priority.
- (3) The Planning Commission will continue to monitor and review local municipal plans and development regulations for consistency with the *County Comprehensive Plan*. The Commission should explore additional methods for increasing the effectiveness of reviews and local consistency with the Comprehensive Plan.
- (4) The county will continue technical assistance to municipalities regarding the formulation of local plans and regulations.



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- (5) The county will condition receiving County-controlled funds upon the consistency of the intended project with the Comprehensive Plan.
- (6) The county will continue to work with the Center for Excellence in Community Leadership's Local Government Program to administer the Commission's Master Planner and Advanced Master Planner Program.
- (7) The county will support actions that improve the efficiency and cost effectiveness of local government including offering incentives for municipal mergers and consolidation of municipal authorities.
- (8) The county will work with local governments to develop and implement new programs that take advantage of joint municipal plans in Berks County.

### Regional Cooperative Actions

- (1) The county will assist municipalities that have adopted joint comprehensive plans and wish to explore using the tools and opportunities contained in Article XI of the Municipalities Planning Code; specifically the formulation of implementing agreements, sharing of revenues and fees within a region, transfer of development rights programs, and the adoption of Specific Plans as referenced in Section 1106.
- (2) The county will assist municipalities and authorities that wish to explore consolidation or merger of sewer and water facilities in a manner consistent with this Plan.

### Local Government Actions

- (1) Foster and participate in multi-municipal activities. Municipalities should engage in joint municipal plans consistent with the Municipalities Planning Code.
- (2) Develop, maintain, and revise specialized plans and functional plans consistent with the Berks County Plan.
- (3) Develop and maintain municipal zoning, subdivision, planned residential development and other land use ordinances that reflect innovative growth management techniques that are result oriented.
- (4) Adopt and enforce building, housing, electrical, and fire prevention codes consistent with the Uniform Construction Code.
- (5) In accordance with the Environmental Advisory Council Law of 1973, establish an Environmental Advisory Council (EAC) to assist and advise the municipal planning commission and governing body regarding local environmental problems, conservation and community environmental programs, and to maintain data regarding open space and other unique features.
- (6) Develop equitable and documented fee structures and schedules for planning related procedures, permits, hookups, and other community services.
- (7) Seek interested and qualified individuals to serve on local planning commissions, zoning hearing boards, and environmental advisory councils. Governing bodies should publicly advertise and conduct interviews to select the most qualified individuals. Also, the governing body should allocate funds for the training of local officials.

### B. Statement Regarding Plan Interrelationship

Section 301(a)(4.1) of the Municipalities Planning Code (Act of 1968, P.L.805, No. 247 as reenacted and amended), specifies that comprehensive plans must include a discussion of "the interrelationships among the various plan components, which may include an estimate of the environmental, energy conservation, fiscal, economic development and social consequences on the municipality." This clause is intended to ensure that the various components of the Plan are integrated and not in conflict with the primary community goals and objectives. Furthermore, this section requires that the Plan consider the impacts each component has upon the other so that the consequences of future decisions are known.

As a precursor to drafting the detailed recommendations of this Plan, the Planning Commission formulated and approved general goals and policies as a statement of community development objectives. The goals and objectives resulted from

the Planning Commission's prior plan, public input and staff recommendations. Each of the policies relates directly to its own general goal. Designing a county comprehensive plan is a difficult undertaking simply because the plan must offer recommendations concerning a variety of seemingly disparate and perhaps conflicting topics. The comprehensive plan is expected to encourage growth, while at the same time preserving large areas of the county.

During preparation of the Plan, each element was drafted and reviewed for compliance with all of the general goals and objectives. In this way, technical inconsistencies were eliminated and conflicts in policy were minimized. Similarly, each element of the Plan acts to support other elements. For example, the Community Facilities Plan recommends the expansion or construction of public sewer and water systems in certain areas that are designated by the Land Use Plan. As another example, the Transportation Plan, while recognizing the need to improve regional circulation and access through the construction of new limited-access highways, does not recommend interchanges to local access roads within agricultural or environmentally sensitive areas. The Planning Commission believes that the principle of integration was followed to the greatest extent possible throughout this Plan. However, due to compelling needs, in a limited number of cases the Planning Commission was required to select recommendations that did not entirely comply with other sections of the Plan. These are summarized as follows:

- (1) To achieve a compact future growth pattern, promote in-fill development, and resolve illogical existing development patterns. The Planning Commission designated certain existing farmland, including some operations with prime agricultural soils, as suitable for future growth.
- (2) Certain proposed new highways, in addition to the upgrading or relocation of certain existing highways, cannot avoid consuming some farmland, including farmland with prime agricultural soils. The regional importance of these highway projects, along with the tremendous costs of re-routing to avoid farmland, outweighs the need to preserve small areas of farmland. The highways will be designed to minimize the loss of agricultural land.
- (3) This Plan designates a large percentage of the total county land area for preservation, conservation and low density uses. Accordingly, the total amount of land available for development, although deemed more than adequate by this commission, will be less than the currently available acreage. As such, the price of land designated for future development could increase at a rate exceeding the current level. Although this occurrence would impact all residents, new homebuyers and new residents would be the most severely impacted. The Planning Commission assumes that the long-term economic benefits of compact urban and suburban development, along with the protection of environmental sensitive land, are worth the adjustment.
- (4) Throughout this Plan, the commission has offered recommendations regarding the need for multi-municipal action and increasing the direct and indirect actions of the county to control land use. It is important that the unique needs of each community remain part of the planning process.
- (5) Various Plan recommendations request the county and local municipalities to assume new responsibilities. The commission knows that the additional responsibilities will require additional funds at a time when the revenue ability of local government is strained. Furthermore, the benefits of the suggested new programs may seem intangible or realized only after many years. However, the commission assumes that the long-term benefits of these programs outweigh immediate funding problems.
- (6) Throughout the Land Use Plan, municipalities and authorities are requested to expand service into adjacent areas to achieve a compact land use pattern and avoid the expense of building new facilities elsewhere. Many of these authorities serve a defined geographic or municipal area. The commission is in effect requesting that they voluntarily become regional facilities. The commission is aware of the risks it is asking the municipalities and authorities to assume. However, the Land Use Plan can only be achieved by more efficiently using our existing facilities.

Finally, the Planning Commission is aware of gaps in this Plan that must be filled during the coming years. Detailed proposals regarding open space and recreation, historic preservation, and planning tools must be undertaken as soon as possible. It is assumed that this Plan provides a sound regional framework for the development of these future plans.

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### **C. Statement Regarding Plan Implementation Strategies**

Section 301(a)(4.2) requires that every Comprehensive Plan include a “discussion of short- and long-range plan implementation strategies, which may include implications for capital improvements programming, new or updated development regulations, and identification of public funds potentially available.” The intent of this clause is to encourage the formation of guidelines and recommendations for the manner in which the Plan’s objectives are to be most effectively implemented.

Each component of this Plan contains a section on policies and implementation strategies. It is, therefore, not necessary to reiterate the commission’s recommendations regarding implementation. However, since so much depends upon the willingness of municipalities to incorporate the recommendation contained within the Plan, the commission must improve and expand its municipal programs for technical assistance regarding the development of local plans and ordinances.

### **D. Statement Regarding Plan Relationship to the Development of Adjacent Municipalities**

Section 301(a)(5) of the Municipalities Planning Code requires that the Comprehensive Plan consider “the relationship of the existing and proposed development of the municipality to the existing and proposed development and plan in contiguous municipalities, to the objectives and plans for development in the county of which it is a part, and to regional trends.” The intent of this section is to ensure that all plans give consideration to the existing development and proposed development patterns of municipalities located within the County and the situations of adjacent counties.

During the course of preparing this Plan, local comprehensive land use plans and zoning ordinances for each municipality in Berks County were mapped. Similarly, all public sewer and water lines, and Act 537 plan future proposals for each municipality were mapped. The commission considered each of these factors during the initial design of the Draft County Future Land Use Plan. The local regulatory information was most important in regard to identifying areas that were zoned for agricultural preservation (exclusive large-lot or sliding- scale zoning) and high-density development. The development trends of areas bordering Berks County along U.S. 422, U.S. 222, and I-78 were of particular concern. The future land use plans for each adjacent county were mapped. Additionally, those plans were reviewed for background regarding development trends. The Land Use Chapter provides further information regarding existing land use and development trends within the county in addition to the Existing Land Use Map.

The draft Future Land Use Map was compared to local development regulations in order to identify areas of conflict. Meetings were held for each region where planning commission and governing body members could inquire about any conflicts or issues that needed to be addressed. The draft Plan was edited to resolve as many conflicts as possible between the County Future Land Use Map and the development regulations within each municipality and adjacent counties. In this way, the county hopes to guarantee the maximum level of plan consistency among townships, boroughs, the City of Reading and neighboring counties.

### **E. Conclusion**

Regional planning is a shared venture involving not only the county and its local communities but also private citizens, organizations, and business interests. It remains the responsibility of these citizens and groups to participate and cooperate in carrying out this Plan and to continue the area wide planning process. In the past few years the Berks County Comprehensive Plan has enjoyed significant support and buy-in from local governments and civic groups. It has served as a rallying point for many environmental and economic development interests. We have been successful in implementing the plan through our joint comprehensive planning program and it is very important that we continue to build relationships with local communities and organizations throughout Berks County.

Although the economic recession that was experienced a couple of years ago has mainly ebbed many of the resources that we relied upon to fund regional and local plans have been eliminated or drastically reduced. We do not expect these resources to be available in the near future. Therefore, it is critical that we cooperate to find new efficiencies and processes to continue our planning programs, methods and training.

Quite often regional plans are predicated on new infrastructure for sewer, water, highways and passenger rail. However, funding for infrastructure expansion is similarly reduced. We can no longer depend upon regional projects to implement our ideas. In fact, funding maintenance of our existing infrastructure is now problematic. Municipalities will be tempted

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to defer rehabilitation and repairs. Development patterns that make use of existing infrastructure and minimize future costs must become a central part of our planning philosophy.

Regional cooperation, joint planning, and service sharing will be more important than ever. Berks County, municipalities, and the private sector must work together to solve the challenges of providing services with limited resources. We believe that this Plan serves as a blueprint for continuing to move Berks County forward.





# Chapter 13 - Public Participation & Plan Adoption



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### PUBLIC PARTICIPATION AND ADOPTION

No comprehensive plan can be completed without input from the citizens and municipalities it serves. As part of the County's comprehensive plan update, planning commission staff engaged a variety of stakeholders and solicited input from the public. Public participation included the use of surveys, regional meetings, social media, websites, press releases and a public open house unveiling the draft plan. The following are brief overviews of the various public outreach initiatives that were undertaken during the planning process:

#### A. Municipal Survey

As part of the planning process a twelve question survey was prepared and distributed to the 72 municipalities in the county on January 20, 2017. The survey was intended to solicit input from the municipalities regarding their current and future planning initiatives. Out of the 72 municipalities in Berks County 36 responded to the survey. The majority of respondents (47%) to the survey were elected officials.

#### B. Citizen Survey

To gain public input for the county comprehensive plan update, the Berks County Planning Commission released an online survey on July 11, 2017. This survey was prepared in both English and Spanish languages and promoted through a press release to the local media. It was forwarded to the Hispanic Center of Reading and the Latino Chamber of Commerce as well as posted to the Planning Commission's Facebook page and website. Surveys were emailed to all email lists we have on file in the planning commission office and advertised via the televised Commissioner's Board Meeting on July 13, 2017. The survey period ended on August 11, 2017. A total of 866 citizens replied to the survey during the roughly month-long period in the summer of 2017. Unfortunately, the planning commission received no input from the Hispanic community in Berks County during the survey response period or thereafter.

#### C. Berks County Board of Commissioners

On August 10, 2017 Planning Commission staff presented the draft Future Land Use plan and map to the County Board of Commissioners during their weekly televised meeting.

#### D. Regional Meetings

The Planning Commission staff conducted five regional meetings to engage municipal officials. The meetings were designed to gather input from the 72 municipalities in the county regarding the Future Land Use map that was developed during the plan update. The following is the list of the five regional meetings and the dates they were held:

- Metro Region - Tuesday January 30, 2018 at Muhlenberg Township Municipal Building 5:30PM
- Oley Hills Region – Thursday February 8, 2018 at Earl Township Municipal Building 5:30PM
- Southern Highlands Region – Thursday February 15, 2018 at Birdsboro Borough Hall 5:30PM
- Hawk Mountain Region – Thursday February 22, 2018 at Perry Township Municipal Building 5:30PM
- Tulpehocken Region – Tuesday March 13, 2018 at Robesonia Borough Hall 5:30PM

#### E. Act 247

In accordance with the Pennsylvania Municipalities Planning Code, Act 247, the draft plan was sent out for review on June 18, 2018 for the required 45 day review period. Notice was sent to all Berks County municipalities, adjacent counties and municipalities, school districts, and other community partners in the county.

#### F. Public Open Houses

Planning commission staff held two public open houses on July 16, 2018 and September 17, 2019. The purpose of these open houses was to unveil the original draft and revised draft documents to the public and gather comments and answer any questions regarding the draft plan. The open houses were held at the County's Agricultural Center which is



## **Chapter 13 - Public Participation and Adoption**

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centrally located and easily accessible for the general public. Citizens could submit comment forms on-site or take them home and send them into the office. The open houses were advertised using print media as well as digitally via the planning commission website and Facebook page. Comments were received and reviewed by the Berks County Planning Commission at their monthly meetings in August and September of 2018 as well as October of 2019. Planning commission staff prepared responses to all of the comments received. Based on some of those comments changes were made to the plan where appropriate.

### **G. Adoption**

At the beginning of the regularly scheduled weekly televised meeting of the Berks County Board of Commissioners on January 23, 2020 the Commissioners held a Public Hearing where the planning commission staff presented the draft Berks County Comprehensive Plan Update for adoption. The plan was unanimously adopted by the County Board of Commissioners by enactment of Resolution No. 21-2020.

