

# MONTGOMERY COUNTY TODAY

Background Information for  
MONTCO 2040: A SHARED VISION,  
the new comprehensive plan for Montgomery County





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# Montgomery County **TODAY**

Background Information for **MONTCO 2040: A SHARED VISION**,  
the new comprehensive plan for Montgomery County

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## INTRODUCTION

*Montgomery County Today* describes Montgomery County's people, environment, and landscapes. This report provides background information for the new county comprehensive plan, *Montco 2040: A Shared Vision*, and can be used to:

- Understand planning issues facing Montgomery County;
- See what has happened recently in the county;
- Get in-depth information and data on a wide range of topics about Montgomery County; and
- Visualize growth trends and future needs.

*Montgomery County Today* is divided into a variety of topics that describe the people and landscapes of the county, including regional position, people, health, the built environment, the natural environment, open space, transportation, housing, the economy, infrastructure, cultural and educational resources, and government structure.



# THUMBNAIL SKETCH OF MONTGOMERY COUNTY



### What is Montgomery County?

What is Montgomery County? On the surface, Montgomery County is a large, prosperous, and diverse suburb of Philadelphia; however, digging deeper, the county is much more. It is:

- *A Leading Innovator for Businesses and Industries throughout American History* - From early paper mills, iron works, and film studios to cutting-edge pharmaceutical and investment firms, Montgomery County has been on the leading edge of innovation in the nation's economy. Today, with over half a million jobs, the county remains a vibrant place of commerce and work.
- *A Transportation Gateway to Pennsylvania* - With the Pennsylvania Turnpike, Northeast Extension, Schuylkill Expressway, and Blue Route intersecting in Montgomery County and with an extensive railroad network, the county is a transportation hub, linking the Philadelphia area with the rest of the state.
- *A Shopping Destination* - The King of Prussia Malls, which form the largest mall complex on the east coast, as well as the Philadelphia Premium Outlets and countless malls, shopping centers, and stores, make Montgomery County a regional attraction for shoppers.
- *A Procession of Traditional Towns Dotted along old Train Lines* - Classic old towns, like Narberth, Conshohocken, Royersford, Glenside, Ambler, and Souderton, are strung along the county's rail lines, providing appealing main street downtowns for the county's residents.
- *A Historic Place tied directly to the Nation's Founding* - From Valley Forge National Historical Park to the John James Audubon Center at Mill Grove, from colonial-era farmsteads to art deco movie theaters, the county reflects the ever-changing character of southeastern Pennsylvania.
- *An Interconnected Community of Schools, Parks, Libraries, and Trails* - With parks like Valley Forge and Green Lane; with many colleges and universities, such as Bryn Mawr and the Montgomery County Community College; with excellent public and private schools; with its extensive trail network along the Schuylkill River, Perkiomen Creek, and Wissahickon Creek; and with its many libraries, Montgomery County provides abundant community resources to its residents and citizens.
- *A Tapestry of Neighborhoods and Homes* - Above all, Montgomery County is a place that over 800,000 people from all walks of life call home.

#### PLANNING ISSUE

*The Montgomery County brand is not as well known in the region as it should be.*



## THUMBNAIL SKETCH OF MONTGOMERY COUNTY

# REGIONAL POSITION AND INFLUENCES



### The Philadelphia Region

#### Montgomery County in the Region

### The Philadelphia Region

Montgomery County, consisting of 62 townships and boroughs and more than 800,000 people, is a diverse and historic suburban community located directly northwest of Philadelphia.

The county is one of five southeastern Pennsylvania and four New Jersey counties comprising the Philadelphia region, which is the sixth largest in the nation. This region, with 5.6 million people, functions as an interdependent metropolis that competes with other cities around the globe. Other Pennsylvania counties in the region include Bucks, Chester, Delaware, and Philadelphia Counties.

The Philadelphia region, located on the Northeast Corridor between New York and Washington, D.C., is a relatively dense place, with 1,512 people per square mile. The region's landscape is defined by its two rivers - the Delaware and Schuylkill Rivers.

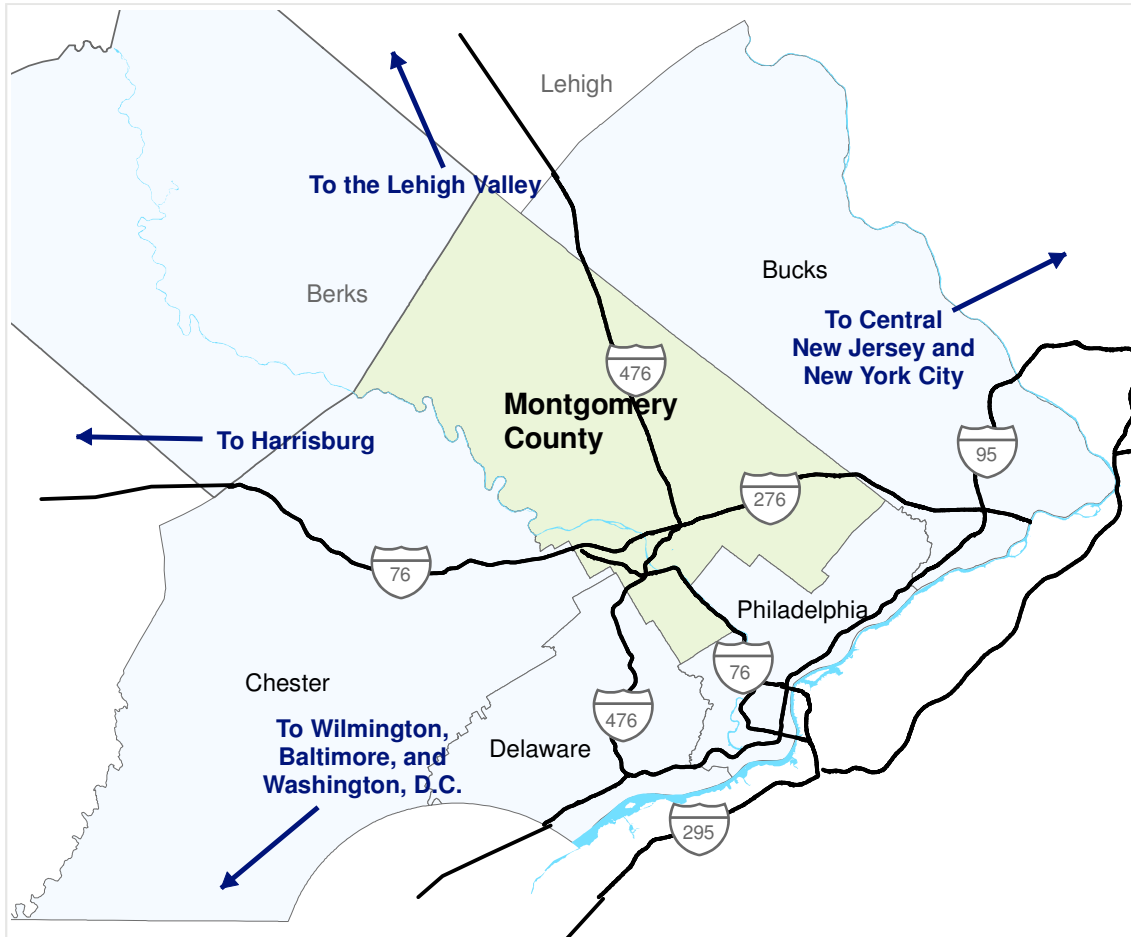
All of Montgomery County's neighboring counties have completed comprehensive plans, and these plans are generally consistent with *Montco 2040: A Shared Vision*.



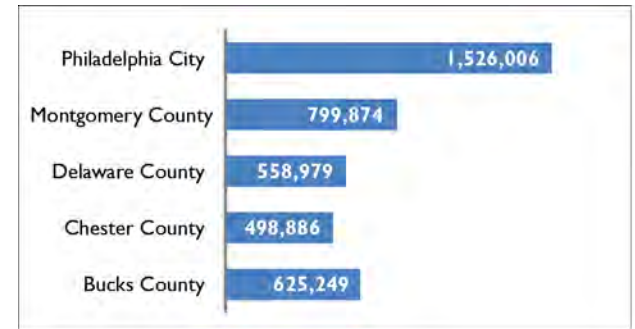
### What's New

- The City of Philadelphia is growing again. Between 2000 and 2010, the city added over 8,400 people, reversing decades of significant declines.
- Philadelphia has strengthened its role as a cultural, entertainment, and tourist destination. Since 2000, the city has added, rebuilt, or expanded many attractions, including:
  - National Constitution Center, National Museum of American Jewish History, the Barnes Foundation, and the African American Museum.
  - The Kimmel Center for the Performing Arts and other theaters on the Avenue of the Arts.
  - Lincoln Financial Field and Citizens Bank Park.
  - The Independence Visitor's Center and the Liberty Bell Center on Independence Mall.
  - The Pennsylvania Convention Center, which expanded by 60% to one million square feet.
- The Philadelphia International Airport has approved an ambitious expansion plan.
- Deeper dredging of the Delaware River for the Port of Philadelphia has begun.
- Although Marcellus Shale and its natural gas are not found in the Philadelphia region, the area could be impacted by the gas industry and lower energy prices.
- Areas north and west of the region, particularly the Lehigh Valley and central PA, have become important distribution center locations.
- The local food movement has started supporting many farms in the area, particularly in Lancaster, Berks, Chester, and Lehigh Counties.

**FIGURE 1: Regional Position**

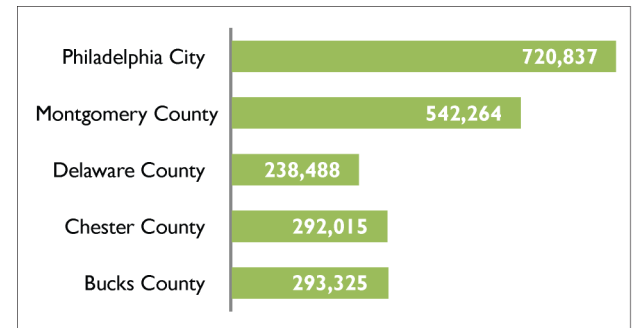


**FIGURE 2: Population in 2010**



Source: U.S. Census Bureau

**FIGURE 3: Employment in 2010**



Source: Delaware Valley Regional Planning Commission estimates

## REGIONAL POSITION AND INFLUENCES

### The Philadelphia Region

#### Montgomery County in the Region

#### Montgomery County in the Region

Like many suburban communities across the nation, Montgomery County has changed significantly over the past 60 years, evolving from a primarily agricultural place with a number of large industrial towns to a dynamic employment hub with a wide range of high-tech and service jobs.

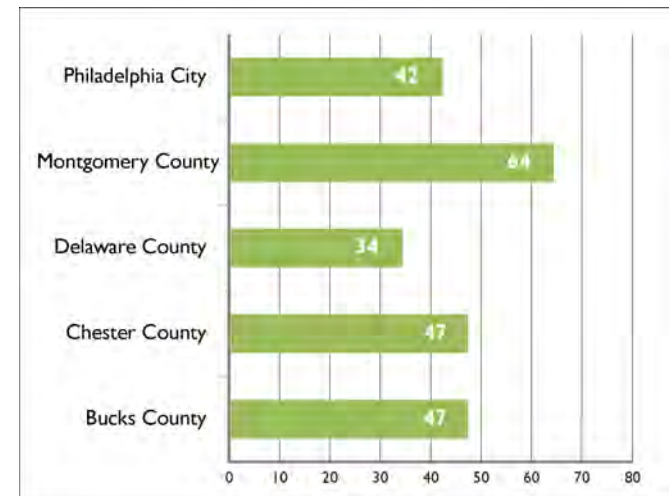
Montgomery has always been a center of commerce and transportation in southeastern Pennsylvania, and this role has intensified during the past 60 years. With over a half million jobs, Montgomery County leads the state in manufacturing and high-tech jobs, importing tens of thousands of workers from neighboring counties. With its many malls, the county attracts shoppers from all over the region. And, with its extensive expressway system, the county is a transportation hub, providing a gateway to the rest of the state.

Montgomery County isn't just about jobs, shopping, and highways. The county is also a historic place that was intimately involved in the American Revolution—it's a beautiful place, with rolling farmland, winding streams, and wooded hills—and it's a neighborly place, home to many traditional towns and residential communities.



Valley Forge National Historical Park, a regional and national treasure, is located in Montgomery County.

**FIGURE 4:** Retail Square Footage per Resident



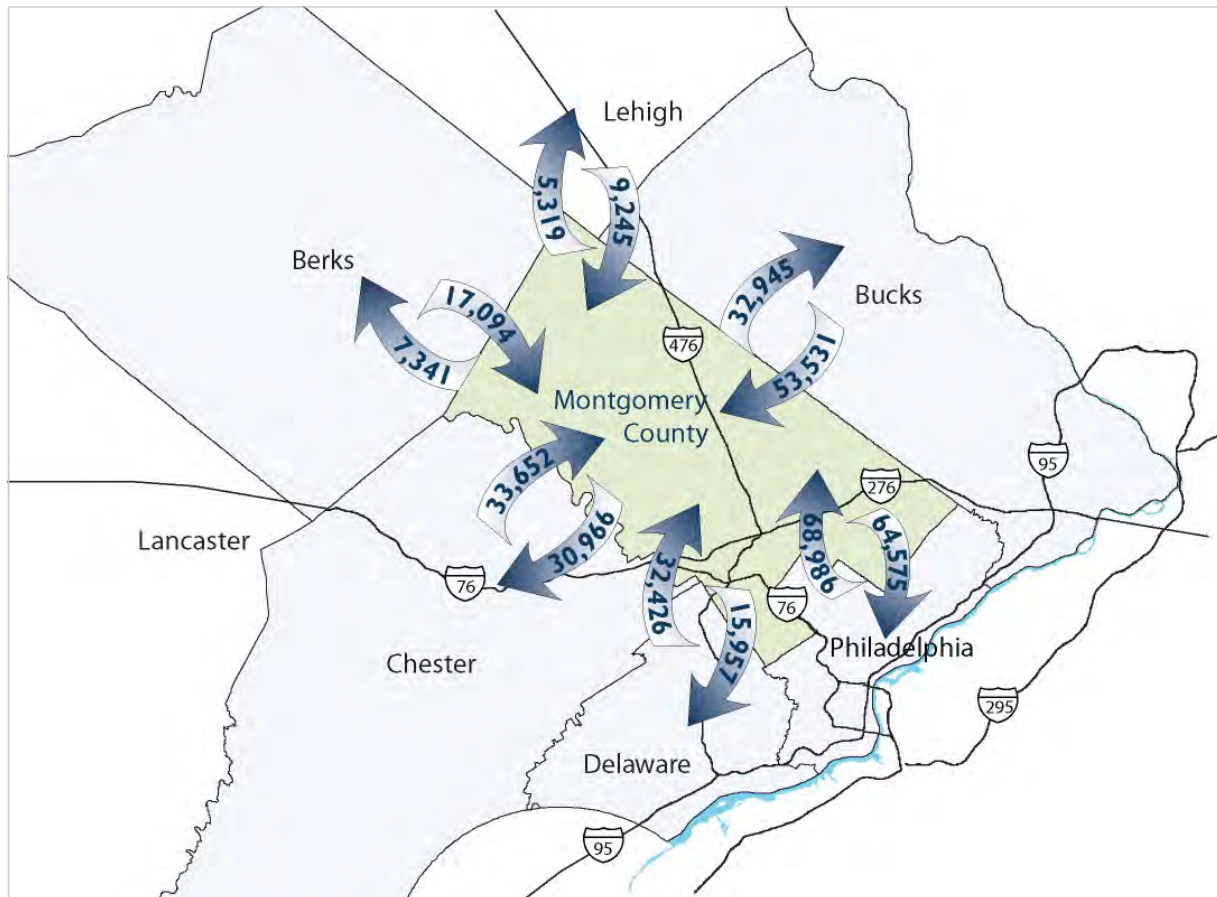
Sources: 2012 The CoStar Retail Report of the Philadelphia Retail Market, 2011 Montgomery County Shopping Center Inventory, and U.S. Census Bureau



Montgomery County is known throughout the Philadelphia region for its excellent county trail system, the most extensive county system in the area.

**FIGURE 5:** *Commuting Patterns*

In 2010, 85,536 more people commuted into Montgomery County than out. Commuting patterns between Montgomery County and its neighboring counties are shown below.



Source: U.S. Census Bureau

**Montgomery County connects the region with the rest of the state.**

**Here are a few key transportation facts.**

**Montgomery County has:**

- Over 57 miles of limited access highways, more than any other Pennsylvania county in the region.
- Nearly 1.2 billion auto trips per year, almost as many as Philadelphia.
- 109 million annual trips on the PA Turnpike, most in the state, coming from 6 interchanges.
- Over 10.8 million annual trips on regional rail, slightly less than Philadelphia, from 41 rail stations on 6 rail lines.

## REGIONAL POSITION AND INFLUENCES



# THE PEOPLE OF MONTGOMERY COUNTY



**Population and Projections**

Household Characteristics  
and Age

Income, Poverty, and Education

Race and Hispanic Origin

**PLANNING ISSUE**

*The county is forecasted to add 94,612 more residents by 2040. Where will these people live and work and how might this change the existing landscape?*

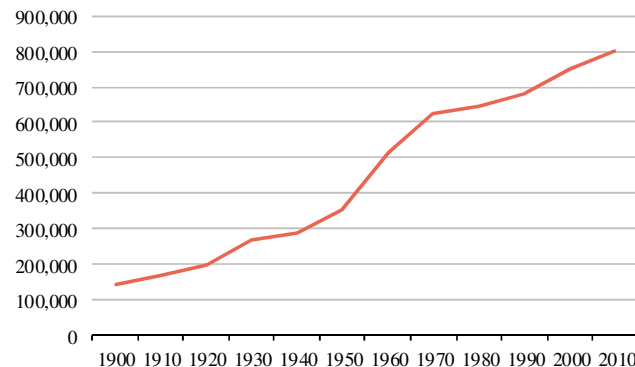
**Population and Projections**

*Existing Population*

Montgomery County is the third most populated county in Pennsylvania. In fact, the county’s 812,000 people make it larger than four entire states. The county has evolved over the last hundred years from a collection of industrialized towns and villages spread amongst rural farmland and open space to a mix of old and new suburbs with regional economic centers that both support and compete with Philadelphia. The county’s fastest growth periods took place in the decades prior to 1970 as the rapid expansion of roads, sewers, and other infrastructure opened new and less expensive areas of the county for development. Since 1970, population growth has slowed, but it has still grown by about six percent on average each decade.

The areas of the county with the greatest population densities are found in the boroughs and in some of the mature suburbs in the eastern part of the county which border Philadelphia. However, the greatest growth over the last twenty years has taken place in some of the townships in the western half of the county, especially along the Route 422 corridor.

**FIGURE 6:** *Population Growth: 1900-2010*



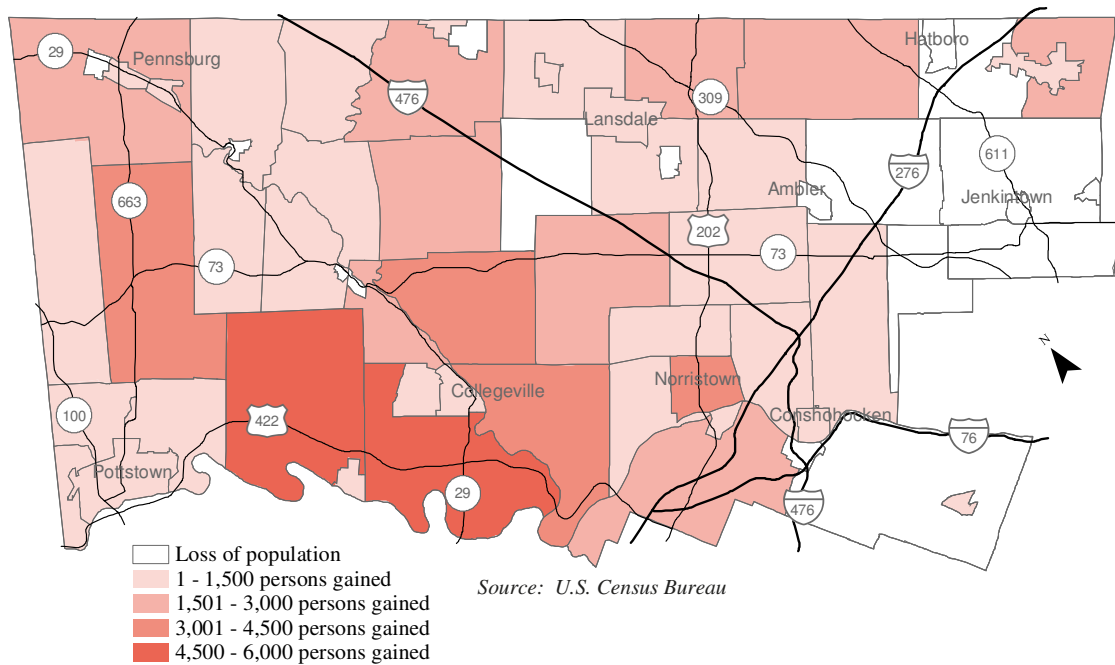
Source: U.S. Census Bureau

**What’s New**

- Montgomery County added the third largest number of people (50,887) between 2000 and 2010 of all of Pennsylvania’s counties.
- The ten largest municipalities in the county remained the same as in 2000, but half of those places lost population in the last ten years.
- The most populous municipalities remain in the eastern part of the county, most being near or adjacent to Philadelphia, but some outside the inner ring of suburbs are catching up. Horsham, Montgomery, and Lower Providence Townships all moved up within the top ten.
- After a period of decline, some boroughs and municipalities, such as Norristown, are starting to build back up with redevelopment and the influx of immigration. 14 of the county’s 24 boroughs gained population between 2000 and 2010.



**FIGURE 7: Population Change by Municipality: 2000—2010**



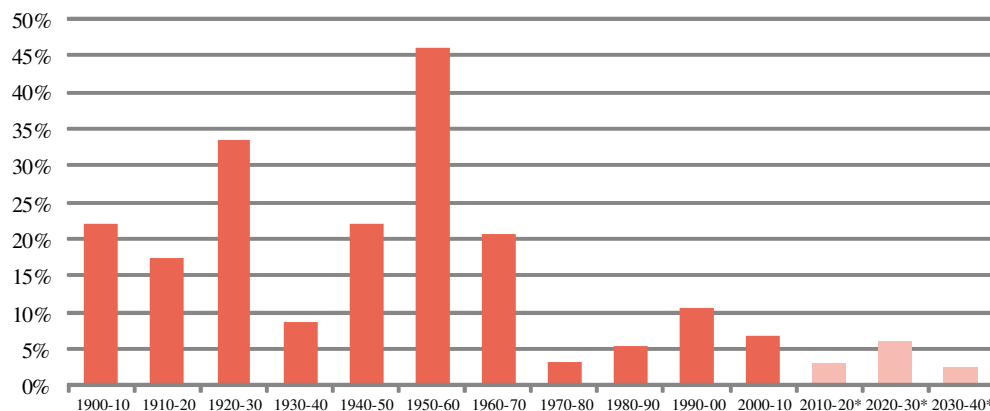
**Population Forecast**

It is unlikely that the county will be able to continue the rate of growth in population of the last two decades—an average of 8.6% per decade. Growth in recent years following 2010 has slowed from the Great Recession and in the current decade, 2010-2020, the county’s population is expected to grow by approximately 3%, or 23,690 people, which is only half of what was gained in the previous decade.

Over the longer term, it is anticipated that the growth rate will prove itself to be cyclic and gain at a higher rate between 2020 and 2030. While undeveloped land will still be limited, the redevelopment of underused sites and other infill projects will offer growth opportunities. This trend has already been in effect. Since 2004, over 35% of new residential units have been built in existing developed areas as infill or redevelopment projects.

The 2040 long range forecast for the county was formulated by the Delaware Valley Regional Planning Commission with input and modifications contributed by county staff. The forecast calls for the population of Montgomery County to reach 894,486 by 2040, an increase of 94,612 persons or 11.8% overall.

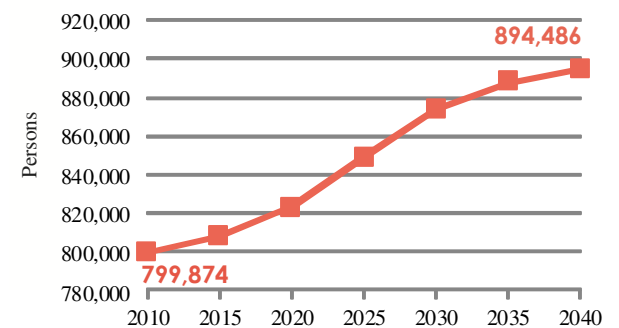
**FIGURE 8: Percent Population Change by Decade, Historical and Projected**



\* Projected Growth

Sources: U.S. Census Bureau, Delaware Valley Regional Planning Commission (projections)

**FIGURE 9: Forecasted Population Through 2040**



Source: Delaware Valley Regional Planning Commission

Population and Projections

**Household Characteristics and Age**

Income, Poverty, and Education

Race and Hispanic Origin

**PLANNING ISSUE**

Single person households are increasing while households of married couples with children decline. Changes in household types will influence the housing choices people make.

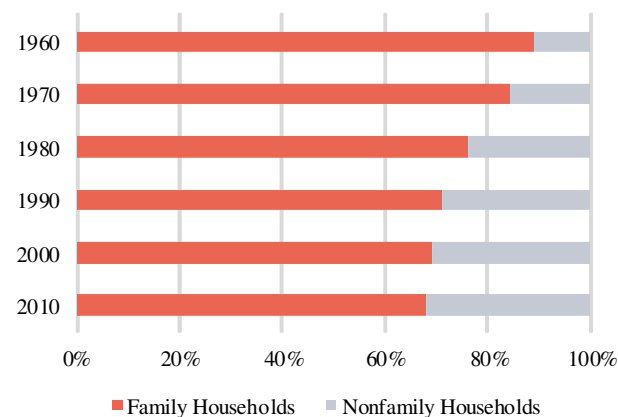
**Household Characteristics and Age**

*Household Types*

Montgomery County, like much of the nation, has shifted away from the traditional family structures that defined popular household types for decades. Over the last 50 years, the percentage of households classified as a family has dropped from 89% in 1960 to only 67% in 2010. A single person living alone is now more common than a household consisting of a married couple with children.

Married couples without children living at home are still the largest household type. These households represent elderly couples, empty nesters whose children have moved out, or other married couples who do not have children.

**FIGURE 10:** *Percent of Family and Nonfamily Households: 1960—2010*

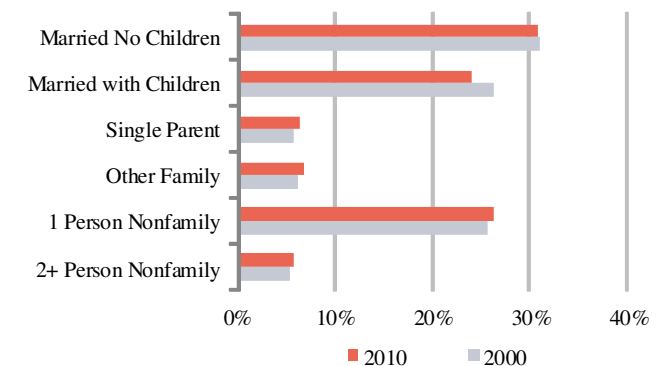


Source: U.S. Census Bureau

**What's New**

- For the first time, there were more single person households than families with married couples and children living under the same roof in 2010.
- Further evidence of the dissolution of the traditional family structure—married couples with children decreased as a percentage while single parent households increased.
- Boroughs and more urbanized areas of the county tend to have more single person or two person households, but these smaller households are also becoming more common where new age restricted developments have been built.
- Changes in households have influenced the types of residential units being constructed in the county. Apartment buildings and other developments with denser designs and smaller units have become more popular over the last decade and now represent over half of all new residential construction.
- The Millennial Generation is roughly described as people born between 1980 and 2000, and their views are changing the status quo in terms of employee and residential preferences. Attracting Millennials could spur economic growth in a community.

**FIGURE 11:** *Percent of Household Types: 2000 and 2010*



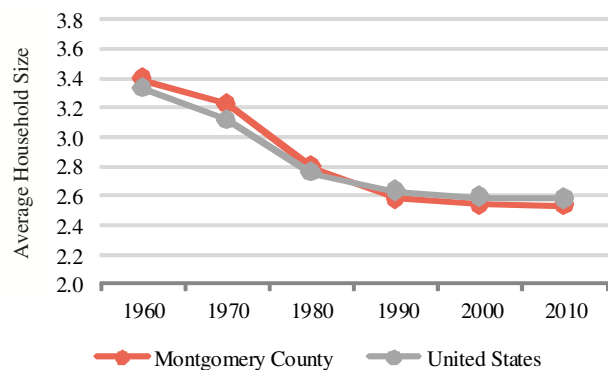
Source: U.S. Census Bureau

### Average Household Size

Fewer families, an increase in single person households due to aging, higher divorce rates, deferred marriage and childbearing, and a lower birth rate have led to a gradual decline in household sizes, although that decline has slowed over the last two decades. There were 2.53 persons per household in 2010, down only one one-hundredth of a person from 2000. Not surprisingly, fewer large detached homes are being constructed as denser housing types account for a greater share of new residential development.

It is possible that household size might have diminished a bit more over the last decade if not for the Great Recession prior to 2010. High unemployment and lower incomes may have encouraged more people to share residences and kept young adults from moving out of their parents' homes.

**FIGURE 12:** Average Household Size: 1960—2010



Source: U.S. Census Bureau

### PLANNING ISSUE

Future land use depends not only on population growth. Smaller household sizes mean that more land and housing units will be needed just to accommodate the existing population before any new people are added.

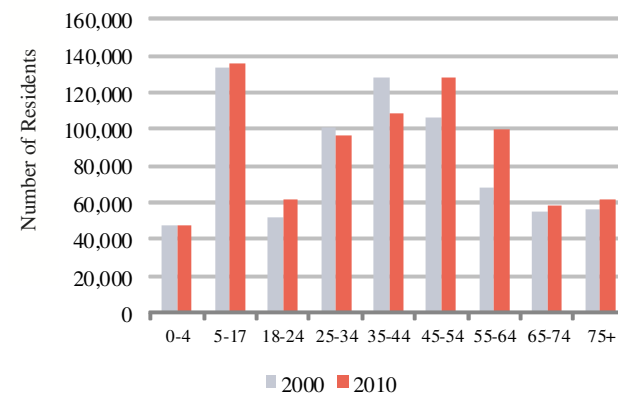
### Age Characteristics

Montgomery County has been getting older overall. The median age was 40.6 in 2010, up from 38.2 in 2000. The oldest population (65 and over) increased by 8% between 2000 and 2010, but the most significant gains were in the “baby boom” generation. The age cohorts between 45 and 65 years of age grew by over 30% in just ten years. The county will face new challenges as this robust group moves into the 65+ range over the next twenty years. They will begin to exit the work force and likely assume lower taxable incomes during retirement.

The number of residents between the ages of 25 and 44 declined since 2000, but there was modest growth in the younger cohorts, especially ages 18 through 24. Young residents born since 1980, represent the “baby boom echo” but are more commonly identified as Millennials. They are also the future of Montgomery County as they become a more substantive part of the county population.

The population of children is expected to grow at a slower rate than the overall population between now and 2040. As they grow older and become young professionals, the county should be prepared to retain many of them through offering good jobs and a high quality of life.

**FIGURE 13:** Age Cohorts: 2000-2010



Source: U.S. Census Bureau

### PLANNING ISSUE

The aging of the “baby boom” population will put renewed emphasis on issues concerning senior citizens. At the same time, the number of children is expected to grow at a slower rate than the overall population, so it will also be important to focus on the retention and attraction of young people as they become adults.



Children playing in the Butterfly Garden at Harriet Wetherill Park in Plymouth Township.

Population and Projections

Household Characteristics and Age

**Income, Poverty, and Education**

Race and Hispanic Origin

**PLANNING ISSUE**

Poverty is growing in Montgomery County, as in much of the country, and it tends to be concentrated in older developed areas.

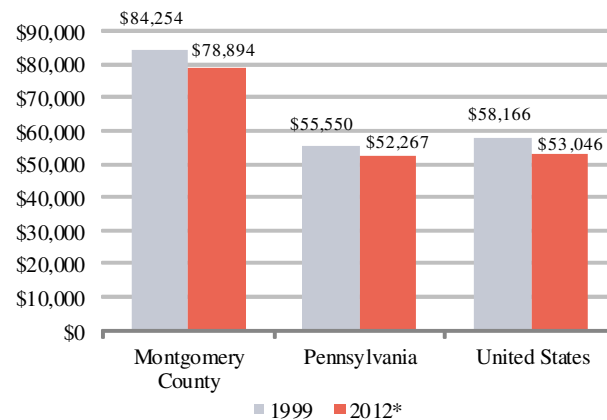
**Income, Poverty, and Education**

*Income*

Montgomery County has a very substantial share of high income households and a strong middle class. However, the county was not immune to the economic struggles affecting the United States over the last decade. Increases in household income have failed to keep up with inflation resulting in a “real value” loss of income since 1999. Nationally, household incomes dropped at twice the rate as experienced in Montgomery County. A decline in income over ten years is not typical at county or national levels and is indicative of the Great Recession and slow economic growth over the last decade.

The county’s wealth is reflected in many of its communities as all but five municipalities had median household incomes greater than the U.S. and Pennsylvania medians. Still, over two-thirds of municipalities in the county experienced a loss of household income when adjusted for inflation between 1999 and 2012.

**FIGURE 14:** Median Household Income: 1999-2012\* (Adjusted for Inflation)



\* 2012 figures are actually five year estimates - an average of responses taken between 2008 and 2012 adjusted to 2012 dollars.

Source: U.S. Census Bureau, American Community Survey

**What’s New**

- Montgomery County ranks 48th in median household income out of all counties in the United States with a population greater than 100,000. The county also ranks second in Pennsylvania behind Chester County.
- Poverty is on the rise in Montgomery County. Only 2.8% of families in 1999 lived below the poverty level, but in 2013, an estimated 4.8% of families lived below the poverty level. However, this still represents a relatively low percent of county residents compared to the national rate of 11.6%.
- Montgomery County residents are increasingly educated. The percent of residents over the age of 25 with at least a high school diploma has risen to 93.7% in 2013, up from 88.5% in 2000.

**FIGURE 15:** 2012\* Income Per Person, Counties Within the DVRPC Region



\* 2012 figures are actually five year estimates - an average of responses taken between 2008 and 2012 adjusted to 2012 dollars.

Source: U.S. Census Bureau, American Community Survey

**Poverty**

Relatively high median household incomes can obscure the reality of the low end of the income spectrum and a greater percentage of families were living below the poverty level in 2013 than in 1999. The same economic factors that lowered incomes for many in the county—the Great Recession, housing market crash, unsteady financial institutions, and stretched governmental budgets—have resulted in a 67% expansion of the county’s most vulnerable population.

Poverty is more common in the county’s boroughs and urban areas, but it can also be found near some of the most prosperous communities. While Norristown and Pottstown are well known for accommodating a higher share of the county’s lowest income families, townships like Cheltenham, Abington, and Lower Merion also had over 300 families living below poverty in 2012.

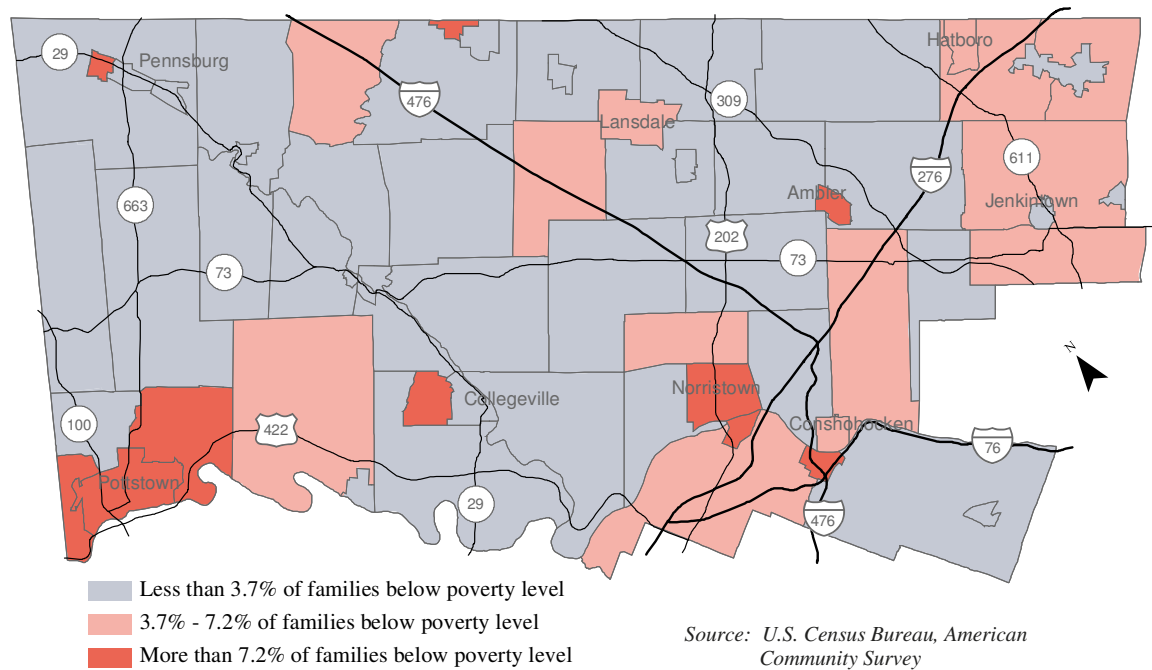
**Educational Attainment**

Education is directly related to income and Montgomery County has a well-educated population. Over 46% of residents over the age of 25 have earned a bachelor’s degree or higher. The county ranks first in the Philadelphia region with both the number and percentage of residents having earned a graduate or professional degree. At the other end, persons without a high school diploma has shrunk from 11.5% in 2000 to only 6.3% in 2013.

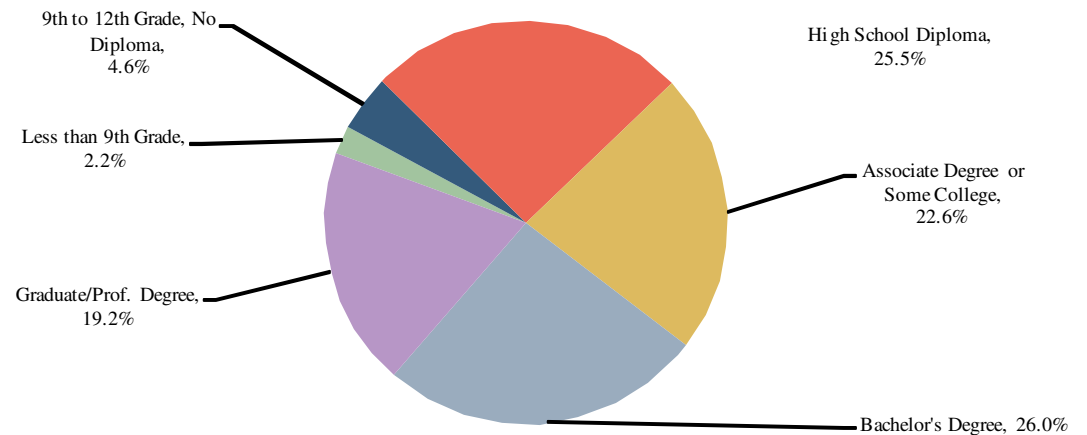
Part of this success can be attributed to the availability of higher education both in the county and in the region. Bryn Mawr College, Ursinus College, Arcadia University, Temple University-Ambler, Pennsylvania State-Abington, and the Montgomery County Community College are a few of the institutions available in Montgomery County.



**FIGURE 16: Percent of Families Below Poverty Level: 2008-2012**



**FIGURE 17: Educational Attainment: 2012\***



\* 2012 figures are actually five year estimates - an average of responses taken between 2008 and 2012.

Sources: U.S. Census Bureau, American Community Survey

# THE PEOPLE OF MONTGOMERY COUNTY

## Population and Projections

### Household Characteristics and Age

### Income, Poverty, and Education

## Race and Hispanic Origin

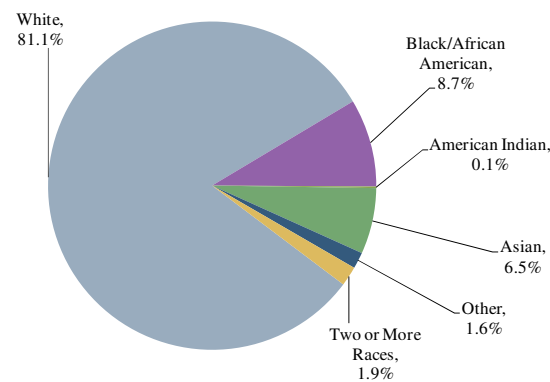
### Race and Hispanic Origin

#### Racial Characteristics

Historically, Montgomery County has always been predominately white in terms of its racial composition. While four out of every five residents are still white, there are some noticeable shifts occurring in the county's racial profile as the county's diversity continues to grow. Almost all of the new residents added over the last decade were of nonwhite descent. Immigration has occurred in certain pockets of the county, often serving as a revitalization agent providing new blood and energy into places that had declined or grown stagnant.

Blacks, or African Americans, remain the largest racial group in the county behind whites, but Asians are the fastest growing group over the last ten years. New Asian communities have sprung up in a number of places throughout the county, especially in the North Penn region, around King of Prussia, and in some of the larger inner ring suburbs bordering Philadelphia.

**FIGURE 18:** Racial Composition: 2010

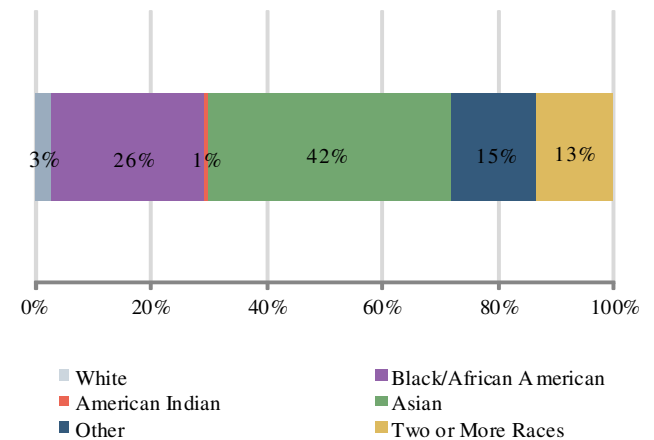


Source: U.S. Census Bureau

### What's New

- The black population has grown since 2000 in all but four municipalities in Montgomery County. The largest increases were seen in inner ring suburbs near Philadelphia as well as urban environments such as Pottstown and Norristown.
- Asians, which include native Hawaiians and other Pacific Islanders, grew the most in terms of total persons going from 30,000 in 2000 to over 50,000 in 2010. Asians with an Indian ethnicity more than doubled in that time frame and comprise the highest percentage of Asians (35%). Korean ethnicity is the second largest, followed by Chinese.
- Mexicans are the largest Hispanic ethnicity in Montgomery County, representing 39% of all Hispanics. They also grew the most since 2000, adding 9,446 residents. Puerto Ricans are the second largest Hispanic population in the county.

**FIGURE 19:** Racial Composition of New Residents: 2000-2010



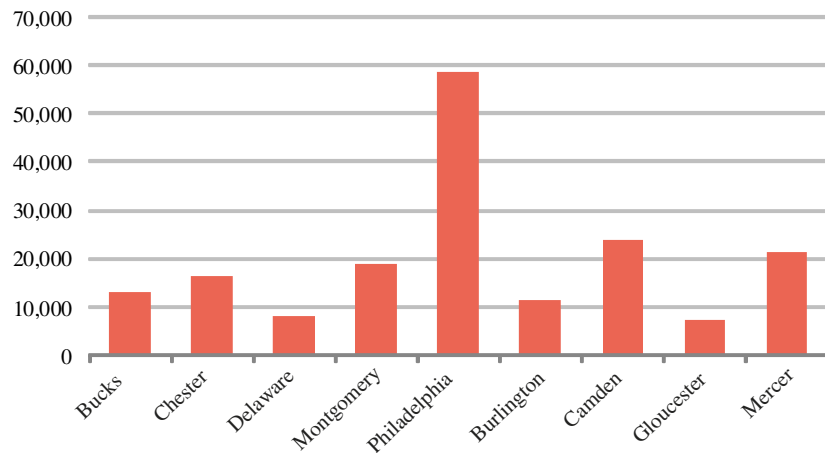
Source: U.S. Census Bureau

*Hispanic Origin*

Hispanics are not considered as their own racial category, but rather as having a heritage, nationality, ethnicity, lineage, ancestry, or country of birth in a Spanish speaking country. People of Hispanic origin may identify themselves as any race. Under the 2010 Census, the majority of Hispanics identified themselves as white, but many chose “Some Other Race” or a combination of races.

Hispanics were the fastest growing minority group in Montgomery County over the last decade. The county’s Hispanic population more than doubled to a total of 34,233 in 2010. There were increases to the Hispanic population in almost all municipalities, but Norristown was the most popular destination for Hispanics by a wide margin. Hispanic immigration into Norristown has helped the municipality post its largest overall population gain in decades. After Norristown, the next largest Hispanic populations are found in Pottstown and some of the bigger inner ring municipalities, such as Cheltenham, Abington, and Lower Merion.

**FIGURE 20:** Regional Hispanic Population Change by County: 2000-2010



Source: U.S. Census Bureau



Marshall Street has been revitalized as a commercial main street area serving the growing Latino community in Norristown.





# THE HEALTH OF COUNTY RESIDENTS



### Health Data and Health Concerns

Health Care Facilities

Aging

Food Distribution and Access

#### PLANNING ISSUE

*Diabetes, heart disease, and other health concerns related to fitness and weight have increased over the past decade, and attention is increasingly turning to ways the built environment can be designed to foster better fitness and overall welfare.*

### Health Data and Health Concerns

The health of the county's residents is a major concern as rates of both chronic diseases and contributing factors like obesity are on the rise. Chronic diseases are those which are persistent and are long-lasting in their effects—this includes conditions such as arthritis, asthma, cancer, or HIV/AIDS. Chronic disease has replaced infectious disease as the nation's main public health threat; it has significant impacts on the county as well. Most chronic diseases affect people of all ages, races, and ethnicities, but some tend to be more prevalent among lower income and minority populations.

Chronic heart disease is among the leading causes of death in Montgomery County (nearly 25% of all deaths annually). Between 2008 and 2010, about 5,000 cases of cancer were diagnosed annually in the county. And in 2011, cancer caused more than 1,700 deaths county-wide. Diabetes is another pressing concern. As of 2008, 7% of county residents had been, at some point in their lives, given the diagnosis of diabetes.

Our increasing waistlines are also a pressing issue. Many factors contribute to this rise, including growing portion sizes, nutrition, social and family dynamics, and a lack of exercise. Many county residents are considered to be overweight, and according to the state's 2013 County Health Profile, 22% of residents are considered obese and 54% are overweight. Obesity is linked to an increased incidence of a number of serious health concerns, including cancer, heart disease and heart attacks, and type II diabetes.



### What's New

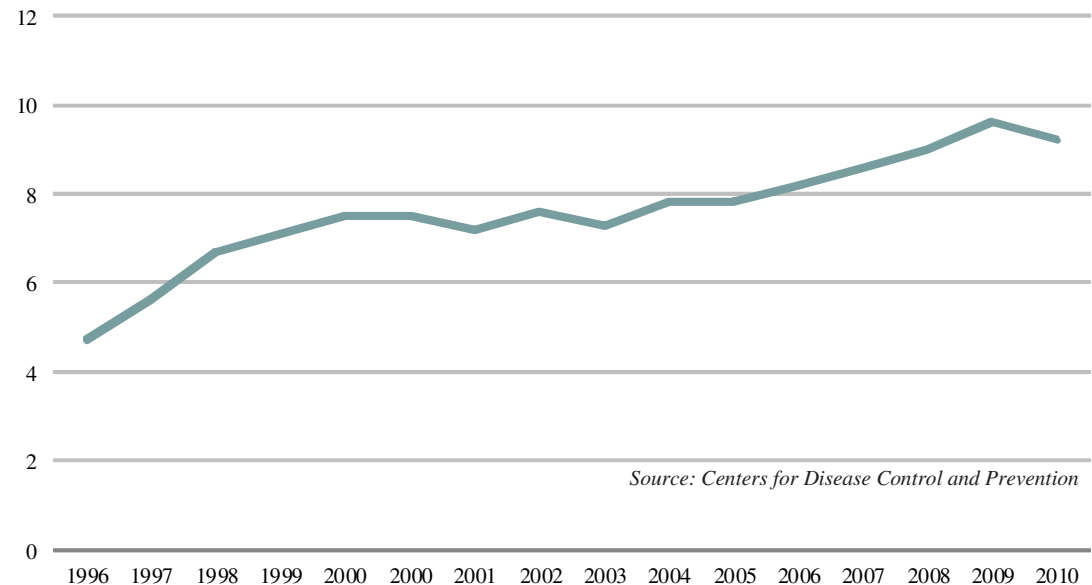
- A joint project from the Robert Wood Johnson Foundation and the University of Wisconsin's Population Health Institute, *County Health Rankings & Roadmaps*, ranked Montgomery County fifth in 2014 in the state for health outcomes and second for health factors. Health outcomes represent how healthy a county is, while health factors represent what influences the health of the county. For more detailed information on Montgomery County's scores, check out [www.countyhealthrankings.org](http://www.countyhealthrankings.org).
- Montgomery County is the 27th healthiest county in the nation for children, according to a June 2014 ranking by U.S. News and World Report.
- As of July 2014, nearly 80,000 county residents—both children and adults, were eligible for Medical Assistance (MA) or Medicaid through the state. This program provides medical and dental services to those who are eligible, typically those with low incomes or resources.
- The Food Trust, located in Philadelphia, developed the Healthy Corner Store Initiative to increase the availability of healthy foods in corner stores and to educate young people about healthy snacking. Adelita's Mexican Market, in Norristown, is a part of this program. Weekly cooking demonstrations teach healthy habits to neighborhood participants.
- Many municipalities have started or sponsor programs to encourage their residents to get healthy and stay that way. Hatfield Borough, for example, offers group walks through the borough to promote fitness and safety. The Lower Merion Library System recently sponsored a community health fair; many municipalities (including Lower Providence, Towamencin, and Plymouth Townships, among others) offer sports leagues and fitness classes for residents of all ages.



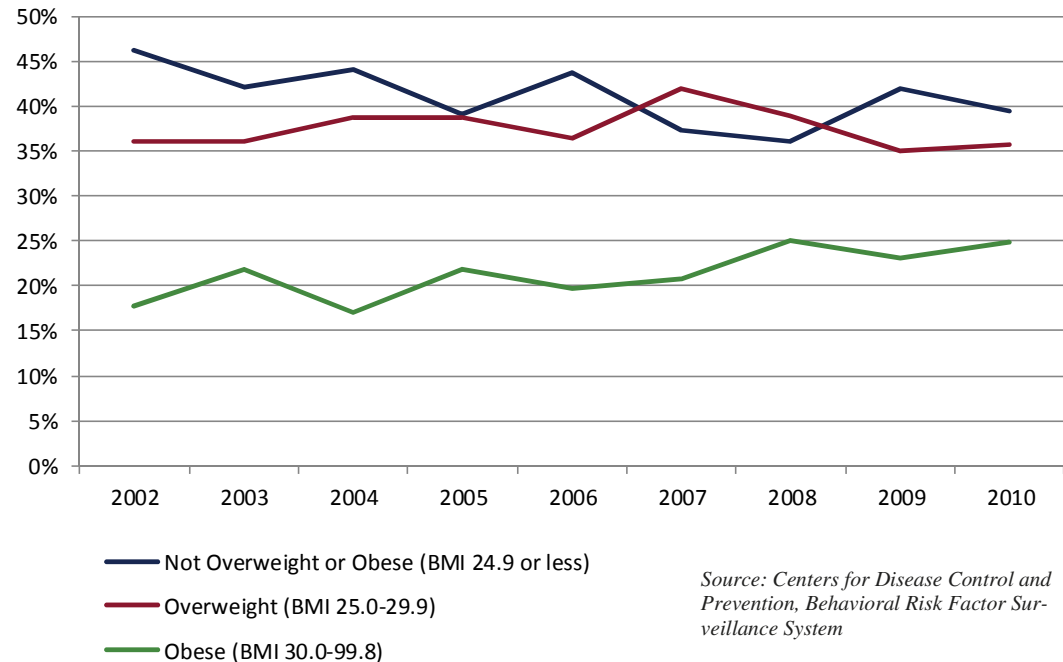
Childhood obesity is especially troubling because, for starters, the habits that children have are hard to reverse as they grow older. Additionally, childhood obesity is linked to not only physical health problems, but emotional problems, learning disabilities, and school performance as well. Educational institutions statewide report to the state's Department of Health on the student population's body mass index (BMI) grouped by grade levels. In the 2010-2011 school year, nearly 15% of Montgomery County students in grades K-6 were considered overweight (having a BMI in the 85th-95th percentiles) and 13% were considered obese (greater than the 95th percentile). In grades 7-12, these numbers rose to nearly 17% and 14% of the overall student population, respectively. These levels have stayed fairly consistent since measuring BMI in students from grades K-12 became mandatory in the 2007-2008 school year.

A hurdle to staying healthy is inadequate or infrequent access to the county's recreational areas. Even though there are parks in each of the county's 62 municipalities, as well as playgrounds, playing fields, and private recreational facilities across the county, not everyone takes advantage of these opportunities. Perceived or real issues of safety, accessibility, or a lack of play equipment or playing fields can prevent people from taking full advantage of the outdoors.

**FIGURE 21:** *New Diabetes Cases—Rate per 1,000 Adults (ages 18-76), Pennsylvania: 1996-2010*



**FIGURE 22:** *Adult Weight Classification by Body Mass Index (BMI)*



## THE HEALTH OF COUNTY RESIDENTS

Local air quality and water issues also impact our county's health. Air pollution consists of six constituent pollutants—carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter, and sulfur dioxide—and these pollutants can cause harm to the environment as well as serious health problems. Chronic ailments like asthma are tied to poor air quality. Nearly 4% of Montgomery County's students had a diagnosis of asthma in the 2008-2009 school year. And although these pollutants come from a variety of sources, vehicle exhaust has been tied to many of them.

Another concern is mosquitoes and the diseases they harbor, which may be aided by the design of our environment if it inadvertently creates pooling areas of water.

Poor access to healthy food and good nutrition remains an issue for some county residents. This is a topic that is explored in more depth in the Food Distribution and Access section of this chapter. However, although there are dozens of grocery stores and farmers markets in the county, many local food stores have closed over the last few years and farmers markets may be inconvenient or financially out of reach for some lower-income residents. Food access strategies that have made inroads in more urban areas like Philadelphia (such as community gardens or urban farms) are not as prevalent in Montgomery County. It is easier in some parts of the county to purchase food at corner stores, but these are places that primarily sell shelf-stable and low nutrition items. Without reliable transportation and a convenient store nearby, having good nutrition may be a challenge for our most vulnerable residents.

Our health—the decisions made collectively on a county level as well as the individual choices made by the county's 800,000-plus residents every day—is intrinsically tied to the built environment around us. Although our land use decisions are but one of the things that affect health outcomes, it is something that could and will change over time. For starters, the design of our built environment—homes, neighborhoods, workplaces, and transportation networks—has a direct affect on people's ability to incorporate physical activity in their daily lives. Research in the American Journal of Health Promotion has shown that people in sprawling counties are likely to have higher rates of being overweight or obese, as well as a greater



*A healthy, active lifestyle is important for people of all ages.*

**FIGURE 23:** Selected Major Causes of Death, Number and Average Annual Death Rate: 2009-2011 (per 100,000 residents, based on annual sample surveys)

	MONTGOMERY COUNTY TOTAL	MONTGOMERY COUNTY RATE	PENNSYLVANIA TOTAL	PENNSYLVANIA RATE
Diseases of the heart	4,927	149.7	94,973	186.6
Cancer	5,055	168.3	86,126	180.0
Stroke	1,319	40.3	20,166	39.3
Accidents	928	33.9	17,110	40.8
Alzheimer's Disease	584	16.6	10,572	19.3
Diabetes Mellitus	401	13.1	9,828	20.2
Influenza	404	12.2	7,547	14.7

Source: Pennsylvania Department of Health



prevalence of hypertension than those living in more compact places (Ewing, Schmid, et al, 2003). When this overall lack of physical activity is paired with poor eating habits, it literally weighs residents down with the burdens and increased costs of poor health and disease.

What makes physical activity so important? In addition to being a crucial part of maintaining a healthy lifestyle, physical activity has been associated with:

- Lower risk of hip fractures and coronary events in older women and decreased cardiovascular disease in older men—findings that held true in both Caucasian and African-American woman, as well as across ages, groups and categories of body mass index.
- Total lower risk of cancers of various types.

Not surprisingly, a sedentary lifestyle can be damaging to one’s health. Adults with chronic disease who were not physically active had higher observed mortality rates than those who were physically active. The onset of chronic diseases is frequently hastened along by factors such as physical inactivity and poor nutrition.

Even though Montgomery County has plenty of communities lucky enough to have the advantages of walkable neighborhoods, public transportation access, and a robust trail network that connects residents with the rest of the region, much of Montgomery County has been designed with the automobile in mind and many neighborhoods and their residents are dependent on driving. Many neighborhoods, even densely developed ones, lack complete sidewalk networks—which makes walking to nearby destinations potentially hazardous and frequently impossible.

Our county’s children and elderly are among our most vulnerable pedestrians. Although the death and injury rate for pedestrians ages 19 and

**FIGURE 24:** Countywide Crashes, Injuries and Fatalities for Automobiles, Bicycles and Pedestrians

CRASH TYPE		2005	2006	2007	2008	2009	2010	2011
Automobiles	Crashes	3,565	3,478	3,094	2,834	2,664	2,634	2,705
	Injuries	4,801	4,633	4,052	3,673	3,467	3,402	3,531
	Fatalities	28	26	22	23	17	21	20
Bicycles	Crashes	79	93	83	109	86	75	73
	Injuries	81	96	82	111	86	75	75
	Fatalities	0	1	2	0	0	0	0
Pedestrians	Crashes	232	221	233	230	200	205	225
	Injuries	228	214	218	234	214	210	229
	Fatalities	3	5	9	5	8	3	12

Source: Pennsylvania Department of Transportation

under has dropped significantly since the mid-1990s, Safe Kids Worldwide estimates that 61 children are hit by cars everyday in the United States. Pedestrian injuries to teenagers are on the rise, and distractions from mobile devices like phones or iPods may be to blame, as their use has skyrocketed. The elderly are particularly vulnerable because of their limited mobility due to muscular and skeletal weakening, arthritis pain, changes in motor or cognitive abilities, and decreased vision. Yet those older residents who feel unsafe behind the wheel may find themselves walking through neighborhoods that aren’t accommodating to older pedestrians.

Our mental health and emotional well-being is tied to the physical built environment as well. Factors such as housing type and quality, overcrowding, and the quality of light and air directly impact the wellbeing of county residents. The way our communities are built can affect the quality (and quantity) of social interactions with neighbors as well as restorative interactions with the natural environment.



Traffic calming tools, like highlighted crosswalks, can help pedestrians walk safely from place to place.

### Health Data and Health Concerns

#### Health Care Facilities

Aging

Food Distribution and Access

#### PLANNING ISSUE

*As health care needs have changed and a growing senior population seeks increased medical attention, more flexibility in treatment options (such as the rise in ambulatory surgery centers) may need to fill this care gap.*

#### Health Care Facilities

Health facilities in the county exist within three categories: general acute care hospitals, specialty hospitals, and ambulatory care centers.

*General acute care hospitals* are licensed by the state's Department of Health. In the county, there are currently 9 general acute care hospitals with more than 2,100 beds set up and staffed, though these numbers shifted within the last year when Norristown's Montgomery Hospital shut its doors and reopened in a new facility in East Norriton Township. Smaller hospitals outside of the county, like Phoenixville Hospital, Chestnut Hill Hospital, or Grand View Hospital, also provide services to county residents. The occupancy rate at the county's general acute care hospitals is 64.9%. This is relatively low and a drop from the 2001 levels—as well as an indication that there is a surplus of hospital beds in county hospitals. The average length of stay at hospitals in the county is 4.38 days. The use of (and length of stays in) acute care hospitals has declined over the years because of managed health care, government cost cutting, and improved medical procedures, which allow people to heal and return home faster.

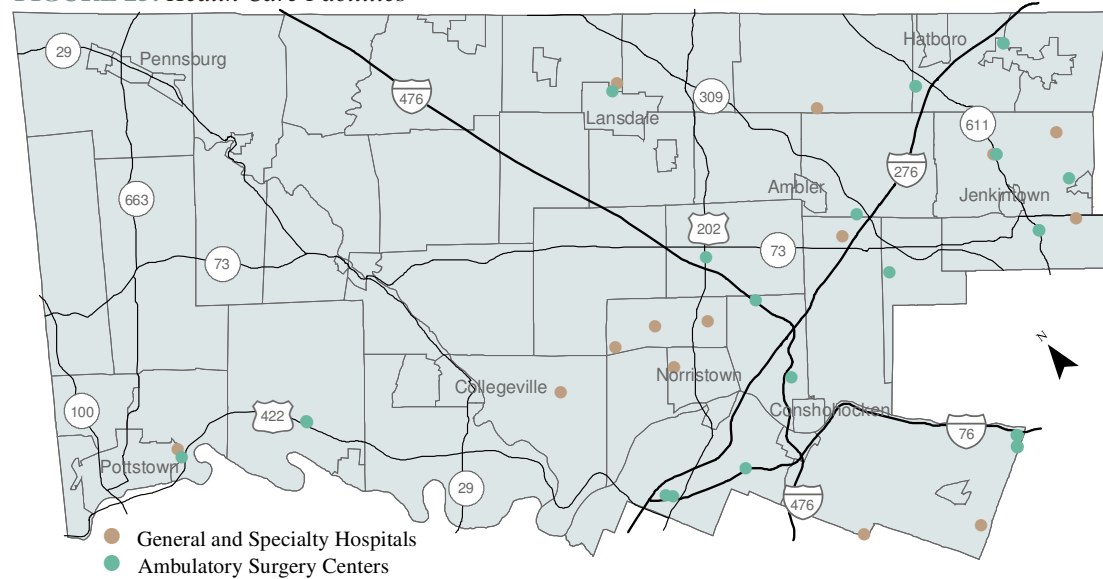
*Specialty hospitals* are also licensed by the state's Department of Health. In Montgomery County, these include psychiatric facilities as well as drug and alcohol treatment centers. The number of beds set up and staffed at specialty hospitals in the county declined to less than 1,000 beds by 2011, a drop from levels a decade prior. Like general hospitals, specialty hospitals have been affected by cost cuts, and the trend of deinstitutionalizing patients at these types of facilities has lessened their need across the county.

*Ambulatory surgery centers* speak to the rapid rise in outpatient services available in the county. An ambulatory surgery center provides day-surgery services for patients who require less than 24-hour medical attention. These are typically stand-alone facilities, which may be affiliated with or owned by a hospital. As of June 2011, there were 26 ambulatory care centers in the county, a huge increase from the 9 facilities that served the county in 2001.

#### What's New

- Montgomery Hospital & Medical Center, formerly of Norristown, found a new home in East Norriton and a new affiliation with Einstein Medical Center. Einstein Medical Center Montgomery opened in September 2012, the first new hospital to be built in the state in more than a decade. With 146 patient beds, it operates as a full service acute care hospital.
- Although Abington Health recently called off a proposed (and controversial) merger with Holy Redeemer Health System, it is expected that more mergers will occur as health care operating costs continue to rise.
- Major expansions are underway or have recently wrapped up at several area facilities. Lankenau Medical Center is proceeding with an expansion scheduled to wrap up in 2014. This will increase the total patient beds to 386, increase parking capacity, and add a new 5-story pavilion to the site. The Bryn Mawr Medical Arts Pavilion, a 141,000 square foot facility with the Bryn Mawr Hospital among its tenants and a connection to the hospital's main building, was scheduled for completion in 2012.
- There are resources in Montgomery County for those residents with medical assistance coverage or without any health insurance. The county is home to two federally qualified health centers—the Norristown Regional Health Center and Community Health and Dental Care (in Pottstown)—which provide primary health care to residents with medical assistance or no health insurance. There are also some providers of oral health care services in the county, though not enough to meet demand for this care. Lastly, the Montgomery County Health Department has three public health clinic locations in Norristown, Pottstown, and Willow Grove. These clinics offer services such as sexually transmitted disease screening and treatment, HIV testing and counseling, and childhood and adult immunizations.

**FIGURE 25: Health Care Facilities**



Source: Pennsylvania Department of Health

**FIGURE 26: Health Care Facility Statistics (as of June 2013)**

FACILITY	TYPE	LOCATION	LICENSED BEDS	STAFFED BEDS	OCCUPANCY RATE	AVG STAY (DAYS)
Abington Memorial Hospital	General	Abington	671	597	63.7	4.43
Brooke Glen Behavioral Hospital	Specialty	Whitemarsh	146	146	86.1	9.71
Eagleville Hospital	Specialty	Lower Providence	84	84	62.1	10.06
Einstein Medical Center—Elkins Park	General	Cheltenham	66	32	48.0	4.20
Einstein Medical Center—Montgomery	General	East Norriton	146	146	69.9	4.00
Holy Redeemer Hospital & Medical Center	General	Abington	242	229	60.2	4.64
Horsham Clinic	Specialty	Horsham	172	172	89.2	10.86
Lansdale Hospital	General	Hatfield	135	127	44.7	4.07
Main Line Hospital—Bryn Mawr	General	Lower Merion	319	319	59.0	4.11
Main Line Hospital—Lankenau	General	Lower Merion	317	317	64.1	4.59
Mercy Suburban Hospital	General	East Norriton	126	126	52.4	4.87
Montgomery County Emergency Service	Specialty	West Norriton	81	81	82.4	10.23
Norristown State Hospital	Specialty	Norristown	373	365	96.7	1016.28
Physicians Care Surgical Hospital	Specialty	Limerick	12	12	17.9	1.70
Pottstown Memorial Medical Center	General	Pottstown	224	224	56.4	4.85
Valley Forge Medical Center & Hospital	Specialty	East Norriton	50	50	89.0	10.29

**FIGURE 27: Ambulatory Surgery Centers (as of June 2013)**

FACILITY	LOCATION	TOTAL PATIENT VISITS	TOTAL OPER. ROOMS
Abington Memorial Hospital Endos.	Abington	6,230	0
Abington Surgical Center	Upper Moreland	11,967	7
Best Impression Surgical Center	Whitpain	352	1
Blue Bell Surgery Center	Plymouth	2,799	4
Bryn Mawr Medical Specialists—Endo	Lower Merion	5,677	0
Delaware Valley Laser Surgery Inst.	Lower Merion	3,051	2
Delaware Valley Nephrology/ Hypertension	Cheltenham	606	1
Delaware Valley Orthopedic Spine Ctr.	Lower Merion	2,223	4
Einstein Montgomery Surg Ctr	East Norriton	331	4
Eye Surgery Center	Upper Merion	5,163	2
Foundation Surgical Affiliates	Upper Dublin	1,862	2
Grandview Hospital Surg Ctr	Lower Salford	386	0
Holy Redeemer Health System ASC	Abington	5,446	3
Huntingdon Valley Surgery Center	Bryn Athyn	7,295	4
Hypertension Nephrology Associates	Cheltenham	548	2
Keystone Kidney Center	Upper Moreland	386	1
Main Line Endoscopy Center East	Lower Merion	6,240	0
Main Line Spine Surgery Center	Upper Merion	6,186	0
Main Line Surgery Center	Lower Merion	7,215	4
Montgomery Surgery Center	Hatfield Twp	1,932	2
Philadelphia Inst of Cosmetic Surgery	Lower Merion	277	1
Philadelphia Surgery Center	Narberth	20	2
Plaza Surgical Center	Lower Merion	91	1
PMA Gastroenterology Center	Limerick	3,890	0
Pottstown Surgical Center	L. Pottsgrove	3,869	0
RMA of Philadelphia Surgical Center	Upper Merion	1,622	1
Springfield Ambulatory Surgery Ctr.	Springfield	6,500	1
Surgery Center at Limerick	Limerick	1,968	3
Urology Health Surgery Center	Abington	2,639	4
Valley Pain Center	Bryn Athyn	3,420	2
Wills Eye Surgery Ctr - Plymouth Mtg	Plymouth	2,636	2
Total		102,827	61

Source (both figures): Pennsylvania Department of Health with additional information from Einstein Medical Center-Elkins Park.

### Health Data and Health Concerns

#### Health Care Facilities

#### Aging

#### Food Distribution and Access

#### PLANNING ISSUE

*With baby boomers hitting 65, the county has a growing senior population. Aging residents will require new housing and social services resources to allow for seniors to age gracefully—and independently.*

#### Aging

Today's seniors are living longer, healthier, and more independent lives than the generations that preceded them. In 2010, county residents ages 55+ already comprised more than 25% of the county's population. By 2040, those 55 and over will make up nearly one-third of the county's population. Their shifting needs will significantly impact the county's housing, transportation, health care, and social service needs.

Various housing options for seniors are covered in Chapter 8 of this publication. But the reality is that more than 75% of the county's seniors ages 65 and over continue to live in a private home—either by choice or necessity—and many of these homes were not built with aging in mind. Some homes may need modifications to accommodate a population that may be challenged by stairs, bathtubs, light switches, counters, and cabinets. Homes lacking major modifications may need minor changes to enable someone with a physical disability to easily enter and exit—ultimately enabling “visitability” by someone with a disability.

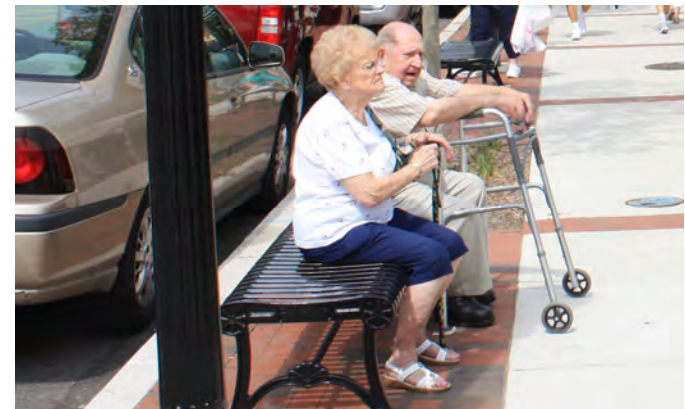
As of 2011, approximately 25% of seniors ages 65 and over lived alone—equal to more than 33,000 households. This may create the need for increased numbers of in-home caregivers and in-home health services if younger generations are unable to provide care for aging relatives.

According to the county's Department of Aging and Adult Services, financial health is among the top concerns of the county's senior residents. Households with senior citizens do tend to have lower household incomes. According to the U.S. Census' American Community Survey, households where the householder was 65 and over reported mean earnings in 2011 \$64,941 (compared to a countywide household level of \$102,745). With lower annual incomes and savings that may have suffered during the nation's recent economic downturn, many seniors are putting off retirement until their finances can recover. More than 20% of county residents over the age of 65 continue to be employed.

Affordable and accessible transportation will also be a concern. Older residents will continue to want and need to drive a vehicle, and many neighborhoods—age restricted

#### What's New

- Grandparents as caregivers for their grandchildren may be a trend worth noting. As of 2011, more than 15,000 grandparents were living with their grandchildren and more than 3,000 were responsible for their grandchildren. This may become more significant if those caring for grandchildren are feeling an economic strain, since many elderly caregivers make choices related to self care versus their primary consideration of care for the children in the home.
- The county's growing minority communities create different needs when it comes to an aging population. It is anticipated that the county's Hispanic and Asian senior populations will continue to grow; these are communities that may receive support and services through cultural or faith-based organizations, as well as from extended family—all outside of the traditional context of places like senior centers.
- The county's Department for Aging and Adult Services recently released “Creating An Aging Friendly Montgomery County” - a four year plan for 2012-2016. It outlines some of the top concerns of older residents or those who care for older residents. By far, the biggest concern was financial health, but other needs included health care, transportation, home health care, senior centers, and nutrition/meals.

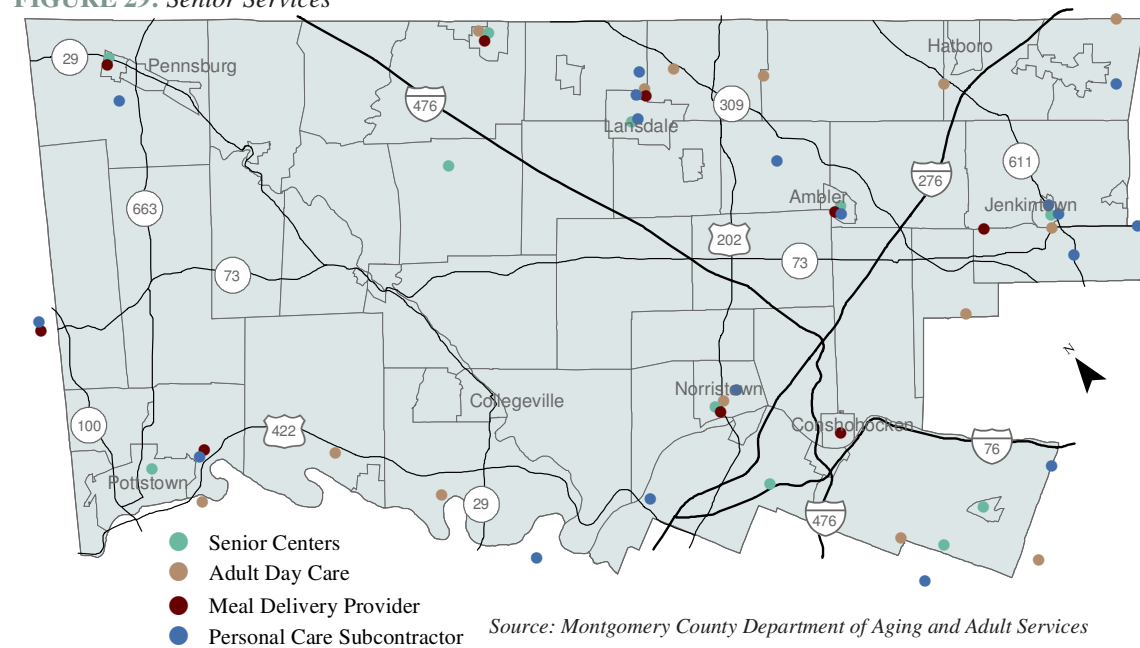


**FIGURE 28: Over-55 Age Projections**

AGE COHORT	PERSONS IN 2000	PERCENT OF TOTAL	PERSONS IN 2010	PERCENT OF TOTAL	PERSONS IN 2040	PERCENT OF TOTAL	CHANGE 2010-2040	PERCENT CHANGE 2010-2040
55-64	68,447	9.1%	99,952	12.5%	102,366	11.4%	2,414	2.4%
65-74	55,562	7.4%	58,492	7.3%	84,588	9.5%	26,096	44.6%
75+	56,235	7.5%	62,235	7.8%	106,781	11.9%	44,546	71.6%
<b>Total 55+</b>	<b>180,244</b>	<b>24.0%</b>	<b>220,679</b>	<b>27.6%</b>	<b>293,735</b>	<b>32.8%</b>	<b>73,056</b>	<b>33.1%</b>
<b>Total Population</b>	<b>750,097</b>		<b>799,874</b>		<b>894,486</b>		<b>94,612</b>	

Sources: U.S. Census Bureau, population projections are from the Delaware Valley Regional Planning Commission

**FIGURE 29: Senior Services**



Montgomery County's seniors are living longer and healthier lives.

communities among them—were designed with cars in mind. And for those older residents who have stopped driving, easy access to groceries, doctors, and family can be a challenge if public transportation or shuttle services are not readily available and sidewalk networks are incomplete.

Educating the county's seniors on health topics like fitness, nutrition, and disease prevention may also become a growing need. The county is becoming increasingly diverse. About 10% of the county's over-65 population is also a racial minority. Many health concerns—such as obesity, diabetes, and various cancers, have a disproportionate effect on minority populations. Outreach and educational campaigns may need to be tailored to effectively reach these populations. The county's growing Hispanic and Latino population, although largely youthful now, may require an increasingly bilingual approach to communicate health concerns as this population grows older.

A healthy diet and good nutrition are essentials to good health. But low incomes or mobility problems can make access to fresh and nutritious food a challenge for seniors. Although the county's farmers markets, meal delivery services, and senior centers make access to food easier, some seniors may skip meals if grocery shopping and cooking are too burdensome. Turning food and eating into a social activity with community gardens, gatherings, and festivals may be one way of providing meals along with a social outlet, eliminating some of the stigma of receiving this sort of assistance.

Health Data and Health Concerns

Health Care Facilities

Aging

### Food Distribution and Access

#### PLANNING ISSUE

*There's no argument that food is something that county residents need—as good nutrition and access to affordable and healthy food is crucial to a healthy population. Easy access is not guaranteed; some local supermarkets have shut their doors and some neighborhoods are clearly underserved.*

### Food Distribution and Access

Food distribution and access is an important issue for the county—not only is it a health issue, but an economic development and equity issue as well.

The county's farms and food processors play an important role in supporting our local food system. There is a growing interest across the county (and country) in supporting local farmers, eating locally grown foods, purchasing organic products, and preserving the growing season's bounty at home. Many products one would purchase at the grocery store are available from local producers at the county's farmers markets and farm stores...as long as one's willing to forego strawberries and corn on the cob in the middle of winter! Encouraging sustainable food production is a way of building livable communities, strengthening the local economy, and protecting the environment from degradation.

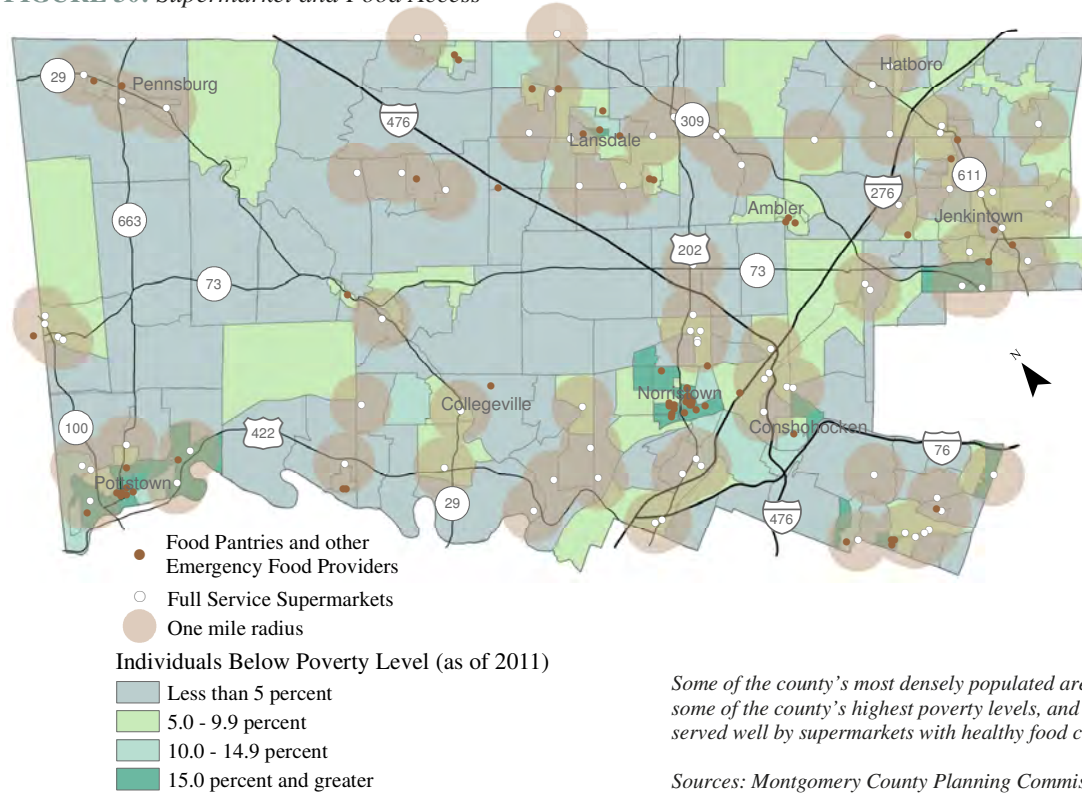
Food safety is an escalating concern as food-borne illness outbreaks from products as varied as spinach to peanut butter affect thousands of Americans every year. Although the Montgomery County Health Department plays a major role in maintaining our health by inspecting establishments like farmers markets, grocery stores, and restaurants—as well as promoting food safety in the home—the way that produce is grown or livestock is raised and slaughtered is outside of the purview of the county's regulations.

Access to affordable and fresh food benefits the health and welfare of all of the county's residents and municipalities. Some of the county's most urban and densely populated communities, like Norristown and Pottstown, do not have easy access to full-service grocery stores. Corner stores and drug stores fill this void to some extent, but prices may be high and fresh food and produce is typically sold elsewhere. Food pantries, such as Lansdale's Manna on Main Street, may also fill a void for those residents with empty cupboards. And as the economy tightened toward the end of the last decade, many of the county's major grocery store chains have responded by closing local stores, leaving darkened storefronts in places like Trappe, Collegeville, and Lansdale. Some communities have looked to fill this void by supporting new food co-ops, such as CreekSide Co-op in Elkins Park; others (like Collegeville and Souderton) have established weekend farmers markets.

### What's New

- In January 2013, the U.S. Food and Drug Administration released a draft Produce Safety Rule (which is open for changes; comments on the proposed revisions are currently open to comment) that will establish mandatory safety practices nationwide to prevent the microbial contamination of fresh produce. This is a major shift from previous practices, which have mostly been reactive. These regulations would affect—among other things—farmworker health and hygiene, manure handling, animal grazing, and building cleanliness and will primarily apply to food items typically eaten raw, like fruits and sprouts.
- The interest in local and organic food has not been lost on local farmers, restaurants, and grocery stores. Organic and/or local produce, eggs, meat, and cheese are readily available at supermarkets and farmers markets. Backyard bee hives and chicken coops are growing in popularity. Several farms use community supported agriculture (CSAs) models to bring weekly shares of produce to local residents; CSAs from surrounding counties serve residents as well. Many restaurants feature seasonal menus and produce from local farms; some fast food chains (such as Chipotle or Elevation Burger) are following suit and choosing organic items for their menus.
- The North Penn Community Health Foundation estimates (in a 2013 report) that more than 83,000 county residents—more than 10% of the total population—live in food insecure households. A food insecure household has limited or uncertain access to adequate food, resulting in residents who go hungry when the money for food runs out. Funding cuts over the last several years have hurt food aid programs; the increased need for food assistance has only been exacerbated by an increase in food prices. Even with these cuts, Montgomery County has seen a 115% increase in SNAP participation (the Supplemental Nutrition Assistance Program) since 2007.

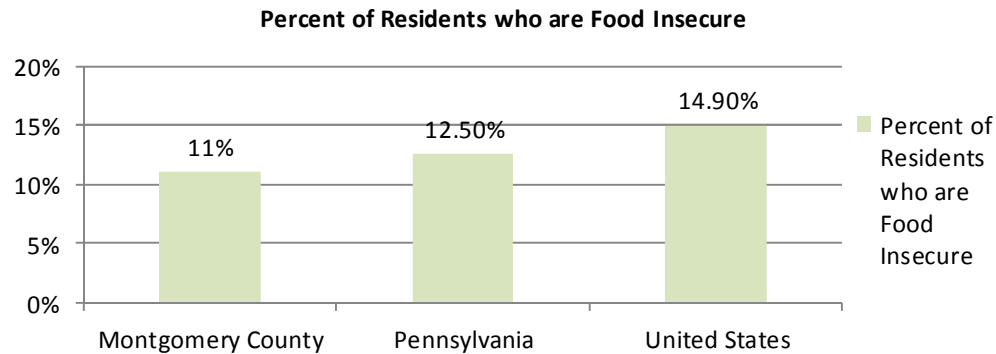
**FIGURE 30: Supermarket and Food Access**



*Some of the county's most densely populated areas have some of the county's highest poverty levels, and are not served well by supermarkets with healthy food choices.*

*Sources: Montgomery County Planning Commission, U.S. Census Bureau (poverty level data)*

**FIGURE 31: Prevalence of Household-Level Food Insecurity**



*Source: The Coalition Against Hunger—2013 State of Hunger report*



*Montgomery County plays a significant role in local food production and distribution.*





# THE BUILT ENVIRONMENT



**Existing Land Use**

Land Use Changes:  
1970 - 2010

Regionally Significant Land Uses

Types of Landscapes

Land Use Trends

**PLANNING ISSUE**

*Growth will continue in both rural and developed areas of Montgomery County. This growth will create opportunities for improvement as well as additional community impacts.*

**Existing Land Use**

Montgomery County features a rich diversity of places and uses. Older towns and main streets formed before the advent of the automobile are entrenched alongside farmland and wooded areas holding on to their rural character. These places exist while even more acreage is devoted to the suburbanization patterns that fueled the county’s rise to become Pennsylvania’s third most populated county. Two-thirds of the county’s developed land is used for residential purposes, and the county also features significant amounts of commercial, office, industrial, and institutional acreage that allowed it to become the economic driver it is today within the Philadelphia region.

The county is represented by its range of uses and the relatively small space in which these uses change. Major office or retail segues into single-family detached homes, then to open land or low-density development, and then back to a retail hub or manufacturing area. This variety reflects historic development patterns, based on both railroads and highways, and has been impacted by the county’s 62 municipalities making their own planning and zoning decisions.

**FIGURE 32: 2010 Existing Land Use Acreage**

LAND USE	TOTAL ACREAGE	PERCENT OF TOTAL COUNTY LAND
Single-Family Detached	80,345	25.8%
Single-Family Detached - Low Density (< 1 unit/acre)	29,962	9.6%
Single-Family Attached	8,419	2.7%
Multifamily	3,392	1.1%
Mobile Homes	600	0.2%
Transportation	22,044	7.1%
Utility	1,566	0.5%
Retail	5,872	1.9%
Office	5,648	1.8%
Mixed Use	1,877	0.6%
Institutional	13,015	4.2%
Industrial	9,973	3.2%
Mining	954	0.3%
Recreation and Parkland Fields	16,806	5.4%
Wooded	58,147	18.6%
Vacant / Agriculture	49,617	15.9%
Water	3,607	1.2%
<b>Total</b>	<b>311,844</b>	<b>100.0%</b>

Sources: Montgomery County Planning Commission, Delaware Valley Regional Planning Commission

**What’s New**

It’s no surprise that single-family detached homes use more land per person than any other residential category:

- Single-family detached home acreage accounts for 90% of all residential land acreage even though the number of detached units is 55% of the total units in the county as of 2010.
- Single-family detached home acreage also accounts for the highest overall percentage of county land at over 35% and that doesn’t include the roads that service the homes.
- Multifamily and single-family attached developments, such as condos, apartments, and townhomes, are more efficient users of residential land with an approximate density of 24.2 persons per acre. Detached home development accommodates only 4.4 persons per acre.

**FIGURE 33: Land Use Coverage (2010)**

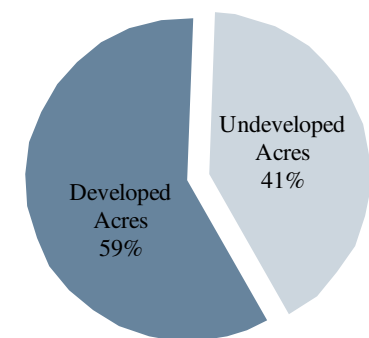
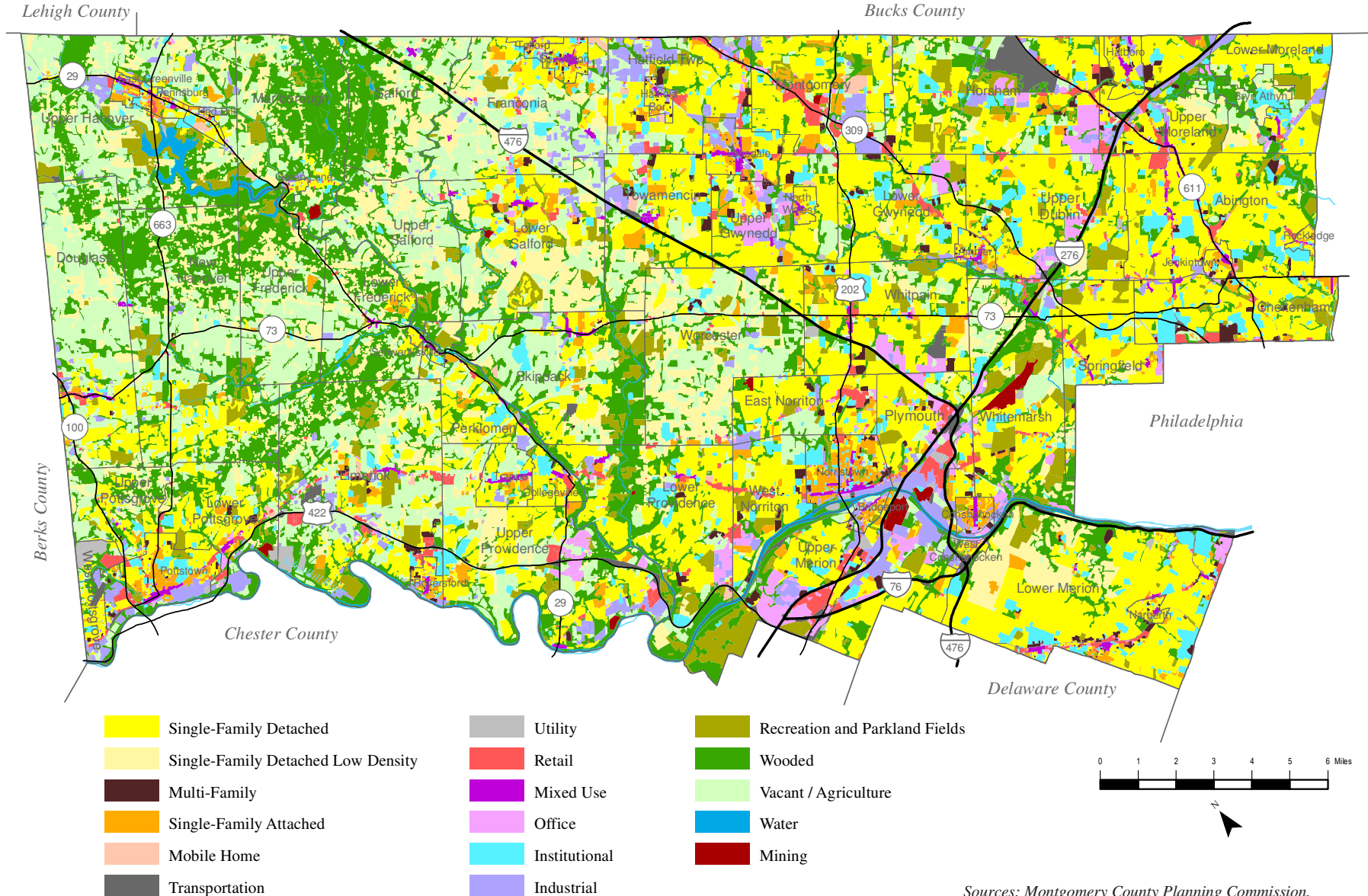


FIGURE 34: 2010 Existing Land Use



Sources: Montgomery County Planning Commission, Delaware Valley Regional Planning Commission

Existing Land Use

**Land Use Changes:  
1970 - 2010**

Regionally Significant Land Uses

Types of Landscapes

Land Use Trends

**Land Use Changes: 1970 - 2010**

In 1970, Montgomery County had three different types of areas – residential suburban neighborhoods oriented to Philadelphia, industrial concentrations with associated towns, and rural farmland. At this time, a fourth type was emerging – significant suburban industrial, office, and retail development, with associated residences, that was not directed towards Philadelphia. From 1970 to 2010, this fourth type of development—independent suburban development—has dominated new development in Montgomery County.

Of course, not all new development takes place on undeveloped land. Underutilized sites in urbanized areas are increasingly targeted for redevelopment and adaptive reuse, especially as the creation of new infrastructure slows.

Since 2007, total land development has slowed considerably. Residential and nonresidential development fell to historically low levels after the housing bubble burst and the Great Recession followed.

**FIGURE 35: Existing Land Use: 1970-2010**

LAND USE	1970	2000	2010
Single Family Detached	42,297	75,340	80,345
Single Family Detached—Low Density (< 1 unit/acre)	16,459	27,511	29,962
Single Family Attached	1,952	6,926	8,419
Multifamily	1,503	3,297	3,392
Mobile Homes	100	547	600
Transportation	16,905	21,016	22,044
Utility	664	1,568	1,566
Retail	2,732	5,171	5,872
Office	541	5,087	5,648
Mixed Use	941	1,829	1,877
Institutional	8,273	11,851	13,015
Industrial	6,153	9,735	9,973
Mining	736	945	954
Recreation and Parkland Fields	9,975	15,994	16,806
Wooded	54,596	61,623	58,147
Vacant / Agriculture	144,443	59,714	49,617

**What's New**

- The county averaged 1,284 acres of newly developed land per year from 2000 to 2010. The 2000 County Comprehensive Plan was based on a goal of 1,000 newly developed acres per year through 2025 in order to maintain the county's quality of life. However, population growth was more rapid than expected during this past decade. Current projections show that the county is still on target to develop no more than 25,000 acres between 2000 and 2025.
- Development over the last ten years has become twice as efficient. From 1970 to 2000, new development was added at a rate of 0.54 acres per person added to the county. From 2000 to 2010, only 0.25 acres were added per additional person.
- More than half of the residential units built since 2000 have been denser housing types such as townhomes, condos, and apartments as opposed to single family detached homes, which had dominated the housing market in Montgomery County up to this point. In 2000, there were 2.6 housing units for every acre of residentially developed land. Between 2000 and 2010, there were 3.1 housing units added for every acre of residential land developed over the decade.

**FIGURE 36: Total Developed Acres: 1970-2010**

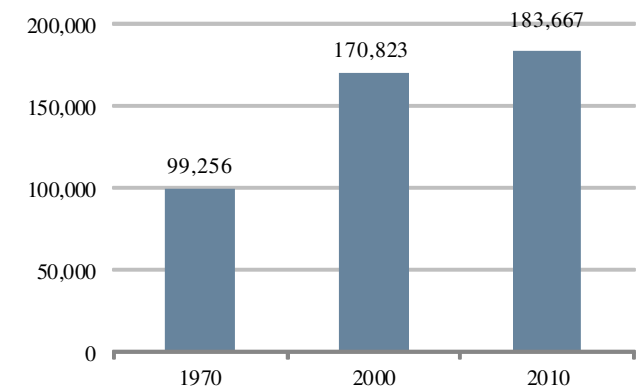
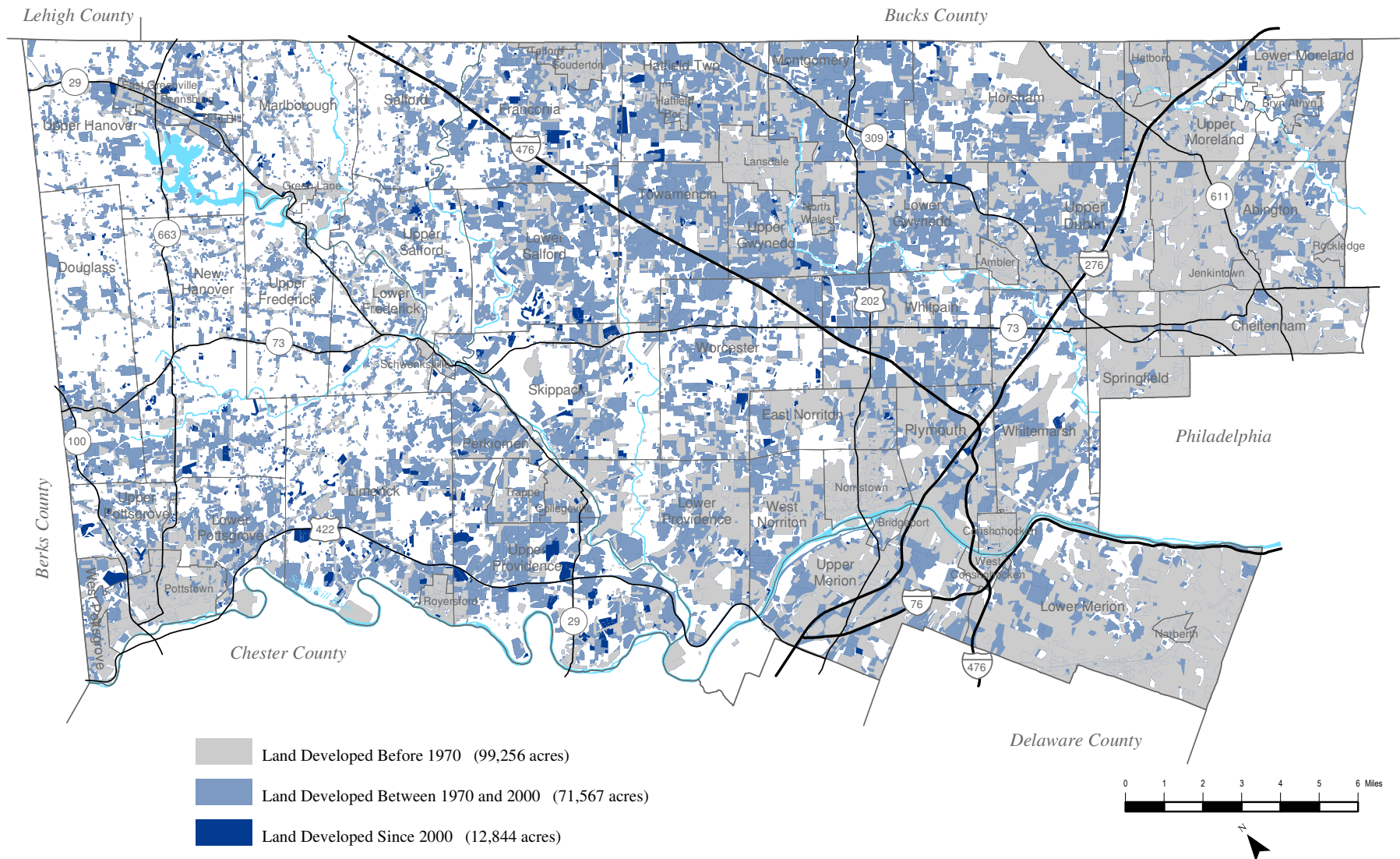


FIGURE 37: Developed Land Over Time



Source: (all figures) Montgomery County Planning Commission

Existing Land Use

Land Use Changes:  
1970 - 2010

**Regionally Significant Land Uses**

Types of Landscapes

Land Use Trends

**PLANNING ISSUE**

*Regionally significant land uses impact a wide area that crosses municipal and sometimes county boundaries, but it is the local jurisdiction that controls these uses most of the time.*

**Regionally Significant Land Uses**

All land uses are not created equally, even within the same category. The existing land use map only identifies land use; it does not reflect the intensity or impact of these uses. To get a better understanding of land uses in the county and their potential impacts on abutting municipalities or communities, it is necessary to identify existing regionally significant land uses. These uses currently make and will continue to make demands on community facilities, the transportation network, and environmentally sensitive land.

In addition to existing uses, proposed developments can have a regional impact and significance if they get approved and built. Due to the economy, there have been only a few proposed developments in the last five years that are still active and would meet the standards for regional significance.

**FIGURE 38:** *Regionally Significant Land Uses Tally (2013)*

LAND USE	REGIONALLY SIGNIFICANT STANDARD	NUMBER OF EXISTING FACILITIES
Large Multifamily / Attached Residential Development	500+ units	16
Shopping Center	500,000+ sq. feet	14
Car Dealer Cluster	5 or more dealers	5
Office Campus / Park	1,000,000+ sq. feet	19
Convention Center	50,000+ sq. feet	2
Casino	Any	1
Industrial Campus / Park	1,000,000+ sq. feet	10
Hospital	100+ beds	10
Prison	Any	2
College and University	500+ students	13
Power Generating Station	50+ megawatts	1
Trash Transfer Station	Any active ones	6
Incinerator	Any active ones	1
Airport	Any	4
Quarry	Active with 20+ acres	7
National Park	Any	1

Sources: Montgomery County Planning Commission, Montgomery County Board of Assessment Appeals

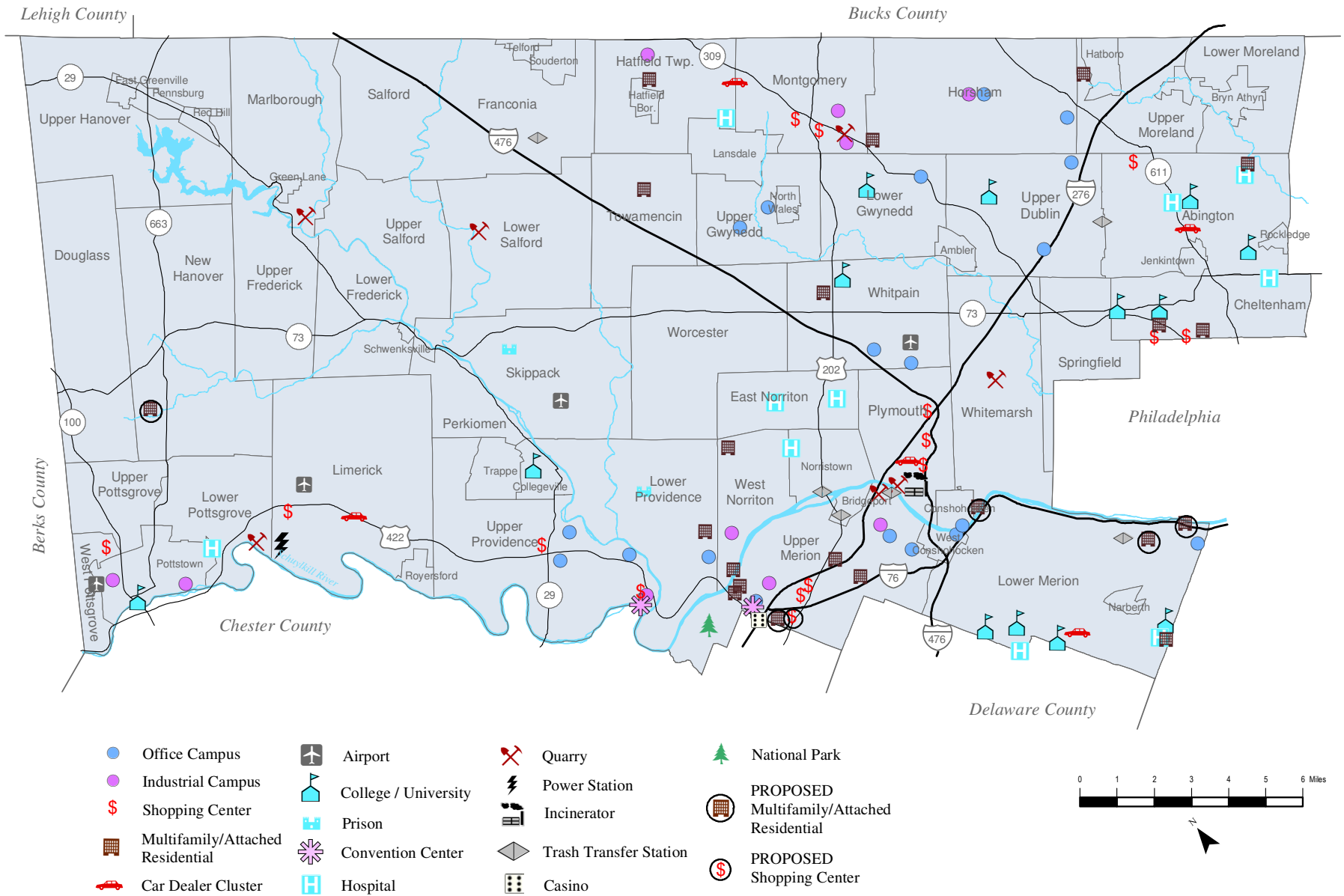
**What's New**

- Retail growth exploded along the Route 422 corridor with regional shopping centers such as the Philadelphia Premium Outlets (605,000 sf) in Limerick and Providence Town Center (755,000 sf) in Upper Providence.
- Most office and industrial development since 2000 has been stand-alone buildings or infill for existing office parks. Two exceptions have been the expansion of Merck and the Renaissance at Gulph Mills Business Center in the first half of the decade.
- The housing boom generated a lot of interest in denser multifamily development, including Shannondell (over 1,000 units) and Riverview Landing (700 units) in Lower Providence and West Norriton, respectively.
- The Valley Forge Casino Resort opened in 2012 to become the first casino in Montgomery County, and the fourth in the Greater Philadelphia area.
- The Willow Grove Naval Air Station was closed in 2011. All runways have been shuttered and much of the 862 acre site will be redeveloped.
- Montgomery Hospital closed in Norristown and was replaced by a new hospital, the Einstein Medical Center-Montgomery, in neighboring East Norriton.



*Regional impact can come in many forms, including this nuclear power plant and 605,000 square foot outlet mall in Limerick Township.*

FIGURE 39: Regionally Significant Land Uses



Source: Montgomery County Planning Commission

## THE BUILT ENVIRONMENT

### Existing Land Use

Land Use Changes:  
1970 - 2010

### Regionally Significant Land Uses

## Types of Landscapes

### Land Use Trends

### PLANNING ISSUE

*The varying landscapes across the county each present planning challenges as the county continues to develop and grow. Urban, suburban and rural areas all will need to find ways to preserve what matters while adapting to new trends and needs.*

### Types of Landscapes

Montgomery County contains a variety of landscapes across its 300,000-plus acres. With urban centers, suburban areas both old and new, as well as rural settings, there's something for everyone in this county.

Rural areas in the county are still primarily undeveloped, with both farmland and wooded habitats, and some low density development. Smaller villages, like Lederach or Perkiomenville, and preserved open spaces, like Green Lane Park, can also be found, primarily in the county's western half. Rural areas in the county are identifiable based on several qualities: traditional farmland or aesthetically pleasing viewsheds, a location in areas away from existing development and infrastructure, and lands with environmental sensitivity or natural amenities that have not yet been preserved.

Much of the county has a suburban landscape, with a range of characteristics. Single family homes on larger lots and destinations that require access to a car make up much of the county's suburban surroundings. So do major employment and retail centers like King of Prussia and the Route 422 Corridor. Some of the county's suburbs have undeveloped land for future growth while other areas look to redevelopment or remediation to adapt to the changing needs of the marketplace.

Urban areas in the county are typified by a high degree of access, usually along a major roadway or within close proximity to public transit (or both). Existing housing stock is frequently older and denser; rowhomes and apartment buildings exist alongside newer infill development that is becoming more commonplace. The infrastructure already exists within these places to handle denser development. Some of the county's development centers can be found in these urban areas too, from well-established places like Pottstown or the county seat of Norristown, to newer centers like Conshohocken, which has blossomed into a major employment center due to its easy highway and transit access.

Montgomery County's landscapes run the gamut from rural to urban:



*Restored farm buildings in Limerick Township*

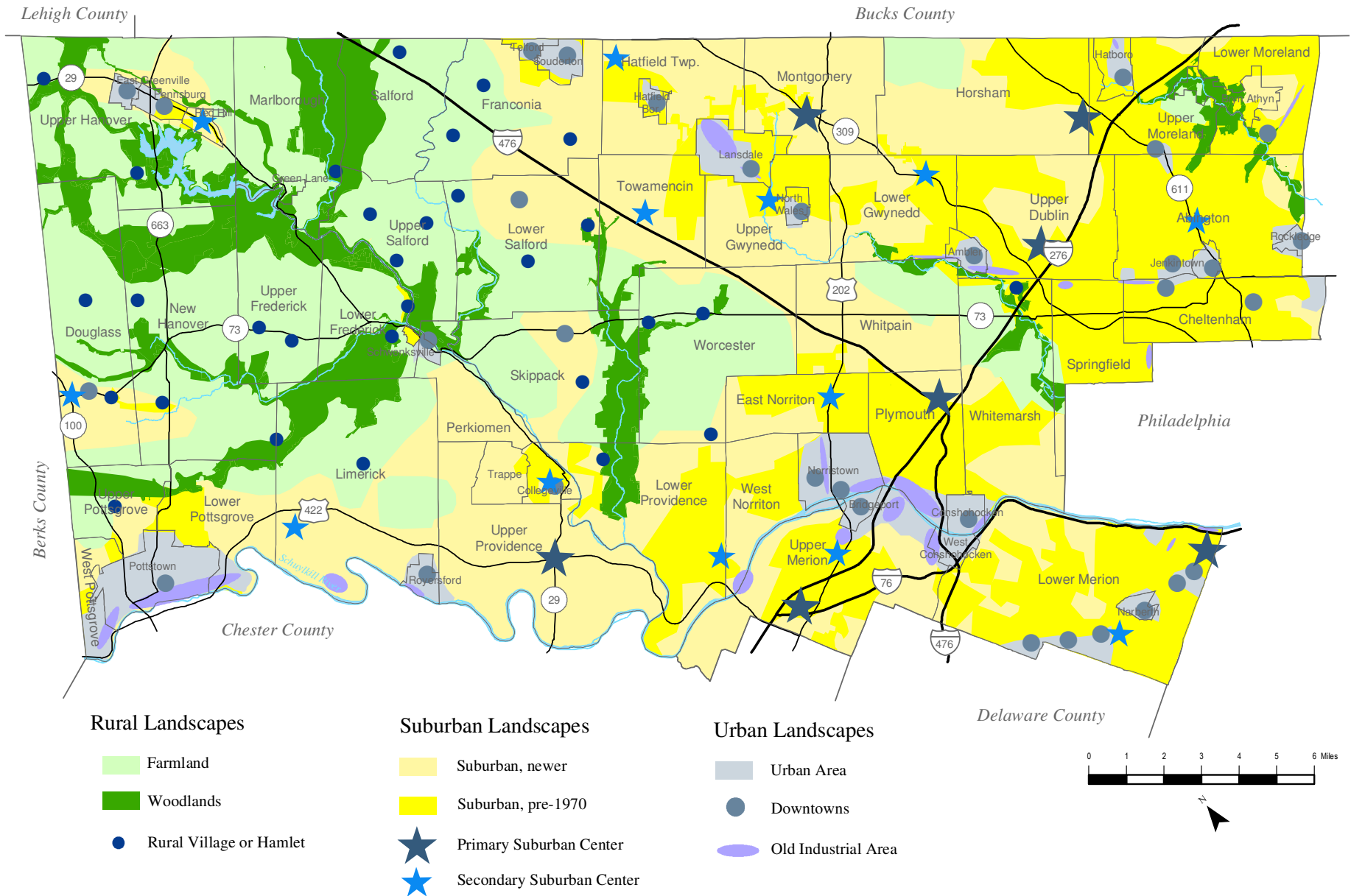


*Downtown Lansdale*



*New residential development in East Norriton Township*

FIGURE 40: Types of Landscapes



Source: Montgomery County Planning Commission

## THE BUILT ENVIRONMENT

### Existing Land Use

Land Use Changes:  
1970 - 2010

### Regionally Significant Land Uses

### Types of Landscapes

## Land Use Trends

### PLANNING ISSUE

*Although development on green fields will continue, much new development will redevelop and intensify existing built-out properties.*

### Land Use Trends

Over time, land use trends shift. Over the past decade, Montgomery County has witnessed a variety of changes in development, and many of these will accelerate in the upcoming years.

#### *Retail will continue evolving.*

Retailers have to constantly reinvent themselves to stay competitive. Grocery stores are back at malls, and many new shopping centers, like the Providence Town Center, mimic old-fashioned downtowns. Chain stores have started using a range of building formats, with smaller options available for more developed areas or where web shopping will be dominant.

#### *Apartments are hot.*

Apartment developments and proposals have taken off lately, both locally and nationally. This is expected to continue, driven by a variety of trends, including more single person households, Generation Y's interest in urban living, deferred marriage and childbearing, declines in household income, and the aging of the baby boomers.

#### *More places will be mixed use.*

Many young knowledge-economy employees want to work or live in stimulus-rich environments. The waterfront in Conshohocken, for example, has offices, hotels, and apartments, while shops and restaurants are next door in the downtown. Zoning changes to allow apartment, retail, and entertainment uses are now commonly considered in the county's employment centers, like Bala Cynwyd, King of Prussia, and Fort Washington. Part of this is driven by declines in work space per employee, which has fallen from 400 square feet per person in 1980 to less than 250 square feet in 2011.

Meanwhile, transit-oriented development, traditional neighborhood design, and other mixed use approaches offer more varied living places for county residents.



*New grocery store at the Plymouth Meeting Mall*



*Apartments along the Schuylkill River.*

*Redevelopment and infill will intensify.*

With less easily developable land available, high gasoline prices, and the comeback of urban-style living, more residents, retailers, and employers will want to locate in the eastern half of the county. These trends, along with the aging of the building stock in this area, will increase pressure for redevelopment of existing properties.

*Being Green is expected.*

Nowadays, buildings, particularly corporate offices, are expected to be green, with LEED certification, Energy Star ratings, and best management stormwater practices.



*Infill development in Lansdale.*



*Green roof on office building in Conshohocken.*



*Mixed use building next to the Ardmore train station.*





**THE COUNTY'S  
NATURAL ENVIRONMENT**



### Geology

Climate

Hydrology

Floodplains

Air Quality

Steep Slopes

Soils

Wetlands

Woodlands

Wildlife

Natural Areas Inventory

#### PLANNING ISSUE

*Local geology conditions determine development site suitability, cost of construction, and potential for local hazards such as sinkholes. Mining and gas drilling opportunities are also shaped by local geology.*

### Geology

Geology is the science and study of the solid matter of the earth, its composition, structure, physical properties, history and processes that have shaped it since the planet's formation. Understanding geology is essential since the local bedrock forms the foundation for the county and greatly shapes its natural resources. In combination with the local climate, geological characteristics of the rock, both physical and chemical, influence hydrologic and terrestrial features such as local soils, wetlands, surface and ground water, vegetation, and topography. Subsequently, their characteristics may impact woodlands and wildlife. In order to understand the county's natural resources one must understand its geology.

The border between two major geologic areas crosses the county along a northeast-southwest line extending from Willow Grove in Upper Moreland Township to King of Prussia in Upper Merion Township, with the Triassic Lowlands falling to the north and the Piedmont Upland to the south. The Piedmont Upland is comprised of older metamorphic and igneous rock (granite and schist), although there is a band of carbonate rock that stretches east from Chester County to Abington Township. Wissahickon Schist/Granitic Gneiss/Hornblende Gneiss, Chickies Quartzite, and Ledger Dolomite/Elbrook/Conestoga Limestone, are the formations found in the Piedmont Upland. The younger rocks that characterize the Triassic Lowlands are primarily red shales and sandstones, with intrusions of diabase. Four formations: the Stockton Sandstone/Conglomerate/Shale, Lockatong Argillite/Shale, Brunswick Shale/Sandstone, and diabase, make up the Triassic Lowlands. The Triassic rocks are exposed in northeast-trending belts which broadly undulate and are faulted in various locations.

Local bedrock is still mined and quarried in the county. At one time quarries were established in nearly every geologic formation though most existed along the limestone and dolomite formation that parallels the Pennsylvania Turnpike. High-grade calcium aggregate from these quarries was used by the steel industry and for building construction. Other limestone from these quarries was crushed and used as concrete aggregate, roadway base or railroad aggregate.

### What's New

- The six large active quarries in Montgomery County are located in Whitemarsh, Upper Merion, Montgomery, Marlborough, Lower Salford, and Lower Pottsgrove Townships.
- Two large quarries in East Norriton and Plymouth Townships have closed since 2000. The county has several former quarries which are currently being filled in accordance with their reclamation plans or reused for other purposes. One large former quarry in Upper Merion Township serves as a major water supply source.
- There is natural gas potential in the South Newark Basin which covers the western portion of the county, though a moratorium exists on drilling in the South Newark Basin until 2018.
- Even without local gas development, Montgomery County could see changes due to gas extraction occurring elsewhere in the state. These changes could involve new gas pipelines, gas processing facilities, and other industry linked to natural gas.



Council Rock in Lorimer Park is the county's most well-known geologic site.

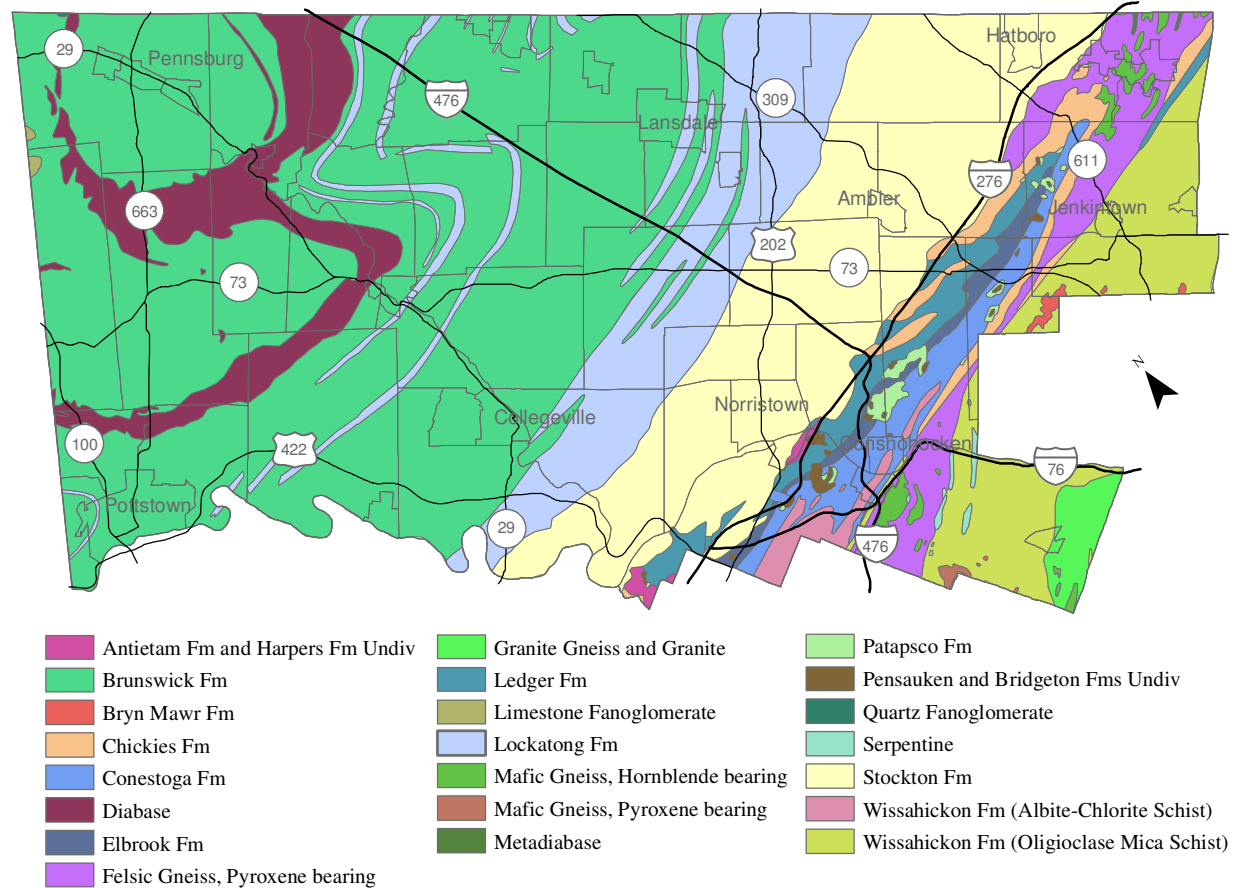


Triassic shales characterize much of the western portion of the county.



The rock bluffs along the Schuylkill River in Upper Providence Township provide some great views.

**FIGURE 41: Geology**



Source: PA Geological Survey

### Description of Local Geology

The two geologic regions of the county can be easily seen on the geology map. To the south of the Pennsylvania Turnpike, I-276, is the Piedmont Upland Region. This area is characterized by several types of older igneous and metamorphic rocks as well as a band of carbonate rock immediately south of the Turnpike. North of the Pennsylvania Turnpike are broad bands of rock formations that make up the Triassic Lowlands. Most of these sedimentary rocks are red shale and sandstone. Igneous diabase intrusions surround the Green Lane Reservoir area and are found in a long ridge from Upper Pottsgrove to Spring Mountain.

## THE COUNTY'S NATURAL ENVIRONMENT

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### Climate

### Hydrology

### Floodplains

### Air Quality

### Steep Slopes

### Soils

### Wetlands

### Woodlands

### Wildlife

### Natural Areas Inventory

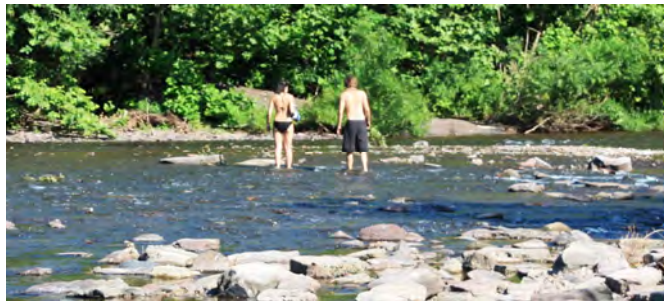
#### PLANNING ISSUE

*The changes to the climate brought about by increased levels of greenhouse gas can have broad implications for the future due to warmer temperatures, changes in local vegetation, more severe weather, and increased impacts to human health.*

### Climate

Warm summers and mild winters characterize the climate of Montgomery County. Daily temperatures reach 90°F or above on an average of 24 days during the summer season, and the county occasionally experiences uncomfortable warm periods of light winds and high relative humidity (U.S. National Oceanic and Atmospheric Administration).

During the winter months, there are normally about 116 days that have minimum temperatures at or below the freezing point. Minimum temperatures of 0°F or lower generally occur one or two times per year. The freeze-free season averages 170 to 200 days (U.S. National Oceanic and Atmospheric Administration). Precipitation is fairly evenly distributed throughout the year; maximum amounts occur during the late summer months. Annual precipitation averages 43 inches, and mean seasonal snowfall is 28 inches, the lowest for the state. In 2011, over 63 inches of precipitation fell on the county, establishing a new record.



*Swimming in the Perkiomen Creek is one way to cool off in the hot summer.*



*Cold weather and snow can occur throughout the winter.*

### What's New

The Montgomery County greenhouse gas reduction plan entitled Greenprint, adopted by the county in December 2007, outlined different strategies for reducing greenhouse gas emissions. The plan recognizes that actions to minimize greenhouse gas emissions will provide other significant benefits including increased energy independence, traffic congestion reduction, open space protection and farmland preservation, smart growth and the revitalization of our older communities, economic development opportunities, and, in many cases, cost savings through energy conservation. Some of the actions taken in accordance with the plan include:

- Reduced energy consumption in county buildings through lighting and HVAC renovations
- New energy service contracts at Parkhouse and the Montgomery County Correctional Facility
- Transit service payment benefits made available to county employees
- Expanded bike to work opportunities for county employees
- Increased recycling and waste reduction throughout the county
- Extension of county trail network
- Preparation of sustainability plans for two municipalities
- Creation of model ordinances to encourage mixed-use, transit-friendly and higher density developments
- Management of several tree planting projects
- Preservation of farmland and open space
- Creation of renewable energy ordinances
- Promotion of locally grown foods at area farmers markets



greenprint  
Montgomery County, PA

### Climate Change

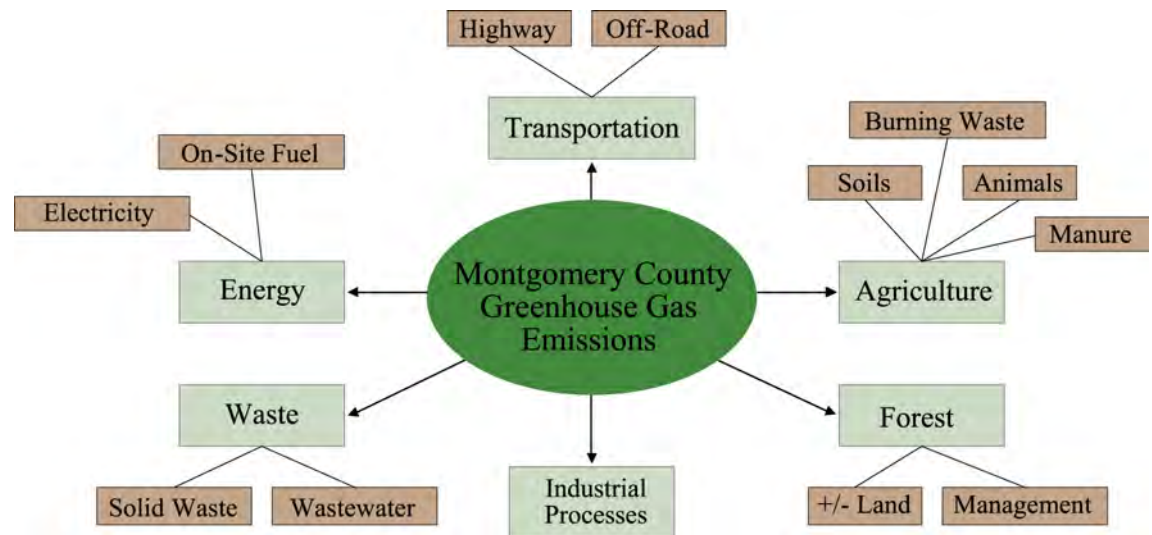
Recently there has been growing concern about the rise in greenhouse gas emissions and its impact on the world. Greenhouse gases, such as carbon dioxide, methane, and nitrous oxide, are created naturally and by human factors such as automobile emissions, tree loss, and energy consumption. Once created, these gases combine with water vapor to trap the sun's energy in our atmosphere. Though the greenhouse gas effect is important in sustaining a habitable planet, recently excess greenhouse gases have increased average temperatures around the globe. This will result in a variety of changes to global temperatures, sea levels, and weather patterns. Reducing greenhouse emissions may limit the impact of some of these changes.

Yet even with a dramatic change in energy use and reduction of greenhouse gas production, the impacts of elevated greenhouse gases will cause climate changes over the next several decades and perhaps centuries. Changes likely to occur in Montgomery County include:

- decreased agricultural production
- more frequent extreme weather conditions such as increased rainfall, flooding, and extreme heat
- increased threats to public health from waterborne diseases
- changes in local habitat and natural conditions
- potential human health impacts including respiratory diseases

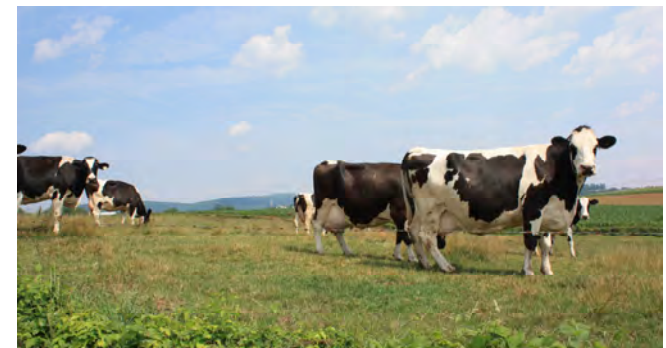
These changes will need to be examined in long-range planning. At the same time, addressing climate change can also create economic opportunities through green technology investments. Montgomery County, with its diversified economy and skilled technical labor force, is well positioned to take advantage of worldwide demand for energy conservation technology and equipment for reducing greenhouse gas emissions.

**FIGURE 42:** Greenhouse Gas Emissions



### Sources of Greenhouse Gas Emissions

There are several human produced greenhouse gas emission sources in the county. A majority of the emissions come from electrical generation and other uses of fuel for heating, industrial production, transportation, waste disposal, agriculture, and forestry. Though most sources are directly a result of the combustion of carbon fuel sources, increases in greenhouse gas can result from loss of trees, decomposition of waste, release of certain volatile chemicals, and fertilizer. In addition to human caused sources, greenhouse gas is consistently produced by nature.



*Greenhouse gases come from not just human activities, like driving a car, but from agricultural uses as well.*

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### PLANNING ISSUE

*Everyone who lives, works, or visits in Montgomery County enjoys the economic, recreational, and aesthetic values that water provides. Yet competing demands for it often stress the quantity and quality of water supplies in some areas of the county.*

### Hydrology

Water is a valuable resource and is essential for life. It is consumed by plants, animals, and people. It is also essential for a vibrant economy and recreation facilities. The streams and rivers throughout the county provide natural habitat for a variety of aquatic life. Natural water bodies are also used as a water supply and for the assimilation of treated wastewater.

Water in county streams originates as surface runoff and groundwater. Typically, surface runoff can cause flooding conditions during and soon after a rainfall event. The sustained source of water in county streams, often referred to as bed flow, comes from groundwater supplies. Effluent from sewage treatment plants and other water diversions also contributes to stream flow.

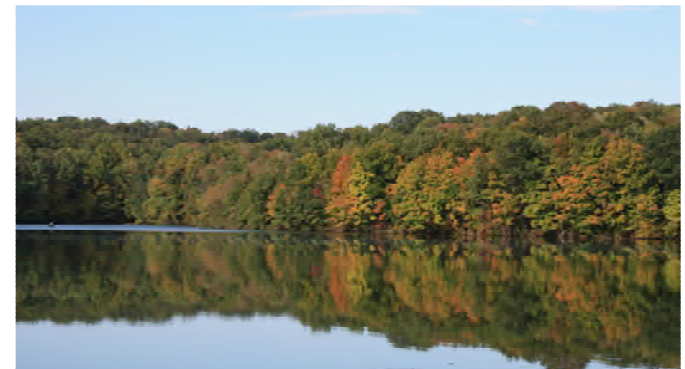
Streams in the county are dynamic systems that react to the climate, watershed land use characteristics, and geology. A stream constantly seeks equilibrium with local conditions by changing its course, depth, and width. In effect, streams are always changing in order to remain the same. Many changes to the shape of the stream and its banks occur during small rainstorm events. During these high flow periods, the force of water erodes the stream bank and moves loads of sediment and rocks.

In addition to the creeks, the county contains several lakes and ponds. The largest of these are the Green Lane Reservoir (814 acres), Deep Creek Lake (38 acres), and Knight Lake (25 acres), which are all located in the northwestern corner of the county. These lakes provide scenic, recreation, and wildlife habitat benefits. The Green Lane Reservoir, which is owned by the Aqua America, Inc., provides supplemental water released into the Perkiomen Creek that allows the company to withdraw the water further downstream at Audubon.

Groundwater behaves much like surface water, flowing under the influence of gravity, only much slower. Groundwater is tapped as a source of drinking water and for industrial purposes throughout the county. It is also utilized as a geothermal energy source. Replenishment of groundwater occurs slowly as rainwater seeps through the

### What's New

- Since 2000, the county has had two drought emergencies of varying lengths during which local water supplies were reduced.
- Some improvement of water quality has occurred as many point sources of pollution have been upgraded or eliminated since 2000. Yet, as the county has grown, non-point sources have continued to impair many waterways.
- Since 2003 all municipalities in the county have been required to meet municipal separate storm sewer system (MS4) requirements to manage pollutants discharged through local storm sewers.
- Four major floods occurred in the county since 2000, resulting in both significant property damage and loss of life.
- Thirteen dams have been removed in Montgomery County since 1998, including two dams on the Schuylkill River.
- Total Maximum Discharge Limits (TMDLs) have been established for 11 streams in Montgomery County since 2000.



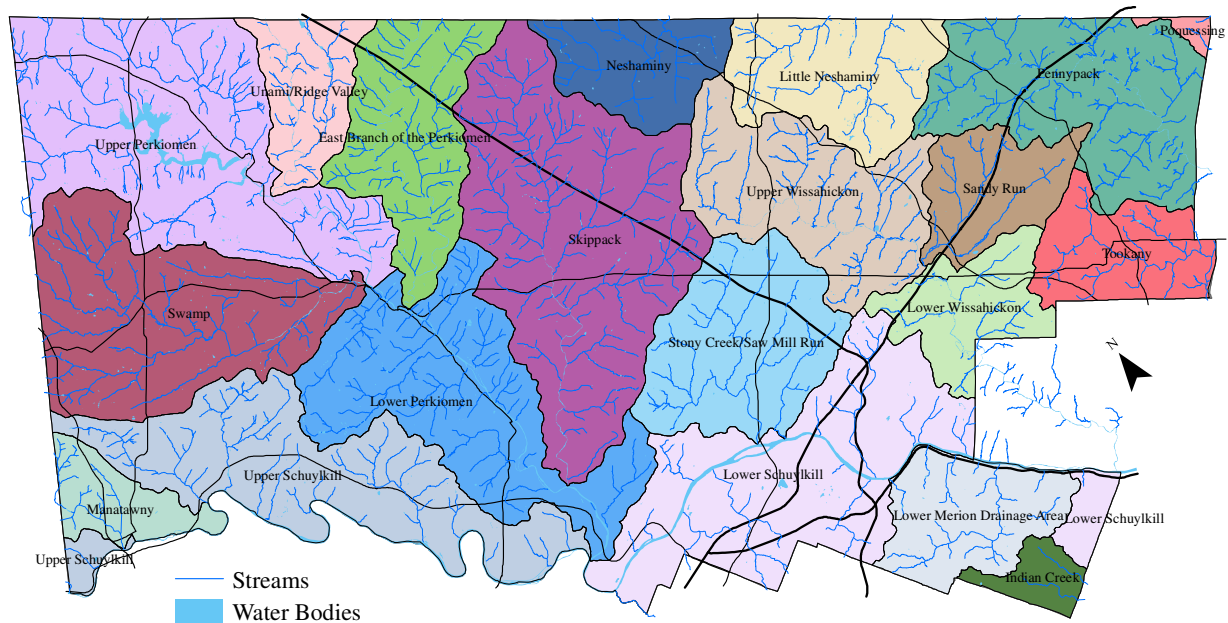
*Green Lane Reservoir is the county's largest lake comprising 814 acres.*

soil and enters cracks in the underlying bedrock. Soil, vegetation, topography, and land use are all factors that influence the recharge of groundwater. Soil structure allows percolation of water at varying rates.

The most visible components of the county's hydrology are the numerous rivers, streams, and creeks that drain the landscape within watersheds. The major waterways include the Schuylkill River, Perkiomen Creek, Skippack Creek, Neshaminy Creeks, Pennypack Creek, the Wissahickon Creek, and Tookany Creek.

Water quality is impaired by point sources of pollution such as industrial discharges and waste water treatment plants and non point sources which may include urban stormwater, sediment, and agriculture waste. Currently 48% of the county's streams do not attain current water quality standards set by the Pennsylvania Department of Environmental Protection.

**FIGURE 43: Watersheds**



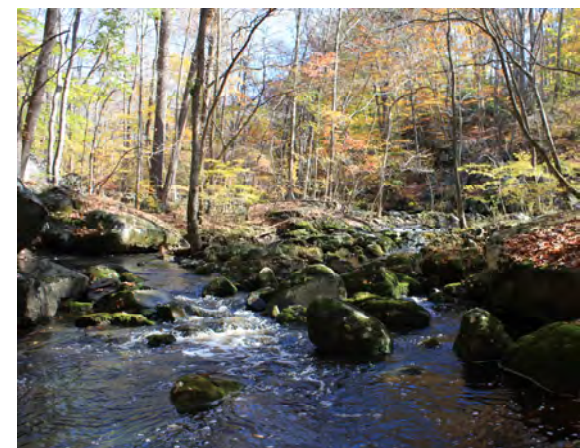
Source: U.S. Geological Survey



An old dam in the Wissahickon Creek is removed to improve water quality and fish habitat.



A stream can be attractive to people of all ages.



The Ridge Valley Creek flows through Salford Township.

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#### PLANNING ISSUE

*There are 2,600 structures and various types of infrastructure in county floodplains that may be subject to future damage. To minimize future damage, existing structures should be removed or floodproofed and future floodplain development needs to be limited.*

### Floodplains

Floodplains include land bordering streams and rivers that are inundated periodically. The characteristic soil and vegetation of a floodplain are influenced by floods.

Protection of the floodway, the portion of the floodplain closest to the water course, is critical since changes to it could impede floodwaters, increasing the height and destructive ability of floods. Protection of the remainder of the floodplain is important to reduce injuries and property loss. The regulated floodplain in the county is an area along a stream or river with a 1% chance of being inundated in a given year. This area comprises 21,311 acres, representing about 7% of the county.

Preserving floodplain areas in their natural state is the surest way to prevent flood disasters, including fatalities and property loss. Structures or improvements within the floodplain will be flooded—it is just a matter of when. Flood elevated or flood proofed structures may reduce property loss and reduce fatalities and injuries, but will not address all of the impacts of a flood. With current development in the county, it would be impossible to return all floodplains to natural conditions. Now, over 2,600 structures exist in areas of the county that have a 1% probability of being flooded in any given year. Additionally, floodplains contain various infrastructure which need to be located along streams and rivers.

Various hazard mitigation strategies to reduce flood impact include flood warning systems, drainage system management, land use management, building code enforcement, the removal of flood prone structures, more effective stormwater management, floodproofing and elevation, floodplain management through ordinances, developing flood control structures, natural resource protection, and public information programs. Though there are no federal laws preventing floodplain development, municipalities can restrict floodplain development through local floodplain ordinances. Montgomery County's Hazard Mitigation Plan Amendment 2012 identifies flooding as the county's most significant overall hazard.

Floodplains used for planning are those lands that have a 1% annual chance of being inundated.

### What's New

- The impact of flooding in Montgomery County has been considerable over the past 30 years, resulting in several fatalities, over \$120 million in property losses, and damage to key transportation and utility infrastructure.
- Floodplain maps, generally known as the Flood Insurance Rate Maps (FIRMs), were updated in 2012 by the Federal Emergency Management Agency (FEMA). These maps, available online, delineate three zones: floodways which carry the bulk of the floodwaters; areas with a 1% chance of being flooded in a year; and floodplains with a 0.2% chance of being inundated in a year.
- All of the municipalities in the county have developed floodplain ordinances to limit development within floodplain areas. As a result of newly adopted FIRMs for the county, each municipality will be required to update their floodplain regulations.
- A model flood plain ordinance was prepared by the Montgomery County Planning Commission.

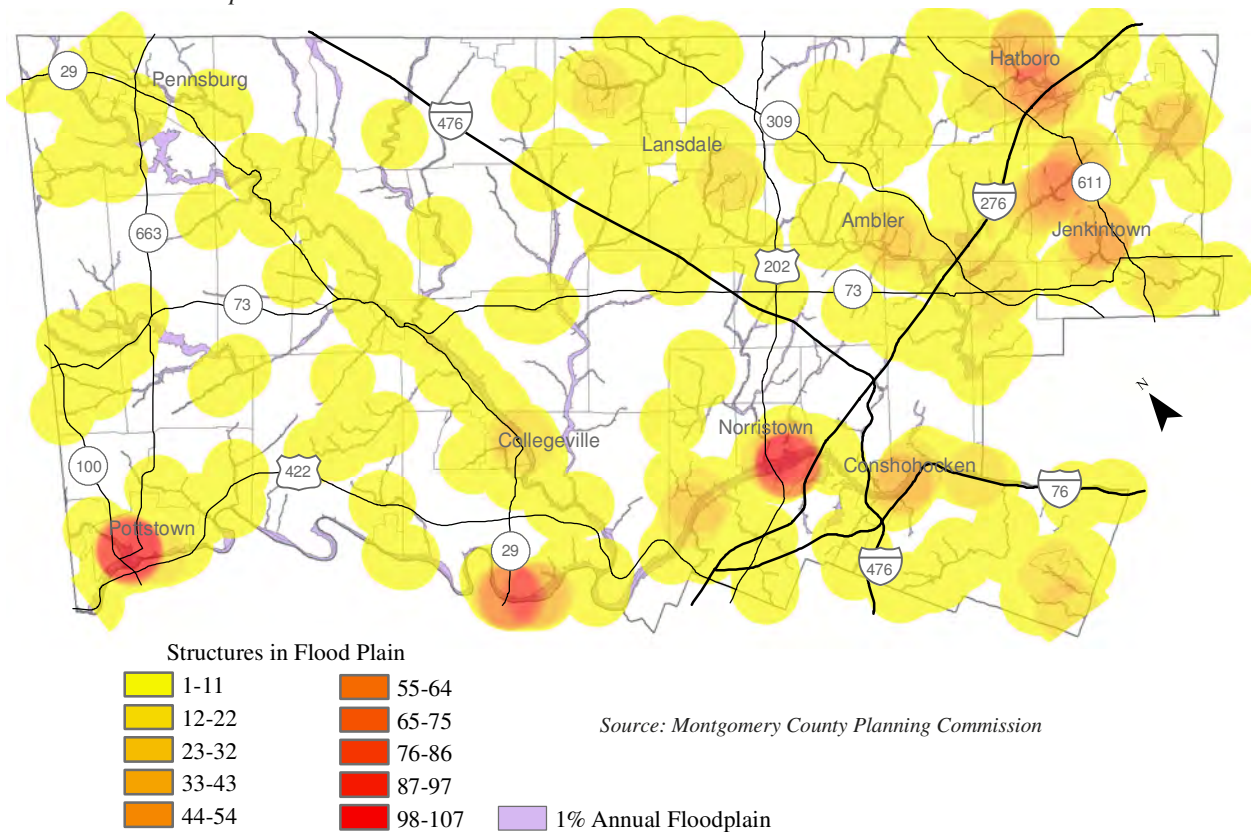


*Flooding in the Port Indian community in West Norriton Township is a common occurrence.*

**Flood Prone Areas of the County**

Most of the flood damage in the county has occurred along the Schuylkill River, Perkiomen Creek, Wissahickon Creek (including the Sandy Run), Pennypack Creek and Tookany Creek. Pottstown Borough, the Mont Clare Port Providence area of Upper Providence Township, Port Indian area of West Norriton Township, Norristown, Bridgeport and Conshohocken Boroughs, and the River Road part of Lower Merion Township have sustained damage during Schuylkill River floods. Collegeville has received the most damage from Perkiomen Creek floods. The Wissahickon Creek flooding has caused damage in Ambler Borough and portions of Springfield and Whitmarsh Townships. Floods along the Sandy Run have occurred in Upper Dublin and Abington Townships. The Pennypack Creek flooding has damaged Horsham Township and Hatboro, as well as Upper Moreland, Lower Moreland, and Abington Townships. Abington Township, along with Cheltenham Township, has also sustained flood damage from Tookany Creek.

**FIGURE 44: Floodplain Areas**



Floodplains are suitable for recreation uses.



Flooding can impact businesses.



Flooding in Pottstown from the Manatawny Creek.

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#### PLANNING ISSUE

*Though most of the stationary sources which emit potential air pollutants are regulated by state and federal permits and standards, significant sources of air emissions are linked to land use and lifestyle decisions which can be guided by local planning efforts.*

### Air Quality

The air breathed by county residents is made up of various gases that sustain life. It also contains many other substances, some of which may cause human harm, damage to the built environment, impacts to ecological systems, impairment in overall visibility, and water quality degradation. Air pollution comes from both mobile sources, such as vehicles, and stationary sources such as power plants, factories, building heating systems, and manufacturing processes. Since air currents can carry pollutants great distances, millions of people can be impacted by air pollution from a large source.

A significant portion of the air emissions in the region is tied to vehicle trips. Though individual vehicle emissions have been reduced through fuel formulations and engine efficiencies, the fact remains, the more vehicle miles traveled and fuel consumed, the greater the amount of mobile source emissions.

The U.S. Environmental Protection Agency (EPA) monitors and sets national health standards for six common air pollutants (ozone, particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide, and lead). The Delaware Valley, including Montgomery County, does not meet the standards for two of these pollutants—ground-level ozone and fine particulate matter (PM<sub>2.5</sub>). The EPA has designated the Greater Philadelphia Region as air quality "nonattainment areas" for these pollutants.

#### Ground-Level Ozone

Ozone in the upper atmosphere shields the earth from the sun's harmful rays. There, ozone plays an important role protecting life on earth. At ground level, where people breathe, ozone can be harmful to lungs and the environment. In the summer, sunlight and heat can "bake" pollutants to form ground-level ozone, also known as smog. Because of air pollution chemistry, high levels of ground-level ozone commonly occur during the summer months.

#### Particle Pollution

Particle pollution is the term for tiny drops of liquid or small bits of dust, metals, or other materials that float in the air. Some particles, such as soot or smoke, are large enough to

### What's New

- Average daily vehicle miles traveled in Montgomery County dropped from 19,392,400 in 2007 to 18,045,300 in 2010 as a result of high fuel prices and weak economic conditions.
- The number of ozone action days in the Philadelphia region increased from 10 days in 2000 to 18 days in 2012. Much of that increase is attributable to weather and changing action day criteria.
- EPA regulations enacted for coal fired power plants and fine particulates have reduced emissions within the region since 2000.
- The number of days that National Ambient Air Quality Standards for PM<sub>2.5</sub> (fine particulates) and Ozone were exceeded in the region dropped from a five year average of 52.2 days (2000–2004) to 24.4 days (2008–2012).



*Emissions from automobiles can be a principal source of smog pollution.*

see. Other particles are so small that they can only be seen with an electron microscope. The sizes and types of different particulate matter include total suspended particulates, fine and coarse particulate matter, sulfates, nitrates, and sulfur dioxide. Particle pollution comes from a variety of natural and manmade sources, such as cars, power plants, and forest fires.

### *Carbon Monoxide (CO)*

Carbon monoxide (CO) is a colorless, odorless, and poisonous gas that can impair the body's ability to transfer oxygen, resulting in asphyxia or shortness of breath. The principal source of carbon monoxide is vehicle emissions.

### *Lead (Pb)*

Lead is a highly toxic metal when ingested or inhaled. Less lead is in the environment due to changes in gasoline formulations.

### *Nitrogen Oxides (NO<sub>x</sub>)*

Oxides of nitrogen (NO<sub>x</sub>) are a class of pollutants formed when fuel is burned at a very high temperature (above 1200 °F), such as in automobiles and power plants. NO<sub>x</sub> plays a major role in the formation of ground-level ozone in the atmosphere through a complex series of reactions with volatile organic compounds (VOCs).

### *Sulfur Dioxide (SO<sub>2</sub>)*

Sulfur dioxide (SO<sub>2</sub>) is one of a group of highly reactive gases which is emitted from fossil fuel power plants and other industrial facilities.

### *Air Toxics*

In addition to the air pollutants listed above, various air toxics and greenhouse gases are also significant threats to air quality and the climate. Nationwide, mobile sources represent the largest contributor to air toxics. Air toxics are pollutants known or suspected to cause cancer or other serious health or environmental effects.

The Pennsylvania Department of Environmental Protection (PADEP), working with the federal Environmental Protection Agency, regulates various stationary sources of air pollution. The Clean Air Act requires the Delaware Valley Regional Planning Commission (DVRPC) to



*The municipal waste resource recovery facility contains several types of air pollution control systems to minimize air emissions.*

demonstrate that transportation projects and programs in the Transportation Improvement Plan and Long Range Plan do not cumulatively harm air quality. DVRPC also administers the Air Quality Partnership and the Ozone Action program.

Additional reduction of vehicle miles traveled would result from increased use of alternative transportation options such as public transportation systems, biking and walking, and commuter ride sharing. Some changes in community design have minimized vehicle miles traveled by creating mixed use development with convenient shopping and employment opportunities near houses.

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#### PLANNING ISSUE

*Steep slopes can be environmentally fragile and must be protected or carefully developed since they are subject to increased erosion, and slope movement such as rock or mud slides.*

### Steep Slopes

Steep slopes create dramatic landscapes that define community character and limit development. Steep slopes, which are often easily eroded, are environmentally sensitive areas. Under certain conditions, they can present a danger to public health and safety if they are not protected. Generally, as slope increases, the depth of topsoil and the ability of the soil to support structures and vegetation decrease. This makes them susceptible to erosion and mass movement of soil through landslides and soil creep. Erosion potential is greater when steep slope vegetation is removed, often times resulting in sedimentation in adjoining watercourses. Due to their unique soil and exposure to natural lighting and weather conditions, steep slope environments often support unique plants and wildlife that add to the region's biodiversity.

Slope failure can take many forms resulting in the mass movement of rock and soil. Generally, rapid landslides caused by excess moisture are referred to as mudslides or earth flow. These have occurred in isolated areas of the county. Slow mass movement caused by water is soil or rock creep. Rock slides, generally not likely in the county, occur under dry conditions.



*Soil movement on slopes can take many forms such as soil creep.*

### What's New

- One of the county's most damaging landslides occurred in Lower Merion Township on January 2, 2007. Though it involved a small amount of mud and rocks, it caused the derailment of a 54-car freight train. Fortunately, none of the train cars loaded with fuel oils leaked and there were no injuries. Similar landslides have occurred along the Schuylkill Expressway.
- In 2012, PennDOT initiated a \$1.2 million slope stabilization and drainage project in the landslide prone areas along the Schuylkill Expressway to prevent future problems.

Various types of structural and vegetative slope stabilization controls can be employed to further stabilize slope areas. Recent innovative slope stabilization efforts have employed cut brush layers in lieu of or in conjunction with synthetic fabrics or various types of structural devices. This approach, which is termed biotechnical stabilization or soil bioengineering, entails the use of living vegetation, primarily cut, woody plant material that is purposely arranged and imbedded in the ground to prevent surficial erosion and to arrest shallow mass movement. In the case of brush layering, the live cut stems and branches provide immediate reinforcement. Additional long term stabilization occurs as a result of plant rooting that takes place along the length of buried stems. Unlike most inert reinforcements, imbedded brush layers also act as horizontal drains and wicks that can enhance the hydrologic regime in the slope.

### Understanding Slope

Topography is generally expressed through the percentage of slope. Slope is calculated by the dividing the vertical elevation change by the horizontal distance in which the change takes place. To do this typically a contour map is consulted. Basic slopes used in most planning work are as follows:

- 33% slope–3:1 slope; maximum slope for grassed areas
- Greater than 25%–very steep; usually most development is prohibited
- 15%-25%–steep; some limitations on development
- 7%–maximum grade for public roads
- 2%–minimum grade for drainage on grassed areas
- 1%–minimum grade for drainage on roads

**FIGURE 45: Steep Slopes**



*Dramatic views occur from the cliffs along the Schuylkill River in Upper Providence Township.*

### Steep Slope Locations

The concentrations of steep slopes are most often associated with particular geologic formations such as the diabase intrusions in the western portion of the county; the Locketong argillite, especially in Upper and Lower Providence Townships; and the Wissahickon Schist in Lower Merion Township. Major slopes are most prominent along the Schuylkill River valley and major streams such as the Perkiomen and Pennypack Creeks. The most significant steep slopes in the county can be found along the Schuylkill Expressway and along Mill Creek in Lower Merion; in portions of Barren Hill and Miquon in Whitemarsh; along the Perkiomen Creek in Upper Salford, Upper Providence, and Lower Providence Townships; and along the Pennypack Creek in Abington Township. Very steep ravines can be found along the Schuylkill River near Mont Clare and in the Ridge Valley Creek in Salford and Marlborough Townships. Both of these areas support unique natural habitat.

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#### PLANNING ISSUE

*Soil erosion reduces soil fertility and adds to stream sediment pollution.*

### Soils

Soils are a natural assortment of organic materials and mineral fragments which support plant life. The composition of soils changes slowly over time due to weathering of rock and the activity of soil organisms. As a consequence, soils differ in their color, mineral characteristics, fertility, texture, erodability, and depth to bedrock and groundwater. Soil scientists have classified soils found in Montgomery County into several groups called soil series. Soils listed within the same series have similar subsurface characteristics. However, the surface characteristics of soils within a particular series can vary in slope, degree of erosion, size of stones, and other easily recognizable features. In addition to these soil-mapping units, soils can be divided into prime and important agricultural soils, hydric soils, and alluvial soils.

#### *Prime and Important Agricultural Soils*

The agricultural potential of soil is determined by measuring fertility, depth to bedrock and groundwater, texture, erodability, and slope. Based on these characteristics, soils are classified as prime farmland, farmland of statewide importance, and other land. Prime farmland soils, which comprise 50,983 acres, are deep, well-drained, and moderately sloped soils that can support high yields of crops with little management. Farmland of statewide importance includes soils that support cultivation but require careful crop management and includes about 87,089 acres in the county. The remaining soils are more suitable for pastures and woodlands.

The major areas of prime agricultural soils are in the Skippack Creek Watershed, especially Worcester Township. Ironically, some of the best agricultural soils in the county are within the heavily developed areas along the Pennsylvania Turnpike. Conversely, the western part of the county where most of the farms are located has a limited amount of prime agricultural soils.

#### *Hydric Soils*

Hydric soils are periodically wet soils, in an undrained condition, that often support the growth of wetland vegetation. Since only some hydric soils are found in undrained conditions, not all hydric soils support wetland

### What's New

- The new web-based Montgomery County soil survey provides a variety of tools to enable a user to better understand local soil conditions and create various reports.
- The Pennsylvania Erosion and Sediment Control Manual was comprehensively revised in 2012 to address sediment based pollution control.
- Development projects between 1 and 5 acres that were begun after 2010, now must receive an NPDES permit.
- Six of the 11 streams in the county that have Total Maximum Daily Loads established since 2000 are impaired as a result of siltation.



*Fertile soil for farming is located throughout the county.*



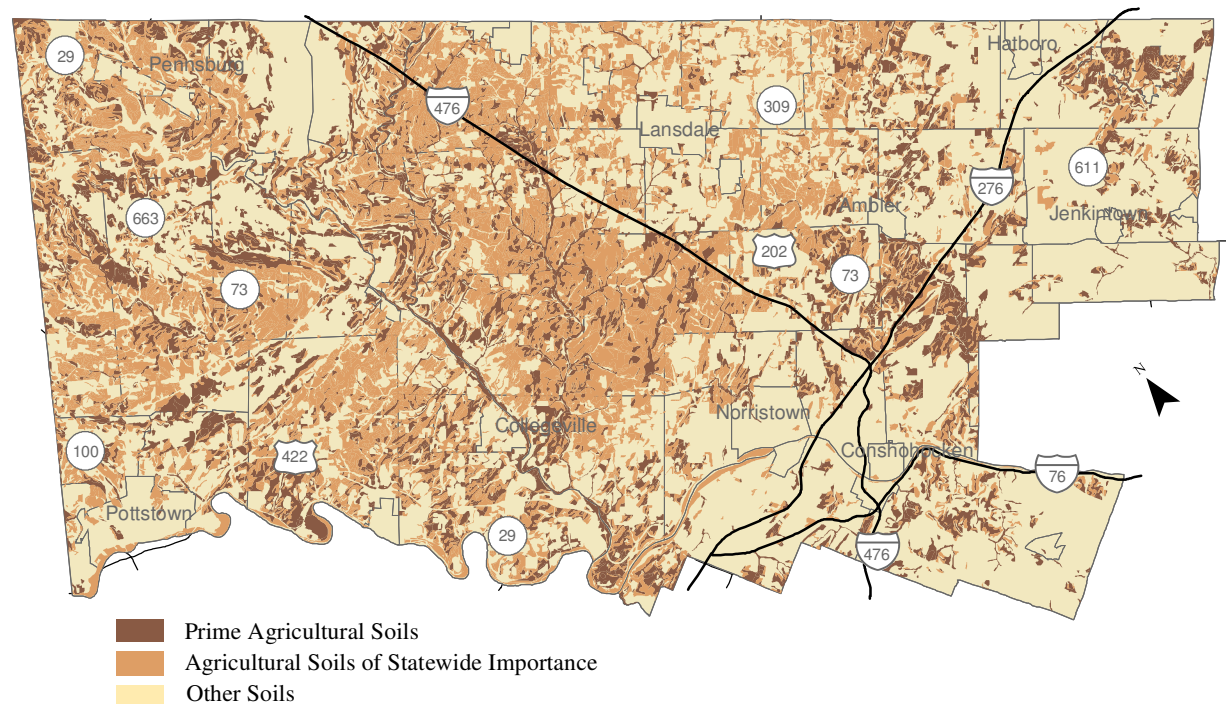
The grading of soil to prepare a site for development can be costly.

vegetation. Hydric soils that have been drained for agricultural use are one example of this. Soils with major hydric components are a conservative indicator of wetlands. Other soils have hydric components in limited settings, such as depressions, bottomlands, swales, drainage ways, and alluvial soils.

### Alluvial Soils

Alluvial soils are frequently, but not always, located within a floodplain. These soils have been deposited by flowing water and are not stable as a result of their texture and composition. The presence of alluvial soils is only one indicator of a floodplain. Changes in the tributary drainage or slope of the adjacent stream may create a floodplain that is either larger or smaller than the area of alluvial soils. An important aspect of alluvial soils is that they often form aquifer recharge areas.

**FIGURE 46:** Significant Agricultural Soils



Source: National Resources and Conservation Service

### Sediment Pollution

Soil in the wrong place can be a significant source of water pollution. Once eroded off the land surface, soil can be suspended in stormwater or become airborne. As a suspended solid in water, soil can make water turbid and reduce water quality. Airborne dust can cause localized air pollution. When deposited as stream sediments, soil can disrupt stream habitat and reduce its hydraulic capacity. Once deposited in the bed of a stream, soils continue to migrate down stream causing additional problems.

### Conservation District

The Montgomery County Conservation District was formed in 1956 to protect and improve the quality of life of the residents of Montgomery County and surrounding communities by providing education, technical guidance, and erosion and sediment plan review for the protection of soil and water control in the county. Professional staff at the Conservation District are guided by a board of directors and work cooperatively with the Pennsylvania Department of Environmental Protection as a level II cooperator undertaking erosion and sediment plan review and approval and site inspection. Under this delegation agreement the DEP conducts enforcement actions.

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*Wetlands, which quietly provide numerous local benefits, are not completely protected by federal and state permits.*

### Wetlands

Wetlands provide many benefits including erosion control, flood retention, water quality improvement, groundwater recharge, and wildlife habitat. They can also be attractive and provide open space and recreation opportunities.

Wetlands are identified by the presence of hydric soils, surface water, and wetland vegetation. The National Wetlands Inventory (NWI), prepared by the U. S. Department of the Interior, Fish and Wildlife Service, generally identifies 6,931 acres of wetlands that are one acre in size and larger within Montgomery County. More detailed wetland delineations based upon hydrology, soils, and plants have been performed on various areas of the county. Typical county wetlands are riverine or pallustrine due to their association with adjoining streams and rivers. These types of wetlands are important since they can filter out impurities in stormwater flowing into streams. The wetlands also provide flood storage and offer unique habitat for unique and endangered species such as the Muhlenberg bog turtle (*Clemmys muhlenbergii*).

In the past, some wetland areas in the county were drained or filled for development. Over the last several decades, changes to wetlands have been regulated so that any loss of wetland area is mitigated with replacement wetland areas. Though many replacement wetlands are on site, some larger created wetland areas have been developed at several off site locations including the Norristown Farm Park and along the Sandy Run in Whitemarsh Township.

Though state and federal permits are required for most construction activities in wetlands, these actions alone do not protect wetlands. Other measures by local government including zoning restrictions that provide setback requirements and lot size restrictions on properties containing wetlands, vegetation protection standards, and open space acquisition and set aside requirements have been used to ensure that wetlands continue to provide local benefits.

Wetlands which contain aquatic and amphibious animals, and different species of grasses, sedges, and wild flowers are important habitat. They provide nesting sites for waterfowl as well as resting spots for migratory species. Most aquatic

### What's New

- Constructed wetlands, which are shallow marsh systems planted with emergent vegetation, have become more widely used as stormwater management in new developments. Constructed wetlands developed in the county over the past 10 years are effective in pollutant removal, mitigation of peak rates of stormwater, reduction in runoff volume and in providing wildlife habitat benefits.



*Vernal ponds provide important habitat for water fowl, reptiles and amphibians.*

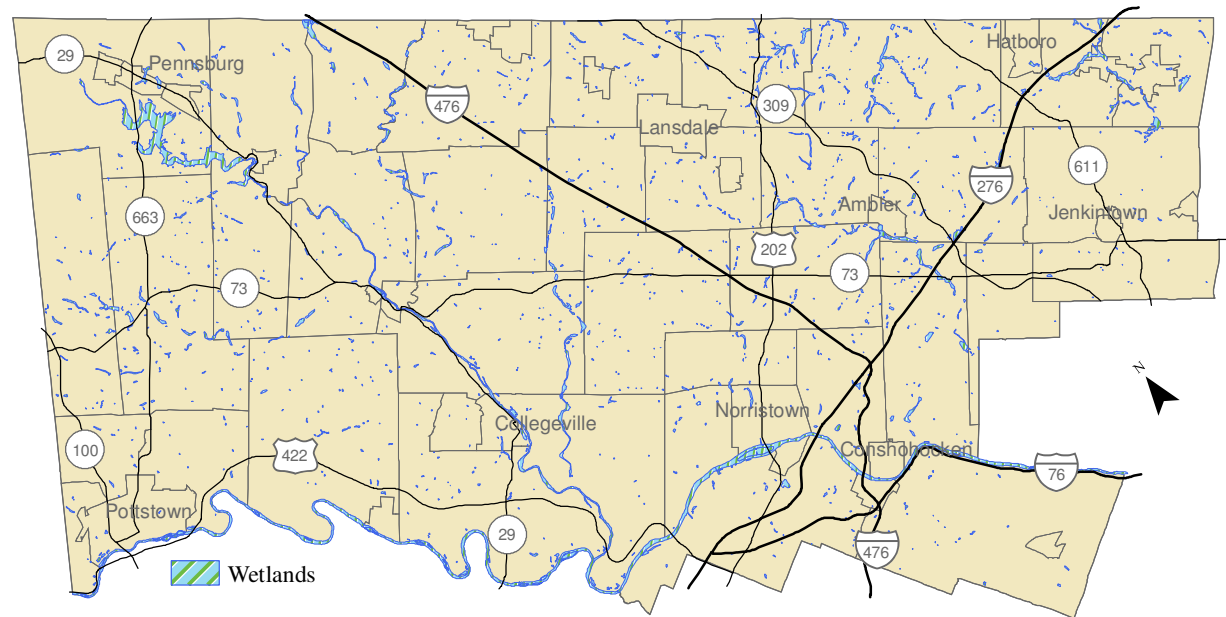


*Many wetlands such as this one in Lower Pottsgrove Township are preserved as open space.*

and amphibious life starts in wetland areas, which act as nurseries, protecting the eggs and young from predators. Lowland and upland species find food in wetlands or feed on species that breed in wetlands and move to land as they mature. Seasonally flooded ponds surrounded by meadows and woodlands encourage butterflies and certain species of birds. These areas are favorites of bird watchers and hikers, due to the diversity of plant and animal species.

Significant wetlands in Montgomery County are located along the Schuylkill River in Lower Pottsgrove Township, Limerick Township above Linfield, Upper Providence Township in the Mingo and Port Providence silt basins, Lower Providence Township at the Valley Forge National Historical Park, and in the Abrams basin in Upper Merion Township. Other large wetlands are associated with other streams in the county including the following sites: Upper Hanover Township upstream from the Green Lane Reservoir in Camelot Park, White's Mill in Salford Township, Camp Sky Mount Lake in Marlborough Township, along the Swamp Creek in New Hanover Township, Bethayres Swamp in Lower Moreland Township, Penllyn Woods in Lower Gwynedd Township, and along the Wissahickon Creek in Whitemarsh Township.

**FIGURE 47: Wetlands**



Source: National Wetlands Inventory



Skunk cabbage is a common sight in wetlands during early spring.



Significant wetlands are found along the Schuylkill River.

## THE COUNTY'S NATURAL ENVIRONMENT

Geology

Climate

Hydrology

Floodplains

Air Quality

Steep Slopes

Soils

Wetlands

### Woodlands

Wildlife

Natural Areas Inventory

### Woodlands

Woodlands provide many benefits to the county. They provide essential habitat for many local bird species and wildlife. Woodlands also help reduce erosion, protect local stream water quality, improve air quality, and offer recreation opportunities for residents.

Three hundred years ago, Montgomery County was a dense forest of hardwoods. Oaks were the dominant species. Over time as the county was farmed and developed, woodlands decreased. Also, the qualities of woodlands have changed over time as a result of the expansion of non-native species, disease and predators, fragmentation, and deer browse. Many non-native trees and bushes have taken root in the county. The most predominate of these is the Norway maple, which has become a big part of several forests in the county. Tree species have succumbed to various diseases and predators, changing the overall forest composition. Chestnut trees are non-existent, while American elms are barely hanging on. Other trees, such as American hemlock and ashes are being besieged by new threats.

One of the greatest threats to county woodlands is deer browse. The overabundant deer population in the county has caused aggressive browsing and buck rub on various plants and shrubs to the extent that in some woodlands, the understory has been eliminated. As a result, many of Montgomery County's woodland areas have little or non-regeneration potential.

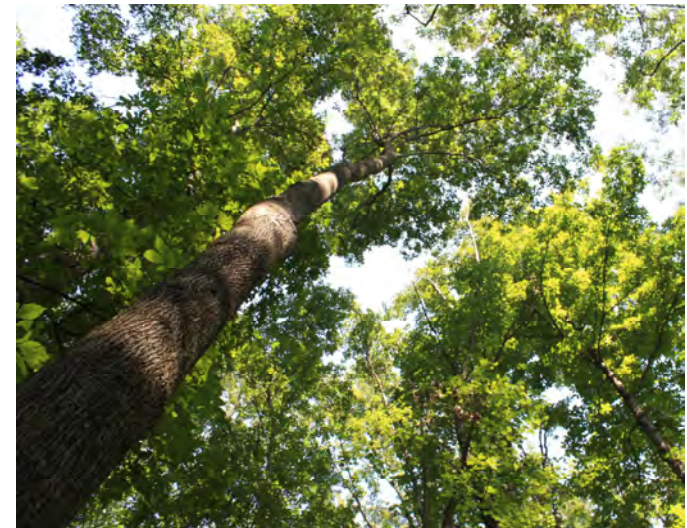
The forest has become more fragmented as roads, land developments, utilities and other forms of development have cut into them. Small and isolated woodlands often have limited ecological value and are more vulnerable to non-native invasive plants.

The principal types of woodlands in the county today are:

- **Red Oak** – A sizable portion of the large remaining woodland areas in the county are oak forests. Northern red oak is predominant, but black, scarlet, and chestnut oak and beech trees are also found in these larger forested and hilly areas of the county. In the early 1980s, many oak forests in the county were attacked by gypsy moths.

### What's New

- In 2010, 58,147 acres, about 18.6% of the county, was wooded. This represented a slight loss of about 3,476 acres of woodlands since 2000. Yet the size of the county woodlands has grown since 1970, largely a result of old farm fields that have reforested. In addition to the overall loss to the size of woodlands, existing forests have become more fragmented as a result of development.
- A study conducted by American Forests in 2003 demonstrated that urban forests in Southeastern Pennsylvania, similar to other more traditional forms of infrastructure, provide over \$5.9 billion in stormwater management benefits and \$167 million in air pollution reduction benefits. Additionally, trees enhance property values by making building sites more attractive. They also provide needed cooling in the hot summer.
- In 2012, over 2000 trees were planted in the Norristown area through funding provided by PennVest.



Mature oaks in Worcester provide deep shade.

### PLANNING ISSUE

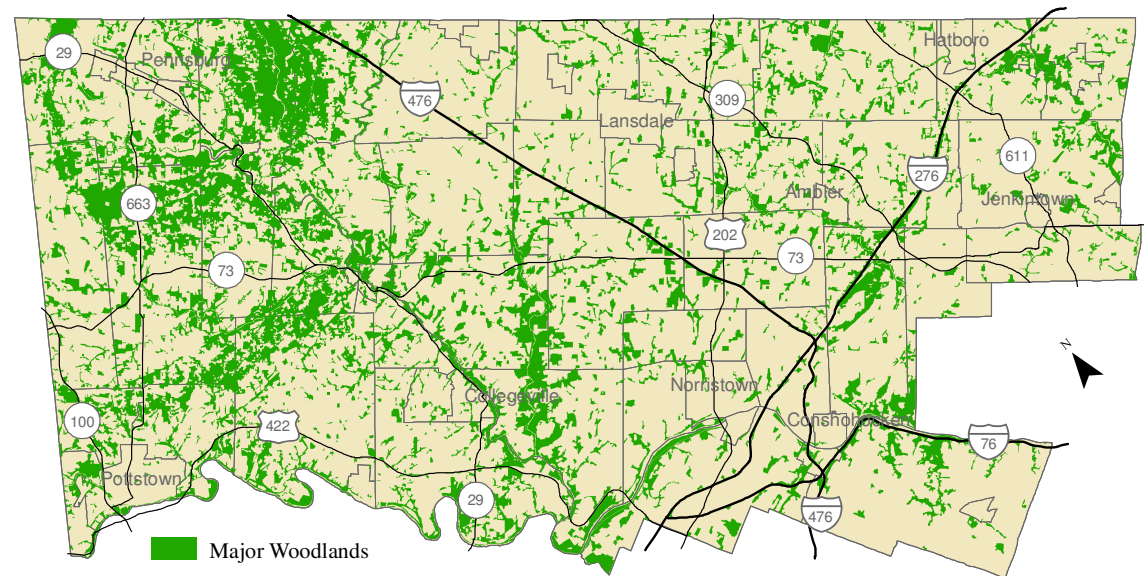
*Woodlands will continue to be lost or fragmented if they are not adequately protected.*

- **Mixed Hardwoods** – Smaller woodlands, particularly along stream valleys and the Schuylkill River, contain different species of ash, maple and sycamore. Local mixtures vary and include minor species such as the slippery elm, yellow birch, black gum, elm, and poplar.
- **Emerging Woodlands** – Former fields are usually transformed by rapidly growing trees such as red cedar, red maple, and aspen. In many of the emerging woodlands in the county, non-native trees such as the Norway maple will dominate the landscape. This can be seen throughout much of the forest cover in the Evansburg State Park.

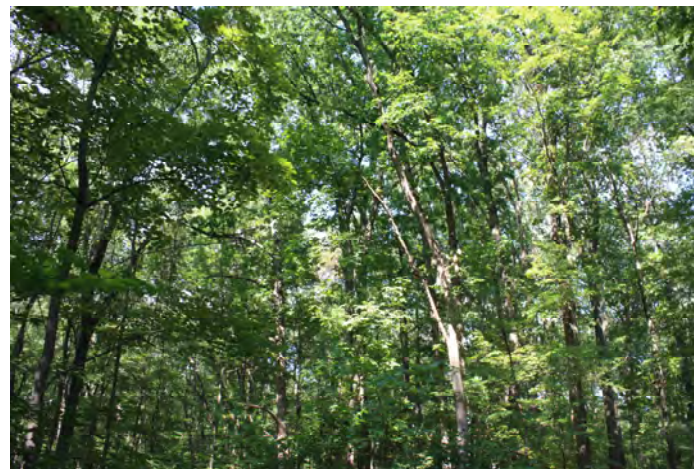
There are small areas of the county with coniferous tree stands including hemlock found on northern facing slopes near Sunrise Mill and Green Lane Reservoir.

The distribution of woodlands in Montgomery County occurs in three different patterns. Small, widely scattered woodlands can be found east of the Pennsylvania Turnpike, often associated with alluvial soils or steep slopes. The Pennypack Wilderness Preserve and Mill Creek Area in Lower Merion contain significant forest land. Long, linear woodlands along streams and on alluvial soils are typical in the central part of the county. Evansburg State Park contains the large forest in this area. Large forests comprising thousands of acres are found on diabase ridges in the western and northern areas of the county. Extensive woodlands are located in the western part of the county, including Evansburg State Park, Green Lane Reservoir area, on hills stretching from Upper Pottsgrove to Lower Frederick, and a large forest in Marlborough, Salford, and Upper Salford Townships along the Unami and Ridge Valley Creeks. The latter example is unique since it is part of the largest contiguous forest in southeastern Pennsylvania and is within the Highlands Region which stretches from Pennsylvania through western Connecticut.

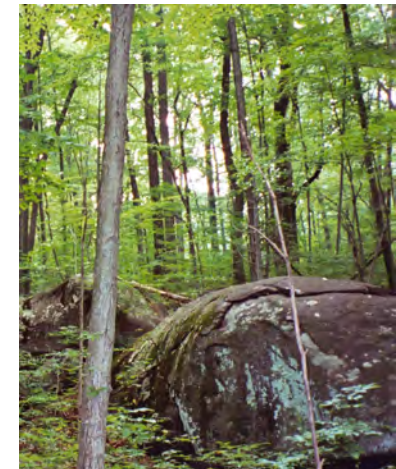
**FIGURE 48: Woodlands**



Source: Delaware Valley Regional Planning Commission  
2010 Aerial Imagery



*A broad wooded canopy provides critical habitat for various types of plants and animals.*



*This is part of the county's largest forest located in Marlborough Township.*

## THE COUNTY'S NATURAL ENVIRONMENT

Geology

Climate

Hydrology

Floodplains

Air Quality

Steep Slopes

Soils

Wetlands

Woodlands

**Wildlife**

Natural Areas Inventory

### PLANNING ISSUE

*Wildlife habitat can be easily destroyed or fragmented without proper protection.*

### Wildlife

Wildlife offers people of all ages a chance for nature study. Observing an animal in its natural habitat can be a lifelong lesson for a young student. Birding areas, such as the Audubon-designated Important Birding Area at Green Lane Reservoir, attracts people into the county.

Each year nearly 80,000 Montgomery County residents acquire fishing and hunting licenses. These sportsmen provide local economic benefits. For many hunters and anglers, animals provide a food source.

Insect control is a critical function provided by many birds. Animals are also essential in the pollination and germination of many agriculture crops. Predators can eliminate rodents and other farm pests. Animals also play a role in seed dispersal, soil generation, nutrient cycling, and organic waste breakdown

In medicine, the development of new drugs and treatments can be dependent on wildlife and wildlife habitat.

Interestingly, most pharmaceutical products are made as a result of animal interaction. Today, most medicinal remedies contain at least one ingredient derived from a wild plant or animal.

Wildlife has four needs: food, cover, water, and space in which to live and reproduce. These four components are collectively termed "habitat." To survive, wildlife must have access to the various types of habitat it requires.

Development and associated roads and utility lines tend to fragment habitat, often separating nesting sites from food or water sources. An open space system that provides links between woodlands, meadows, and streams will encourage greater diversity of wildlife species by providing various contiguous habitats. A park or wooded open space area consisting of mature deciduous trees with a ground cover of closely cropped grass provides little value for wildlife.

Wildlife would thrive when land is managed to encourage a mix of deciduous and evergreen species of differing ages and multiple layers of vegetation, along with infrequently mowed grass areas.

Wildlife found in the county is typical of species in similar parts of Pennsylvania. Yet the county contains several

### What's New

- In the past 10 years the county has become home to new plants and animals. Beavers have become more prevalent in the northwestern portions of the county. Coyotes and bears have migrated into the county. Invasive aquatic species such as Asian clams and zebra mussels are found in many local waterways.
- Deer populations have exploded in the county due to available food sources and lack of natural predators. In the past few decades, they have browsed on local vegetation to the point where woodland regeneration and diversity is limited in most of the county. Deer management programs have been initiated by many property owners to control deer populations.
- Canada Geese also have thrived in the county due to warmer weather and available food sources. Large goose populations in some areas have impaired local waterways and ruined recreation sites. The Montgomery County Parks, Trails and Heritage Services Division and local parks departments have initiated various geese deterrent strategies, including controlled hunts, decoys, fencing, natural vegetation barriers, and harassment.



*Beavers in the northwestern part of the county have made their presence known.*

animal species and plant species listed as species of special concern or as part of an exemplary natural community.

Mammals common to the county include raccoons, red foxes, white-tailed deer, grey squirrels, flying squirrels, chipmunks, woodchucks, muskrats, and opossums. Smaller mammals, such as mice, voles, and shrews, abound. Several species of bats are also common.

Less showy, but no less important, are the turtles and reptiles. The snapping turtle, musk turtle, painted turtle, red bellied turtle and bog turtle (an endangered species) are aquatic turtles that can be found within the county. The eastern box turtle is more commonly found in the county. Snakes, such as the eastern garter, black rat, northern ring-necked, northern brown, and northern water snake, are nonvenomous species that are fairly common. The northern copperhead, a venomous snake, is sometimes encountered on trails and in rocky areas within the county.

Amphibians, such as frogs, toads, and salamanders, are a vital link of the food web. The American toad, pickerel frog, green frog, bullfrog, and spring peeper not only are food for larger animals, but also have wildlife value for children and adults. For many people, the chorus of peepers and bullfrogs is an integral part of summer. Children also enjoy hunting for northern red-backed salamanders under logs and northern two-lined salamanders under rocks at the water's edge.

A variety of waterfowl are found in the county such as Canada geese, mallards, common mergansers and wood ducks. Vultures and hawks are often spotted circling in the summer sky. Black vultures (*Coragyps atratus*) are commonly seen circling above the Perkiomen near Spring Mountain. Golden and bald eagles have been spotted while migrating through the area, particularly along the Schuylkill River and Green Lane Reservoir. The Atlantic flyway, a significant bird migration route from Canada to the south, passes through Montgomery County. The Green Lane Reservoir is an important stopover in that flyway. A large Great Blue Heron rookery exists along the Swamp Creek in New Hanover Township.



*Deer in many parts of the county have caused damage to local vegetation.*



*The Eastern Box turtle can be found throughout the county.*



*A young fox is a common sight in many farm fields throughout the county.*

Songbirds benefit from the variety of habitats found throughout the county. Some, like the eastern meadowlark, purple martin, eastern bluebird, and red-winged blackbird, prefer open fields and meadows. Woodlands are important habitat for birds such as the red-eyed vireo, black capped chickadee, and gray catbirds as well as the more unusual species, such as the ovenbird, blue-gray gnatcatcher, wood thrush, and screech owl.

## THE COUNTY'S NATURAL ENVIRONMENT

Geology

Climate

Hydrology

Floodplains

Air Quality

Steep Slopes

Soils

Wetlands

Woodlands

Wildlife

### Natural Areas Inventory

#### PLANNING ISSUE

*Maintaining the unique and rare natural features of the county requires the preservation of important natural landscapes defined in the Natural Areas Inventory. 73% of the area in these natural landscapes is now unprotected.*

### Natural Areas Inventory

The Natural Areas Inventory, updated in 2008, identifies 13 conservation landscapes covering a total of 74,711 acres, or 24% of the county. The landscapes incorporate interdependent systems of high natural diversity consisting of large forested tracts, stream corridors, wetlands, and known locations of rare plants and animals. Each landscape includes a core area of protected land, though a majority of the property in each remains unprotected in private ownership. Efforts to further protect these landscapes will involve acquisition, land use and environmental controls, smart stewardship, and education. Zoning tools such as cluster zoning, performance based zoning which sets development density based on resource characteristics, and resource overlay provisions have all been used effectively.

- Mill Hill/Deep Creek Conservation Landscape: The large forested diabase ridge that forms a semicircle at the western edge of Green Lane Reservoir forms the core of this landscape.
- Unami Creek/Ridge Valley Creek Conservation Landscape: As part of one of the largest forests in Southeastern Pennsylvania, the scenic boulder-strewn Unami and Ridge Valley Creeks provide unique habitat for birds and various plants.
- Spring Mountain Conservation Landscape: Spring Mountain, though not the highest feature in the county, is the prominent center of a rich forested landscape along the Perkiomen Creek providing exceptionally high diversity of species of birds and plants, including several rare species.
- Swamp Creek Conservation Landscape: As a long riparian corridor stretching from Zieglersville to Gilbertsville, the Swamp Creek landscape provides a rich habitat surrounded by farmland.
- Stone Hill Conservation Landscape: The forested Stone Hill landscape straddling Limerick, Lower Frederick, New Hanover, and Lower Pottsgrove Townships supports bird diversity throughout the county.

### What's New

- During the past 20 years, the county, municipalities, and various non-profit conservation organizations have been successful in preserving many significant natural landscape properties. Acquisition, either by purchasing all land rights or a conservation easement focused on the land's natural resources, has been the most direct route to protecting a piece of land.
- Currently 27% of the conservation landscapes identified in the Natural Areas Inventory have been preserved.
- Different zoning and subdivision and land development standards have also been used to minimize the impact of development on a property's key natural resources.
- Generally since 2000, 19 municipalities have adopted riparian corridor protection standards.
- The county's Land Preservation District and Rural Residential District model ordinances were prepared to assist municipalities in the protection of unique natural areas.



*Mature woodlands and diabase boulders characterize the Unami forest in Marlborough Township.*

- Upper Perkiomen/Green Lane Reservoir Conservation Landscape: The important mix of large expanses of open water, wetlands, riparian areas, and meadows provides a rich habitat for breeding and migratory birds in the vicinity of the Green Lane Reservoir.
- Middle Perkiomen Creek Corridor: Portions of the Perkiomen Creek and the East Branch of the Perkiomen Creek make up this significant riparian corridor.
- Skippack Creek Conservation Landscape: The forested stream valley along the Skippack Creek, primarily in Evansburg State Park, provides for animal and plant diversity and flood protection.
- Wissahickon Creek Conservation Landscape: The Wissahickon Valley Watershed Association (WVWA) has preserved this natural riparian corridor that winds through some of the most developed portions of the county.
- Pennypack Creek Conservation Landscape: Like the WVWA, the Pennypack Ecological Restoration Trust has successfully preserved the core area of the Pennypack Creek through the developed eastern part of the county.
- Upper Schuylkill River Conservation Landscape: Part of the 42-mile stretch of the Schuylkill River in the county, this conservation landscape features rich riparian habitat along the river and several small tributaries.



*The Wissahickon Creek Conservation Landscape is very accessible along the Green Ribbon Trail.*

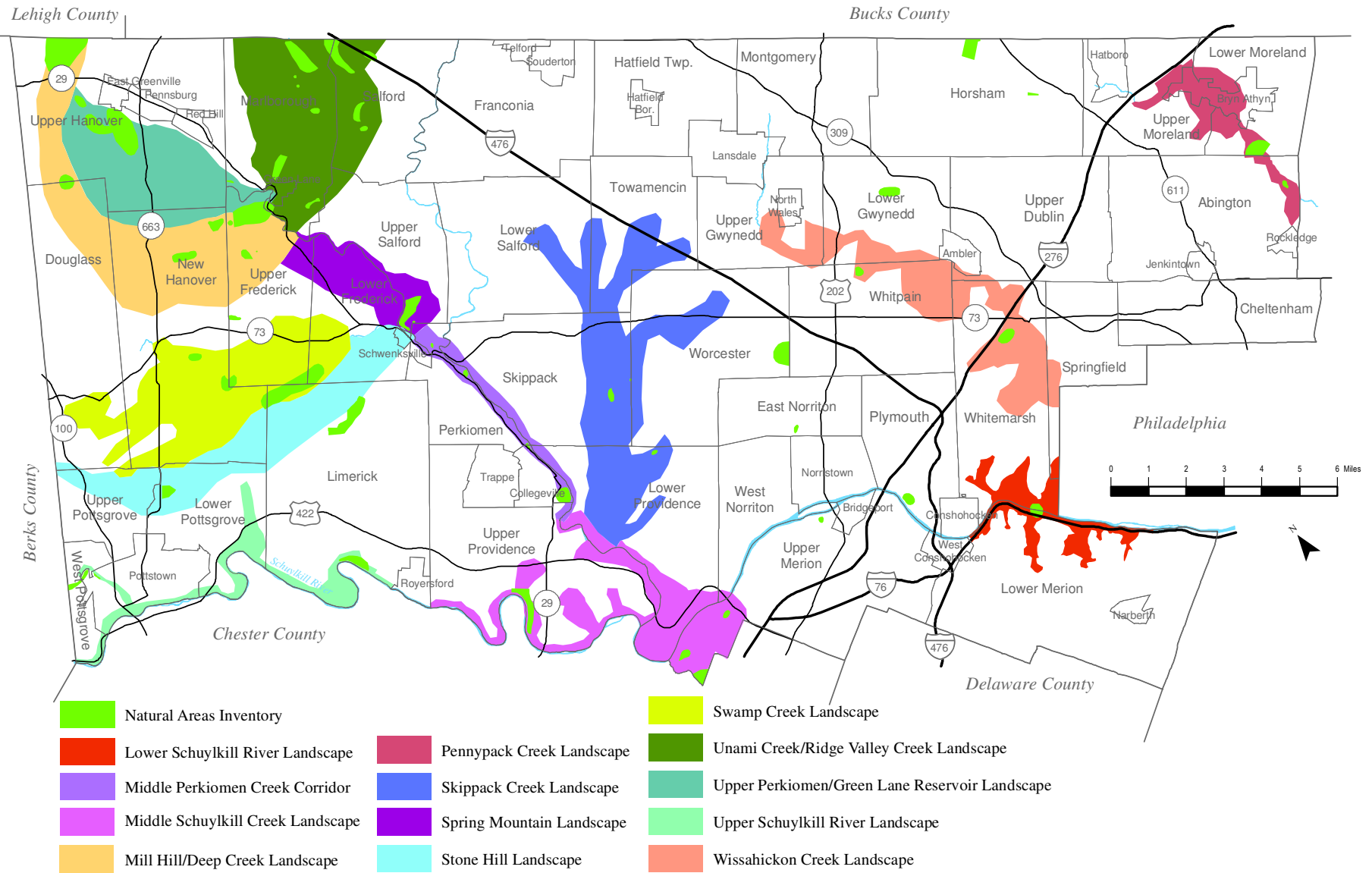
- Middle Schuylkill River Conservation Landscape: The core of the Middle Schuylkill River Conservation Landscape is the forested ravines and bluffs near Mont Clare, the confluence of the Perkiomen Creek and Valley Forge Park.
- Lower Schuylkill River Conservation Landscape: Though adjoining the City of Philadelphia, the steeply sloped river valley and tributary streams provides a rich riparian habitat and recreational resource accessible to large populations.



*White's Mill pond is a rich wetland in the center of the Ridge Valley watershed.*

# THE COUNTY'S NATURAL ENVIRONMENT

FIGURE 49: Natural Areas



Source: Montgomery County Natural Areas Inventory



**THE COUNTY'S OPEN SPACE  
AND RECREATION NETWORK**



### Preserved Open Space

Temporary Open Space

Recreation Facilities

Trails and Pathways

#### PLANNING ISSUE

*Open space preservation requires more partnerships and creative solutions as funding becomes more limited and land becomes more scarce.*

### Preserved Open Space

The county contains approximately 41,514 acres of permanently preserved land, or 13.4% of the total land in the county. These permanently protected lands are comprised primarily of publicly accessible park and historic sites, held under federal, state, county, and municipal ownership. Additional protected land, which may provide limited or no public access, includes preserved farmland, natural areas, and properties under conservation easements. Farmland preservation is discussed separately in the County Economy section. Other properties not included in the preserved land totals include land owned by homeowners associations and various community groups.

#### *Federal and State Parks*

**Valley Forge National Historical Park** (total of 3,466 acres, with 1,964 situated in Montgomery County) is administered by the National Park Service (NPS) as a national historic site of the Continental Army's 1777-78 winter encampment.

**Evansburg State Park** (3,349 acres), administered by the Pennsylvania Bureau of State Parks, follows the Skippack Creek and provides recreational activities including fishing, hunting, nature study, environmental education, and equestrian and hiking trails. The property was originally acquired by the Commonwealth to develop a multipurpose lake.

**Fort Washington State Park** (484 acres) is another state park located in Whitemarsh Township, encompassing woodlands and a stream valley, with scenic views across a historic landscape that includes Fort Hill and Militia Hill.

In addition, the Pennsylvania Historical and Museum Commission (PHMC) operates four historic sites in Montgomery County. Graeme Park in Horsham Township containing the historic Keith House (41.72 acres), The Highlands (43.3 acres), a late 18th century Georgian mansion with formal gardens in Whitemarsh Township, Hope Lodge (38.8 acres), a Georgian home dating to the

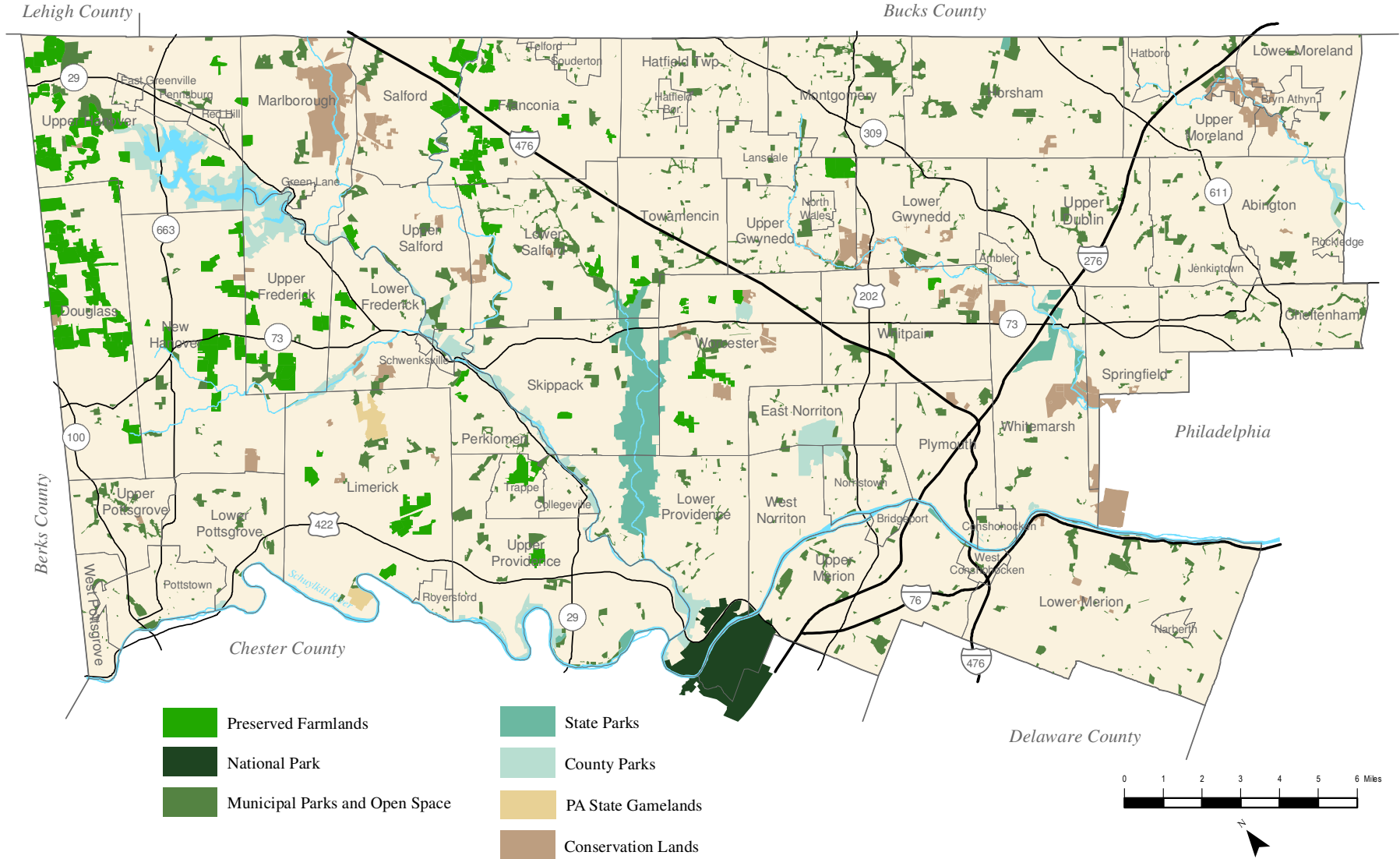
### What's New

- Since 2000, 7,657 acres of land have been preserved in the county through purchase by municipalities, private conservation organizations, and the county.
- Since 2005, three municipalities, Whitemarsh, New Hanover and Upper Pottsgrove Townships, have joined many other municipalities and adopted an open space funding tax. Two other municipalities, Upper Merion and Upper Dublin Townships, passed open space bond funding through referendums.
- Partnerships between private conservation organizations and government resulted in the preservation of the 449-acre Erdenheim Farm. The National Park Service expanded Valley Forge National Historical Park with the addition of the 78-acre property acquired from the National Center for the American Revolution.
- With recent public financing challenges that began in 2008, revenue sources for open space have decreased—limiting the ability of most local governments and conservation organizations to protect open space.



*Green Lane Reservoir at Green Lane Park.*

FIGURE 50: Preserved Open Space



Source: Montgomery County Planning Commission

## THE COUNTY'S OPEN SPACE AND RECREATION NETWORK

1740s Colonial era also located in Whitemarsh, and Mather Mill (3.3 acres), a restored gristmill located along the Wissahickon Creek, located one block from Hope Lodge.

The Pennsylvania Game Commission owns two hunting preserves (505 acres) in Montgomery County, both located in Limerick Township. These state game lands are open to hunting during specified seasons.

### *Montgomery County Parks and Heritage Sites*

Montgomery County owns or manages more than 6,000 acres of permanently preserved open space. Most of this acreage is associated with large county parks and historic sites, with additional land located along the Schuylkill River Greenway. As an operating philosophy, the Montgomery County Parks and Heritage Services Division manages parks for a variety of outdoor recreation uses but does not provide athletic facilities.

**Central Perkiomen Valley Park** (464 acres) is a greenway park system along the Perkiomen Creek containing the Perkiomen Trail and picnic areas. Most of this land is managed as natural open space.

**Green Lane Park** (3,062 acres) provides for different types of water based recreation such as boating and fishing, centered around 814-acre Green Lane Reservoir, Deep Creek Lake and Knight Lake. As the largest county park, the Green Lane Park also offers a variety of outdoor and recreation experiences including hiking, horseback riding, mountain bike riding, picnicking, outdoor concerts, and bird watching.

**John James Audubon Center at Mill Grove** (249 acres), the former residence of famed naturalist John Audubon, provides a historic setting and a natural area operated jointly with the Audubon Society. The county and Audubon Society are working to develop a new visitors center and education facility at this site.



*Boy Scout troop hiking at Valley Forge National Historical Park.*



*Group picnic at Lower Perkiomen Valley Park.*



*Children enjoying the cool water in Pottstown's Memorial Park.*

**Lock 60 at the Schuylkill Canal Park** (64 acres) provides fishing access to the Schuylkill River and canal, hiking trails, a public boat launch, and a five-mile water loop trail. In addition to its outdoor beauty, the site includes the historic 2.5 mile canal, restored Lock 60 and the locktender's house.

**Lorimer Park** (230 acres) straddles the Pennypack Creek and was established due to the bequest from the late George Horace Lorimer (longtime editor-in-chief of *The Saturday Evening Post*). The park provides picnic facilities and an extensive trail system, including the Pennypack Trail.

**Lower Perkiomen Valley Park** (90 acres) contains picnic areas and portions of the Perkiomen Trail along the Perkiomen Creek in Oaks. It also contains large mowed field areas that can be used for a variety of activities and group events.

**Norristown Farm Park** (690 acres) combines agricultural land with recreation areas providing trails, picnic grounds, and a concert amphitheater. This property is owned by the state, but is managed entirely by the county as a park facility.

**Pennypack Mills** (181 acres) contains a historic estate with a Colonial Revival mansion and barn used as a museum. The property contains farmland and adjoins portions of the Central Perkiomen Valley Park and lands owned by the Perkiomen Watershed Conservancy.

**Peter Wentz Farmstead** (106 acres) is an 18th century Pennsylvania German farm that served as headquarters for General George Washington in October 1777. The site hosts various historic reenactment events and is visited by various people, including school groups.

**Pottsgrove Manor** (2 acres) is a restored 18th century Georgian manor house once owned by iron master John Potts, the founder of Pottstown.

**Spring Mill Park** (31 acres) is an unopened park along the Schuylkill River and Schuylkill River Trail in Spring Mill.

**Spring Mountain Natural Area** (124 acres) is a natural area preserve on portions of Spring Mountain in Upper Salford Township.

**SunRise Mill** (236 acres) contains a historic mill and preserved greenway along Swamp Creek in Lower Frederick, Upper Frederick and Limerick Townships. The historic mill is not open to the public and the remainder of the park is largely undeveloped.

**Upper Schuylkill Valley Park** (244 acres) is located across from the Parkhouse geriatric facility and along nearly a mile of the Schuylkill River. The park provides a wildlife exhibit in old farm buildings with several wild animals indigenous to the area as well as farm animals.

**Wissahickon Valley Park** (149 acres) combines with Fort Washington State Park and private conservation lands to establish a greenway along the Wissahickon Creek and contains the Wissahickon Trail.

### *Municipal Open Space*

More than 13,500 acres of open space and park lands are currently under municipal ownership, making municipal open space the largest segment of preserved land in the county. Most of this land is owned in fee; very few municipalities have purchased conservation easements to protect properties.

A significant portion of municipal open space was acquired through Montgomery County's Open Space Program, which began in 1993. Other parcels of municipal open space have



*Pennypacker Mills Mansion is a popular site for historic events.*



*Manderach Playground is located in Limerick Township's Community Park.*



*The Raythorn Farm property is maintained by the Pennypacker Ecological Restoration Trust as part of their Wilderness Preserve.*

been acquired through state grants, funds from previous county programs, donations, and dedication through the land development process. These properties may contain deed restrictions depending upon the funding source and circumstances of acquisition. A few municipalities, such as Franconia, New Hanover, Skippack, Upper Merion, and Upper Pottsgrove Townships, have held referendums establishing a dedicated tax for acquisition of additional open space.

Municipal open space is used for a variety of activities, with active recreation generally being associated with intensive park improvement, and passive recreation requiring little or no park development. The primary park uses in many municipalities are athletic fields, hardscape surface sports, and playgrounds. Larger municipal open space areas generally provide walking trails and other forms of access for passive recreation.

### *Privately Conserved Open Space*

Private non-profit conservation organizations own 6,825 acres of open space as part of their primary mission to protect and conserve open land and natural resources. These organizations protect land in a variety of ways: by outright acquisition and ownership of special properties, by temporary acquisition of land to place conservation easements before conveying the property to another owner, or by holding conservation easements on properties whose owners wish to retain the land while restricting future development potential.

These organizations acquire land or easements in a variety of ways, often receiving the property or easement as a full or partial donation for which the donor receives charitable donation tax benefits. Private organizations have also purchased open space with grant funds from the county, state, or private foundations as well as using funds raised through membership donations. Private organizations have been particularly successful in consummating complex land deals and forming creative partnerships to protect large properties.

Conservation organizations manage natural lands to protect important resources and wildlife habitat. Often times they

## THE COUNTY'S OPEN SPACE AND RECREATION NETWORK

undertake landscape restoration projects to enhance the natural qualities of a property. Though the primary interests of conservation organizations are in protecting natural resources, they allow public access to most conserved properties along trail systems. Often they conduct education programs on their lands.

Major conservation organizations protecting land in the county include:

- Heritage Conservancy
- Lower Merion Conservancy
- Natural Lands Trust
- Pennypack Ecological Restoration Trust
- Wissahickon Valley Lands Trust

### *Other Private Open Space*

Other types of open space and recreation land in the county are owned by homeowners associations and community organizations. Many of these properties were created as part of large cluster developments or condominium projects and include a variety of open landscapes. Currently 8,778 acres of property are classified as common open land, and are generally owned by homeowner associations. Some of these properties may have deed restrictions placed on them, though most are generally protected based on the land use approvals made when they were created. Management of these properties is often performed by homeowners associations and generally the use of the land is limited to members of the homeowners association.

### *Enjoying the Benefits*

The 2010 regional “Economic Value of Protected Open Space Study” by the Delaware Valley Regional Planning Commission (DVRPC) and GreenSpace Alliance shows that preserving open space is a wise public investment. It documented that preserved land provided the following benefits to Montgomery County:

- Increase of \$10,000 to average value of each property,
- About \$117.5 million in yearly value of recreation activities, and
- About \$269 million in yearly value of avoided health costs.

Generally open space and park land can:

- Sustain natural systems and protect wildlife habitat,
- Provide numerous, affordable recreational opportunities for all ages and interests,
- Preserve cultural and heritage landscapes,
- Promote community engagement,
- Protect water resources and reduce the impact of floods,
- Enable a fitter and more active population,
- Enhance the community image,
- Provide tourist and visitor opportunities, and
- Contribute to the overall attractiveness of the county for business and commerce.



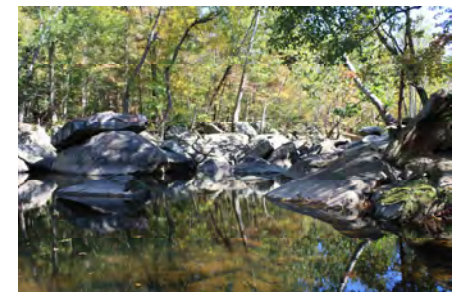
*Canal Day at Lock 60 sponsored by the Schuylkill Canal Association.*



*Green Lane Park provides great opportunities for health and fitness.*

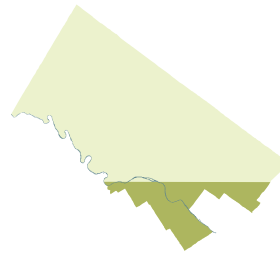


*Parks bring people together for important community activities.*



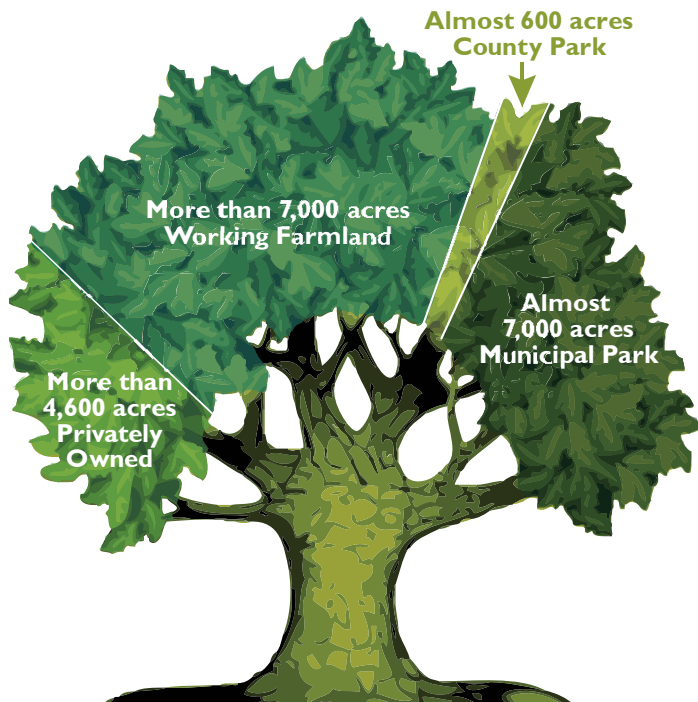
*Preserved land along the Unami Creek helps to protect its water quality.*

## Measuring The Accomplishments Since 1993



13.4% of the county's land is protected

In 1993 Montgomery County initiated a large investment in open space preservation through the establishment of an open space grant program guided by the Montgomery County Open Space Board. Under this program and the subsequent Green Fields, Green Towns Program begun in 2003, the county funded nearly 500 projects, resulting in the acquisition of park and open space land, the construction of trails, the preservation of farmland, the establishment of greenways, and the development of park and recreation facilities. In addition to substantial county investments in protecting land and developing green infrastructure, the county also partnered with each municipality to develop open space plans which established policies and ordinances under which municipalities were able to protect more land and develop creative green infrastructure to address local needs.



## Preserved Open Space

### Temporary Open Space

#### Recreation Facilities

#### Trails and Pathways

### Temporary Open Space

Some undeveloped landscapes which provide open space amenities to surrounding communities are privately owned with no permanent preservation restrictions. These properties, generally used as schools, religious institutions, camps, golf courses or private recreation associations, may contain natural features, high quality agricultural soils, and scenic qualities, but without any permanent protection can be developed at any time. They are only maintained as open space due to the wishes of their current owners. Eligible properties may be subject to preferential tax assessment programs that provide tax incentives to keep land undeveloped. Under the Clean and Green Act (Act 319) and the Open Space Covenant Act (Act 515) certain agricultural and open space properties may be assessed at a lower rate for property tax purposes. Nevertheless, the following types of properties are vulnerable to development.

**Properties under Governmental Ownership:** Several large properties in Montgomery County are under federal, state, or county ownership but are not permanently preserved or formally used for open space. These properties include the federally owned Willow Grove Naval Air Station (1,100 acres), the State Correctional Institution—Graterford (1,730 acres) owned by Pennsylvania Department of Corrections, and several Montgomery County properties used for the prison and emergency services. That said, the closure of the Willow Grove Naval Air Station in 2011 spurred a multi-year planning process that will ultimately result in the surplus property being transferred to Horsham Township for redevelopment and reuse.

**Utility Properties:** Various forms of public utilities own properties for power needs, utility rights-of-way, airports, dams, storm water control facilities, and railroads. Collectively, these properties encompass a sizable acreage, or include rights-of-way, especially transmission corridors, that provide an important opportunity to connect a variety of open space sites. Though required to fulfill the purpose of the utility, these properties occasionally are made surplus and thus subject to sale at any time.

**Public and Private Institutional Properties:** A variety of public school districts, private religious and educational

### What's New

- Golf has continued to decline as a leisure activity since the late 1990s. As a result, the county has lost 7 golf courses to development over the past 10 years. Other remaining courses are struggling and may be forced to close in the near future.
- The closure of the Willow Grove Naval Air Station and construction of a new state penitentiary at the State Correctional Institution - Graterford will greatly alter these large properties in the future. Open space protection and park use were important considerations in the planning for the future of the Naval Air Station property.
- In the past 10 years, some corporations and large institutional land holdings, such as property owned by the Philadelphia Archdiocese, have been subjected to reuse plans which have diminished their open space characteristics.
- In 2005, 1,160 acres of farmland were taken out of the Clean and Green Act (Act 319) program. The acreage of Act 319 rollbacks has dropped steadily as a result of the housing development slow down. In 2013, only 142 acres were removed from Act 319.

### PLANNING ISSUE

*Important private unpreserved landscapes that provide open space amenities such as golf courses, institutional lands, and utility properties are likely to be developed if they are not adequately protected.*



*Meadow in front of the Pfizer research facility in Upper Providence Township.*



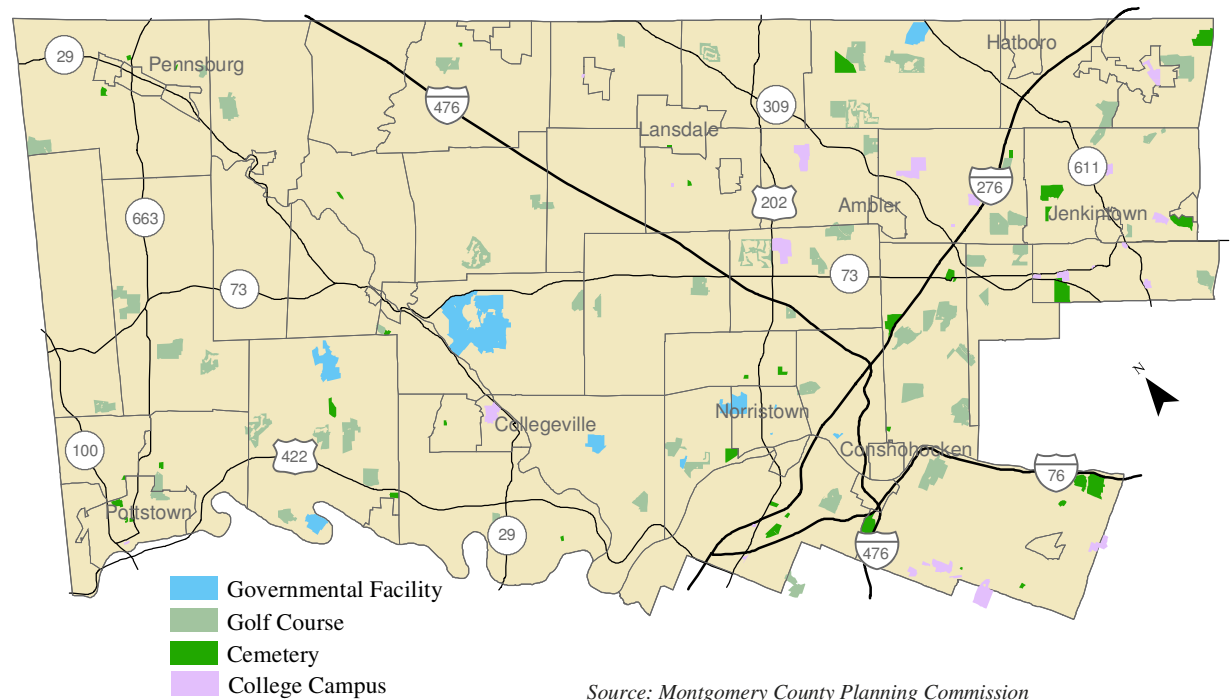
Playing golf at the Rivercrest Golf Course near Mont Clare.

institutions, camps, recreation associations, cemeteries and private foundations own open land in the county. These properties may be available for public use, depending upon the objectives and regulations of the organization. Some institutional lands, such as school properties, are used for active recreation and sports leagues, while other institutional land, such as cemeteries, provides informal access to the public.

**Golf Courses:** Montgomery County residents enjoy a wide variety of golf opportunities on the 54 golf courses that comprise 7,909 acres in the county. Golf courses provide several benefits to the county. As largely open land, they provide vistas and natural landscapes which can reduce stormwater impacts, enhance water recharge, and provide habitat. Golf courses also provide local economic opportunities and can be an important amenity available to attract tourists.

**Corporate Properties:** A few corporate research and office properties in the county may contain open land with woodlands, meadows, and stream corridors. Although not public land, corporate lands may serve as natural habitat areas, and local trail networks may pass alongside or even link into employee walking trails maintained on these properties.

**FIGURE 51:** Institutional Open Space



Source: Montgomery County Planning Commission

**Preferential Tax Assessment**

The county is able to offer two forms of reduced property tax as incentive for property owners to conserve their land. The Clean and Green Act (Act 319) provides assessment of agriculture land based on its production value. Act 515 allows for the establishment of covenants that reduce the assessed value of property for a specified time frame to maintain an open space use of the property.

The Clean and Green Law, Act 319, was enacted in 1974 to allow for the preferential assessment of farmland. As of January 3, 2013, 1,674 parcels of land in the county totaling 49,810 acres were assessed under Act 319. Under this voluntary program, qualified land is assessed based upon agriculture production. If the property is no longer used for agriculture purposes and developed, the property owner is subject to the payment of roll back taxes and interest penalties covering a seven year period.

Covenants established under Act 515 can be used on select properties which contain various open space qualities. Through the establishment of a 10-year covenant, the property owner agrees to maintain the land as open space while the tax assessment is lowered to reflect that use. Violation of covenants can trigger roll back tax and interest penalties. On January 1, 2013, 78 parcels with 7,804 acres were under Act 515.

## THE COUNTY'S OPEN SPACE AND RECREATION NETWORK

Preserved Open Space

Temporary Open Space

### Recreation Facilities

Trails and Pathways

#### PLANNING ISSUE

*Demand for additional sports fields and facilities, especially for youth programs, remains strong. It is increasingly difficult, however, to find undeveloped sites that are available, affordable, and unconstrained by important natural resources or community concerns.*

#### Recreation Facilities

Public access to recreation is a key component of community vitality and quality of life. Recreational opportunities benefit everyone by promoting a fitter, healthier population and giving communities an outlet for productive and socially beneficial leisure time.

In pursuing recreational interests, people can combine physical exercise, mental relaxation, and social interaction while strengthening their connection to the outdoors and understanding of the natural environment. A Kent State University professor of recreation, park, and tourism management sums up these quality-of-life benefits—*good for the mind and body, even better for your social life, and great for the great outdoors.*

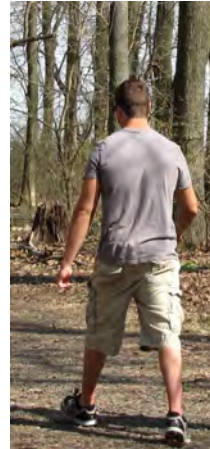
Public recreation can also be a strong economic driver that stimulates business investment, enhances property values, motivates residential choices, and attracts visitors and tourists. A current factsheet from PA DCNR on the economic impacts of local recreation finds that “(l)ocal parks, open space and trails provide opportunities for close-to-home recreation. This conservation and recreation infrastructure...contributes substantially to the Commonwealth’s economy.” The Outdoor Industry Association, with offices in Washington DC, concurs: “In short, outdoor recreation is a growing and diverse economic super sector that is a vital cornerstone of successful communities that cannot be ignored.”



*The community park can be the heart of the community and a major reason why people choose where they live.*

#### What's New

- Demand has increased for year-round recreational opportunities that provide variety, address health and wellness objectives, and fit into people’s busy schedules.
- **New Municipal Community Centers** - Municipal community recreation centers have been completed in Plymouth and Upper Providence Townships. Similar facilities are under construction in Montgomery and Upper Merion Townships.
- **Municipal Swimming Pools** - Municipalities such as Hatfield Township and Souderton and Lansdale Boroughs have reinvented their community pools into modern aquatic parks that are all-day destinations for area residents.
- **Alternative Sports Activities** - Large new skate or BMX parks in Pottstown and Upper Providence Township are popular facilities. Smaller skateboarding areas have been added to parks in Ambler and Abington and Cheltenham Townships and to the Boys & Girls Club in Souderton. Outdoor adventure-based activities have emerged as a specialty in Upper Salford Township at Spring Mountain Adventures, which offers seasonal activities such as skiing and snowboarding, zip line adventure tours, and mountain biking.
- **YMCA as a Major Recreational Provider** - The creation of a regional YMCA network has resulted in full-service facilities that provide indoor recreation, fitness, and indoor/outdoor aquatics at 8 locations throughout the county. New facilities are proposed for 2 other locations in the county, and across county boundaries, newly completed YMCAs in Phoenixville, Havertown, and Doylestown are within easy reach of portions of Montgomery County.



*Outdoor recreation takes advantage of all aspects of the outdoors, but its use is dependent upon weather and time of year.*



*Indoor recreation requires extensive construction of facilities and infrastructure but extends recreational opportunities year-round.*



*Gathering places for activities like summer concerts, family picnics, or community events can range from informal areas with little impact on a site to large structures that require extensive construction. These places may be intensely active or relatively passive in the type of recreation they provide. Picnic areas are often located adjacent to tot lots, consolidating ad hoc visits to the park in a relatively compact area.*

### Active Versus Passive Recreation

Active recreation relies on engineered facilities for specialized purposes, all of which tend to attract intensive use. These facilities include athletic fields, sports courts, amphitheaters or large pavilions, destination playgrounds, skate parks, and aquatic centers. The user comes to a particular place because of the facilities provided; construction of those facilities often has a significant impact on the land resources where they are located.

Passive recreation, on the other hand, is generally less intensive in use and does not require extensive constructed features. This type of recreation has a minimal impact on the site's resources, often allowing the site to provide positive ecosystem services. The activities provided tend to be "place-based," with people being attracted to the particular site's natural attributes rather than its man-made facilities. Activities generally considered passive in nature include bird watching and nature study, hiking, walking and biking on trails, picnicking, fishing and canoeing or kayaking, and tent camping.



*Active recreation at sports courts.*

*Passive recreation at natural resource areas.*

### Who Provides Opportunities for Public Recreation?

Governmental entities are the most common providers of public parks, with national, state, and county parkland in general being place-based and used primarily for passive recreation. Conservation organizations are an additional major provider of passive recreational opportunities. Municipal governments (in Montgomery County, both townships and boroughs) tend to provide a blend of active and passive recreation facilities, particularly focusing on community parks, which may contain sports fields and hard-surface courts, playgrounds, picnic pavilions and amphitheaters, swimming pools, and increasingly, indoor recreation centers. School districts are a major provider of indoor recreation and outdoor sports facilities, and private organizations, such as the YMCA, are becoming an increasingly popular provider of indoor aquatic and fitness opportunities. These public or community-based recreation providers are often complemented by the facilities of nonprofit sports associations, public golf courses, and commercial sports and fitness sites.

## THE COUNTY'S OPEN SPACE AND RECREATION NETWORK

### Recreation Opportunities Available to Montgomery County Residents

For planning purposes, Montgomery County is subdivided into 12 regions. Aided by a survey in which every municipality was invited to participate, each planning region was characterized in terms of community parks, active and passive recreational options available to the public, and the entities providing those opportunities. A summary of the information gathered is given below in the *Recreational Facilities Overview*.

The region-by-region inventory shows that county residents have access to a fairly wide variety of active and passive recreational opportunities provided by governmental entities, not-for-profits, and commercial organizations. In recent years, municipal recreation planning has moved away from recommended standards per numbers of people served – the quality and quantity of public parks, recreation facilities, and natural areas are determined by the priorities and funding resources of each community. Recreational sites and choices differ within each planning area because of variations in municipal budgets, community interests, character of natural features, and market for commercial recreational offerings.

**FIGURE 52: Recreational Facilities Overview**

	AMBLER	CENTRAL PERK	CONSH-PLYM MTG	EASTERN MONTCO	HORSHAM-WILLOW GROVE	INDIAN VALLEY	MAIN LINE-KING OF PRUSSIA	NORRISTOWN	NORTH PENN	POTTSTOWN	SPRING FORD	UPPER PERK REGION
Population	62,266	41,200	41,707	118,486	71,879	43,109	96,376	98,763	97,957	64,759	44,045	19,327
Community Parks	4	1	5	5	12	4	8	6	8	6	3	2
Regional Parks	None	State; County	State; County	County	None	County	National	National; State; County	State	County	State; County	County
Trails and Biking	Community; Local	Regional; Community	Regional; Community	Regional; Community	Regional; Community	Regional; Community	Regional; Community	Regional; Community	Community	Regional	Regional; Community	Regional
Public Golf	2	None	None	1	1	2	None	3	2	4	4	3
Indoor Recreation	YMCA; High School	High School	Municipality; High School	YMCA; High School	YMCA; High School	YMCA; High School	YMCA; High School	High School	YMCA; High School	YMCA	YMCA	High School
Fishing/Boating	Yes	Yes	Yes	No	No	No	Yes	Yes	No	Yes	Yes	Yes
Municipal Athletic Fields	18	6	10	21	20	7	22	16	17	9	5	5
Complementary Sites	13	7	4	20	15	11	14	16	16	14	10	5
Skateboard Areas	1	None	None	2	None	1	None	None	None	1	1	1
Outdoor Swimming	1 Municipal	None	None	5 Municipal	1 Municipal	1 Municipal	2 Municipal	Non-profit	5 Municipal	Non-profit	None	YMCA
Dog Parks	None	None	None	2	1	None	1	None	2	1	1	None

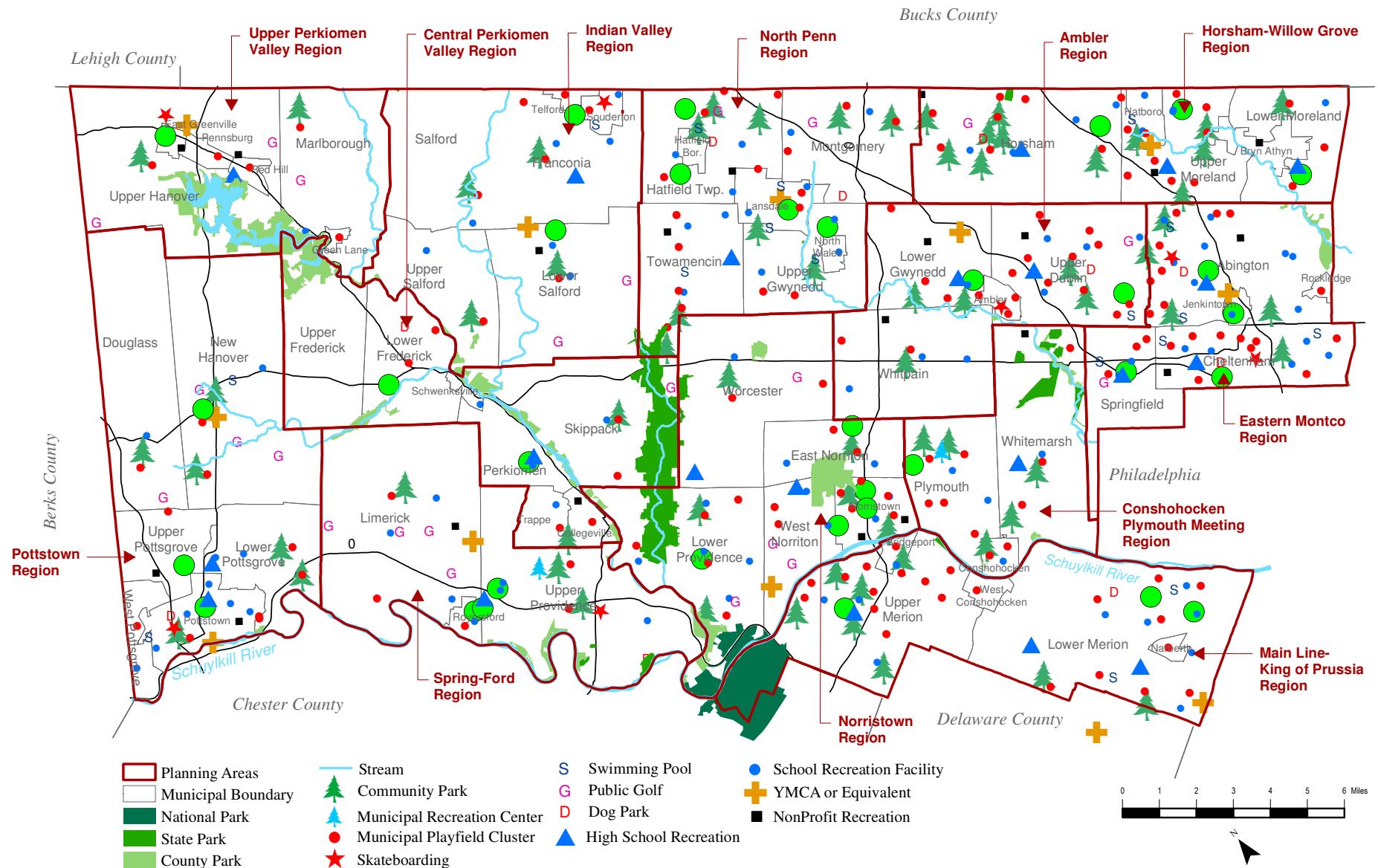
Source: Montgomery County Planning Commission

### Highlights of Recreation Around the County

Each municipality provides at least one public playground, and most provide multiple sites for various types of recreation. Each planning region includes biking, hiking, birding, and picnicking opportunities. A YMCA, public high school, or both, provides indoor recreation in every planning region, and people can enjoy fishing and boating, public golf, and outdoor swimming in the majority of these regions. Two increasingly popular recreation amenities, dog parks and skateboarding areas, are currently found in at least six regions.

Throughout Montgomery County, the number of public community parks (regarded as sites of at least 18 to 20 acres providing a variety of recreational activities) range from more than twice the county-wide average in the Horsham-Willow Grove planning region to less than 1/3 the average in the Central Perkiomen planning region. Municipal playing field clusters, which may contain varying numbers of actual fields, are found in almost every municipality, and are augmented in each region by a variety of school district, non-profit, and commercial recreation facilities. The Central Perkiomen, Spring-Ford, and Conshohocken-Plymouth Meeting planning areas do not include public opportunities for outdoor swimming.

FIGURE 53: Recreational Facilities in Montgomery County



Source: Montgomery County Planning Commission

## THE COUNTY'S OPEN SPACE AND RECREATION NETWORK

Preserved Open Space

Temporary Open Space

Recreation Facilities

### Trails and Pathways

#### PLANNING ISSUE

*One-third of the county's primary trail network is complete. A solid start, however a majority of the trail network is still conceptual.*

### Trails and Pathways

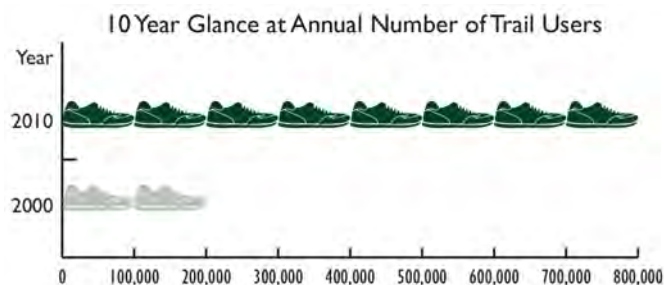
Montgomery County offers its residents and visitors a premier trail system. The county's current proposed trail system is comprised of twenty-five interconnected trail segments shown in Montco 2040: A Shared Vision. The plan illustrates a total of 257 miles of trail that will crisscross the county and bring a trail within three to five miles of all county residents.

Additionally, many of the county's proposed trails will provide an opportunity for trail connections to neighboring counties further strengthening an intergraded regional trail system.

Currently, 55 miles of county-built trails exist connecting greenways, heritage corridors, and points of interest within Montgomery County. Most noteworthy are the Schuylkill River and Perkiomen Trails. Combined, these two nationally recognized trails provide over 40 miles of multi-use trail experience. Annually, more than 800,000 people visit/use Montgomery County trails.

Although the county has constructed over 50 miles of the network, municipalities and partnership agencies have developed an additional 29 miles of the proposed county network. By 2005, all 62 municipalities had updated their open space plans, with some local governments incorporating detailed trail development components. A sampling of notable municipal trail plans include Cheltenham, Upper Merion, Lower Merion, Whitpain, Lower Gwynedd, Upper Dublin, Worcester, Lansdale, and Lower Salford.

Without the incorporation of comprehensive trail planning and extreme foresight, the additional network mileage would never have been built.



### What's New

How many trail miles did the county blaze between 2000 and 2013? The figure is quiet impressive, equating to 41 miles. Paramount trail projects include:

- **Schuylkill River Trail** - 9.5 newly constructed miles were added to the existing 14 miles of this nationally-recognized trail system. Notable extensions include connections to Berks County from Pottstown and linking Oaks to Phoenixville.
- **Perkiomen Trail** - An ambitious and outstanding 20 mile trail system was constructed in four years. Typically, it takes four years to build 4 miles of regional trail. The trail connects to the Schuylkill River Trail in Oaks at the southern end while connecting to the county's Green Lane Park at the northern end.
- **Cross County Trail** - 3.5 miles were developed through intense industrial and commercial complexes. The trail connects to the Schuylkill River Trail in Conshohocken near SEPTA's regional rail line.
- **Wissahickon Green Ribbon Trail** - A scenic 3 miles of meandering trail were built parallel to the Wissahickon Creek. The trail alignment weaves through Fort Washington State Park and county park and open space lands.
- **Pennypack Trail** - Two miles were installed along a segment of inactive passenger rail line. The trail traverses through the county's Lorimer Park and intersects with the Pennypack Creek at the northern end.
- **Chester Valley Trail** - A majority of the trail alignment will follow the old Chester Valley Secondary rail line in Chester and Montgomery Counties. PennDOT built one mile of the trail and installed a long span bridge over the Schuylkill Expressway I-76 in Montgomery County.

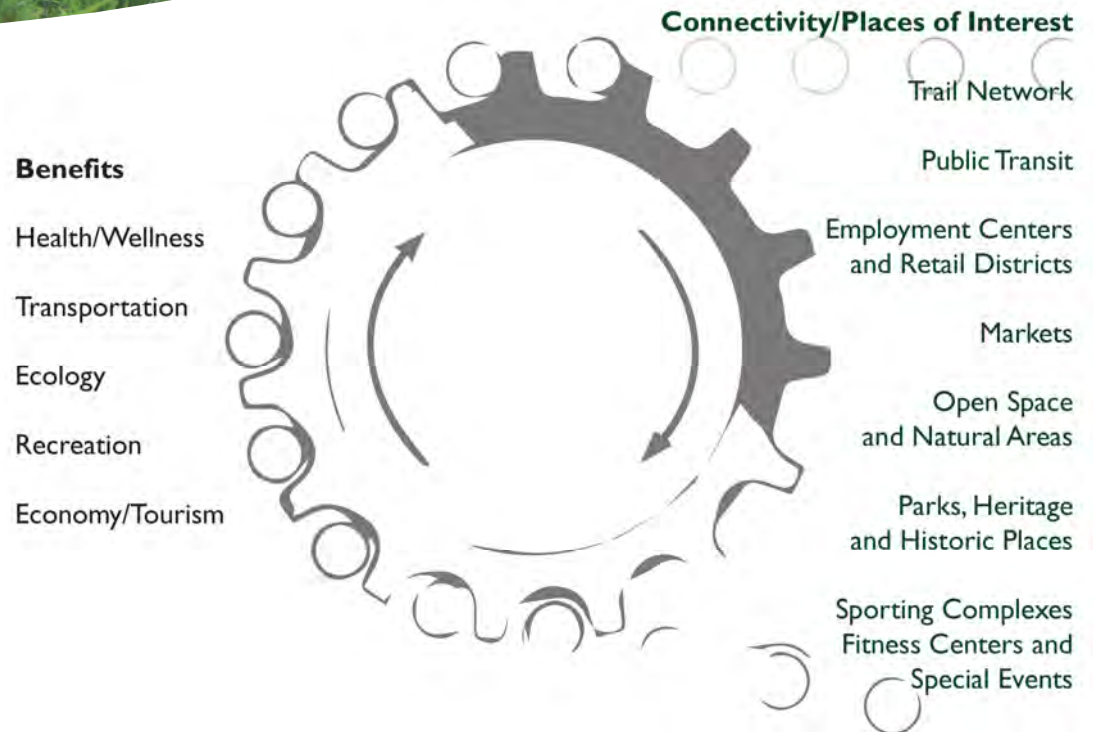


**Benefits and Connectivity**

Trails provide numerous benefits regarding health, transportation, ecology, recreation, and the fiscal environment. The direct beneficiary is the trail user, who in turn, indirectly creates a beneficial connection to the local or regional economy.

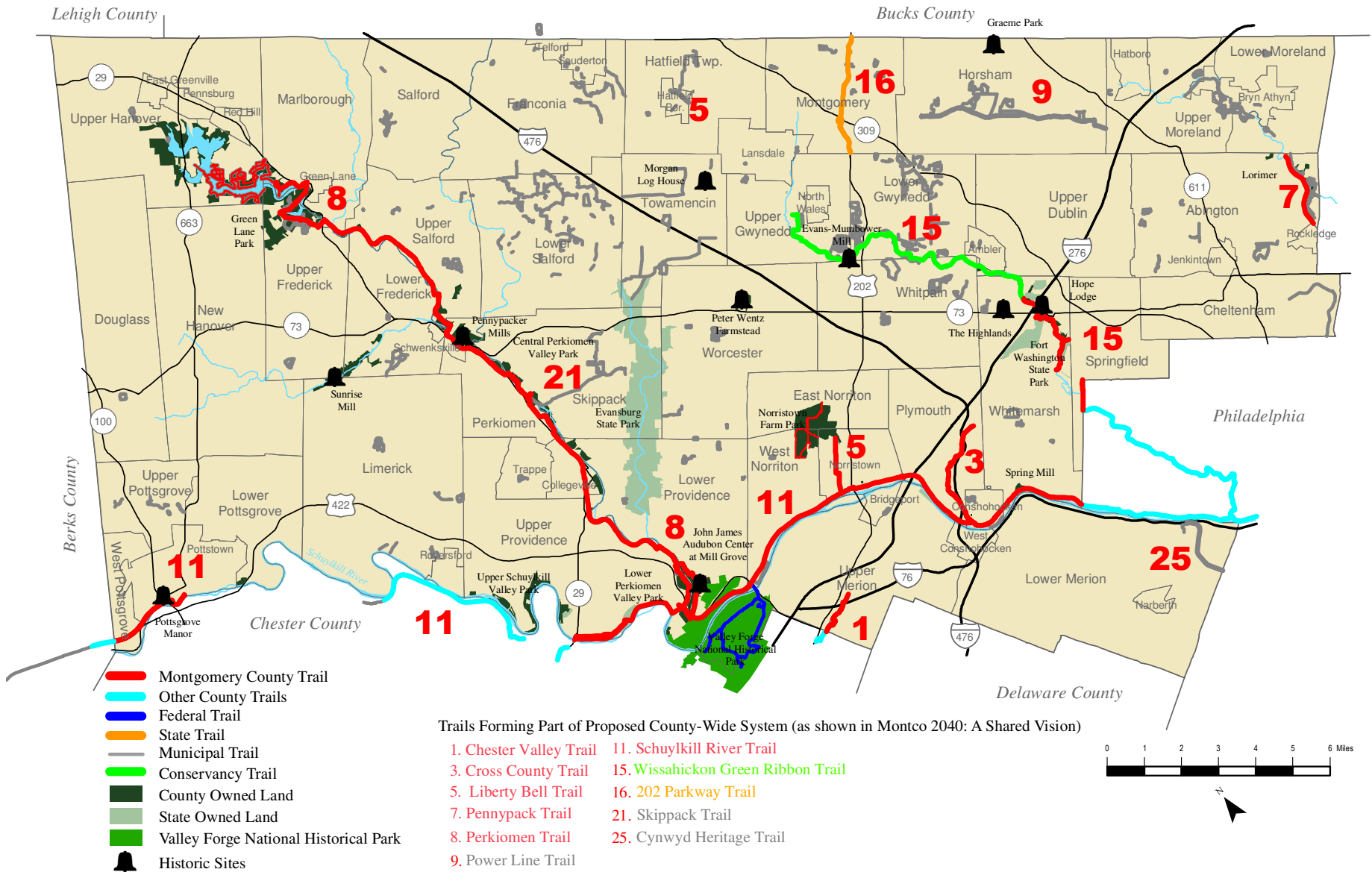
Montgomery County invested years to plan and determine the feasibility of creating a regional trail network that highlights its ability to connect to places of interest and employment centers. Connectivity is the foundation of the county’s proposed trail system and the primary goal for implementing the recommendations in the comprehensive plan. The higher connectivity rate of local and regional trails, the greater the enhancement of direct and indirect benefits to the users and community.

Over 60% of trail users that responded to the Perkiomen Trail 2008 User Survey & Economic Impact Analysis and Schuylkill River Trail 2009 User Survey & Economic Impact Analysis reported an annual average of \$400 spent on hard goods (bicycle purchase; bike supplies) and an average of \$10 spent on soft goods (beverage; meal) per person, per trip.



# THE COUNTY'S OPEN SPACE AND RECREATION NETWORK

**FIGURE 54: Existing Trails in Montgomery County**



Source: Montgomery County Planning Commission



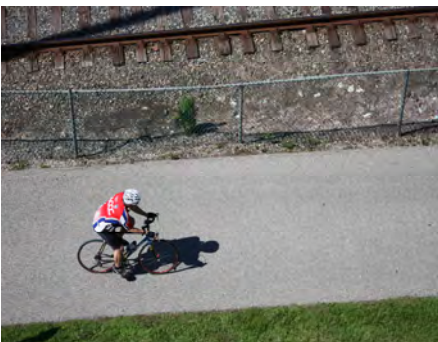
*Design, Safety, and Maintenance Issues*

**Trail Design:** County trail design standards and specifications have not changed significantly in the past ten years. This can be attributed to following best trail design principles created by governmental and non-profit trail agencies. Key agencies like the Federal Highway Administration, American Association of State Highway and Transportation Officials, PennDOT, PA DCNR, and Rails to Trails Conservancy, as well as the Americans with Disabilities Act help shape the county’s nationally recognized trail system.

Today, the county can build a 12-foot wide asphalt trail, one mile long for approximately \$150,000 (excluding stabilizing structures, culverts, and pedestrian signals). A well constructed trail has over a 30-year life cycle and is open to all users free of cost. The return of investment is unparalleled regarding initial cost and actual life cycle of the public facility.

**Safety Issues:** In the early years of trail planning, a majority of residents were fearful of trails in their neighborhoods. Many had misconceptions that trails would create criminal corridors and promote trespassing. Through educational workshops, community meetings, and field trips to existing trails, the majority dissolved their misconceptions and realized the multitude of tangible benefits.

Currently, trails are in demand from the local level up to the national level. The county receives significantly more requests to build more trail mileage and to upgrade existing trails than it did before. The consensus and present movement points to trails as a positive asset for any community, town, or city. Montgomery County has not been alone in meeting the recreational and alternative transportation needs of the region. Municipalities including Lower Salford, Horsham, Upper Dublin, Lower Merion, Worcester, and Skippack Townships have built regional segments or remarkable local systems with connecting opportunities.



**Ongoing Maintenance:** All trail development projects should include a maintenance and operational plan with short and long term budget projections. Montgomery County develops a plan for each trail project. This critical step ensures proper upkeep of the trail corridors and creates a pleasing and consistent experience for the user.

Montgomery County diligently enhances, promotes, and protects these valuable assets. The county strives to provide all trail visitors with an exceptional, healthy, and alternative transportation experience while traversing on foot, bicycle, or even horseback.





# THE COUNTY'S TRANSPORTATION NETWORK



### Vehicles

Transit

Pedestrian Mobility

Bicycle Mobility

Aviation

Freight

#### PLANNING ISSUE

*Recently available funding for vital road and bridge projects has resurrected some major improvement projects but traffic congestion is still a significant issue. Strategies to reduce congestion must be cost-effective.*

### Vehicles

For more than 60 years, the personal auto has been the dominant mode of transportation for suburban workers and residents. According to the 2011 American Community Survey (ACS), 80% of Montgomery County workers got to work by driving alone. More than half of all county residents have access to two or more vehicles, and 32% have access to at least one vehicle. Only 6% lack access to a vehicle.

The county's low-density suburban development frequently impedes the use of alternative modes like transit and walking, forcing many residents to use vehicles for all of their transportation needs, even for short trips. As the county grows, increased traffic congestion will grow as well.

Between 2000 and 2007, the total number of vehicle miles traveled (VMT) in Montgomery County increased by 8.5%. While the economic downturn reduced this demand after 2007, by 2010 the VMT was still 1.5% above 2000 levels.

Traffic congestion has many negative impacts on the economic and environmental well-being of county workers and residents. Limiting its impacts is vital to the health and wellness of all.

An approach to curbing congestion is Travel Demand Management (TDM), which strives to minimize single-driver automobile use as a principal mode of transportation, especially during rush hours. By providing commuters flexibility in their choice of workplace location, commute time-of-day, and route and mode taken, it's possible to reduce congestion. TDM can include different tools such as carpools, park and ride lots, car sharing, and workplace flexibility like compressed workweeks, flextime, or telecommuting.

Additional mobility options are provided by non-profit membership organizations called transportation management associations or TMAs. TMAs advocate for viable transportation networks in their communities and provide supplemental transit service where needed. Two

### What's New

- Several major roadways have benefitted from dramatic improvements in the last ten years. The Pennsylvania Turnpike was reconstructed and widened from four to six lanes between the Mid-County interchange in Plymouth Township and the Valley Forge interchange in Upper Merion Township. The new US 202 Parkway connecting Lower Gwynedd Township with PA 611 in Bucks County was built with an adjacent multi-purpose trail. And the Fort Washington Expressway (PA 309) was reconstructed between Greenwood Avenue in Cheltenham Township and PA 63 in Lower Gwynedd Township.
- Federal and state gas taxes provide most of the funding for road and bridge projects. At a time when the service life of many of our highways is running out (increasing the need for funding), increased popularity of hybrid and fuel-efficient vehicles has reduced the number of gallons of gas purchased, resulting in fewer available dollars for transportation projects.
- New transportation funding made available in late 2013 has given the green light to many major projects, including Phase 2 of the PA 309 Connector Project in Franconia and Hatfield Townships, portions of the US 422 Reconstruction near Pottstown, and the reconstruction and widening of Ridge Pike between Norristown Borough and Philadelphia in Plymouth and Whitemarsh Townships.
- Since its adoption in 2008, Smart Transportation has become an integrated part of PennDOT's design manual. Smart Transportation is a way to design and implement fiscally-constrained and context-sensitive transportation planning projects so that solutions are tailored to the local context of a roadway's service area. It also provides strategies for planning for alternate transportation modes.

TMA serve Montgomery County - the Greater Valley Forge TMA and the Partnership TMA. In addition to their help planning transportation projects and setting policy, Greater Valley Forge operates corporate shuttles and the twice weekly Conshohocken Rambler; Partnership TMA offers travel training to seniors.

**Functional Classification**

Functional classification is a hierarchical system used by the Federal Highway Administration (FHWA) and PennDOT to group roadways according to their function and service characteristics. All roads in Montgomery County can be classified as one of the following:

**Expressways** are the highest class. These are divided multi-lane limited-access highway; in the county these include the Blue Route (I-476), US 422, the Schuylkill Expressway (I-76), the Pennsylvania Turnpike, the Northeast Extension, and PA 309 south of Welsh Road.

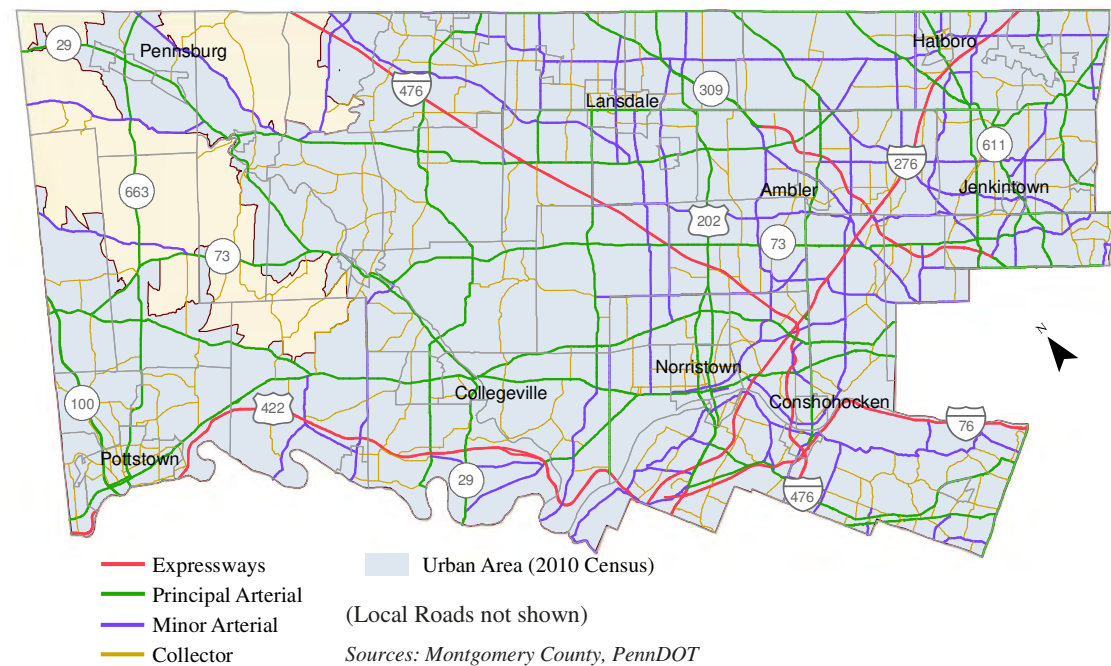
**Arterials** are either “principal” or “minor,” and provide greater mobility for longer trips, but offer more accessibility than expressways. Principal arterials in the county include roads like Bethlehem Pike (PA 309), Old York Road (PA 611) in Upper Moreland, and US 202 Dekalb Pike.

**Collectors** channel traffic to or from higher classification roads. Examples of some of the larger collector roads in the county include Conshohocken State Road in Lower Merion and Susquehanna Road in Abington.

**Local Roads** make up the bottom tier of the system and represent the majority of road miles in the county. These include all residential side streets.

Mobility (the ability of a road to move traffic efficiently) and accessibility (the level of control over traffic’s ability to enter or leave a roadway) are two major considerations in determining roadway classification. Expressways are the least accessible but offer the most mobility.

**FIGURE 55: Functional Classes of Roads**



*Sumneytown Pike in Upper Gwynedd Township is a Principal Arterial.*



*Haverford Avenue in Narberth Borough is a Collector.*

**Traffic Volume**

As Montgomery County's population has increased, vehicle traffic has increased as well. And despite lower traffic volumes lately—mostly due to the recent economic downturn—traffic volumes are much higher than historical levels.

The most heavily travelled road in the county is the Pennsylvania Turnpike, with close to 120,000 vehicles per day. Other roads in Montgomery County have had significant increases in traffic over the last thirty years.

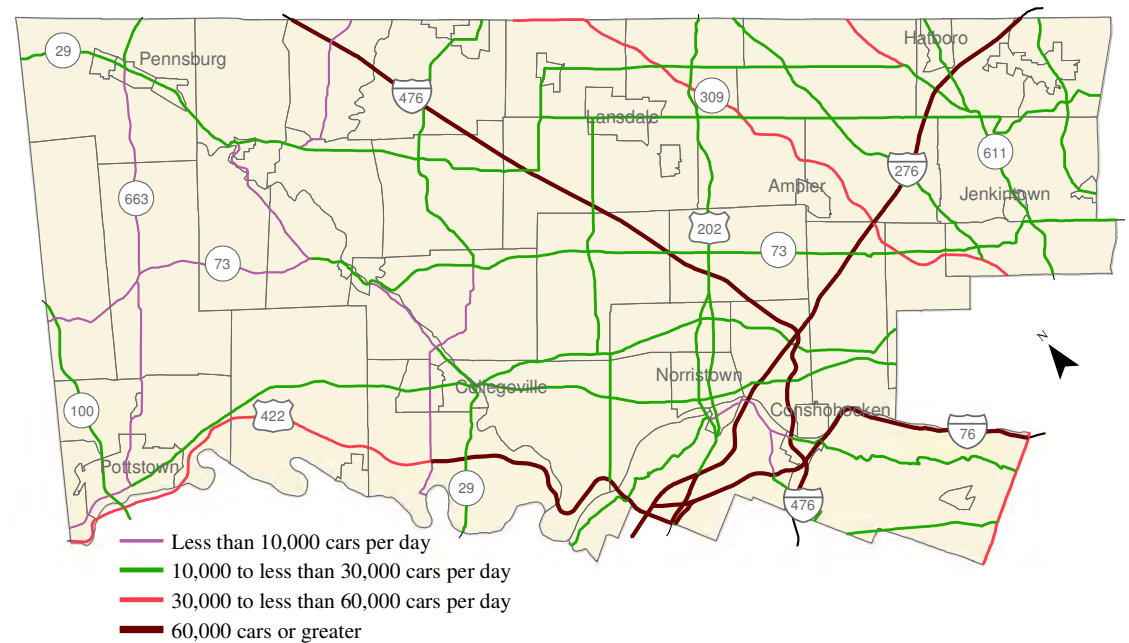
The average number of miles driven per day in Montgomery County has fluctuated for the last 20 years. In 2011, drivers drove an average 18 million miles per day, down slightly from 2007, when it was 19.4 million miles per day. This represents more than a quarter of the total roadway miles driven in the five-county Philadelphia metropolitan region.

Travel times have increased as well. In 1990, the average Montgomery County worker was on the road for 22.5 minutes for the daily commute to work—45 minutes roundtrip. By 2000, this travel time had increased to 26.5 minutes, or a 53 minute roundtrip. And by 2010, the average daily commute took 27.4 minutes each way. This is not an insignificant amount of time when added up over a year. Assuming a 5 day work week and 50 weeks of work per year, that's 9.5 days of one's year spent commuting to work! The county's suburban location, the distribution of jobs from Philadelphia's core to various economic centers across the region, and people's general preference to drive alone all add to this trend of longer commutes.



*Highways like Route 422 have had significant increases in commuter traffic as residential development has spread out from King of Prussia.*

**FIGURE 56:** Traffic Volume on Montgomery County's Major Roadways



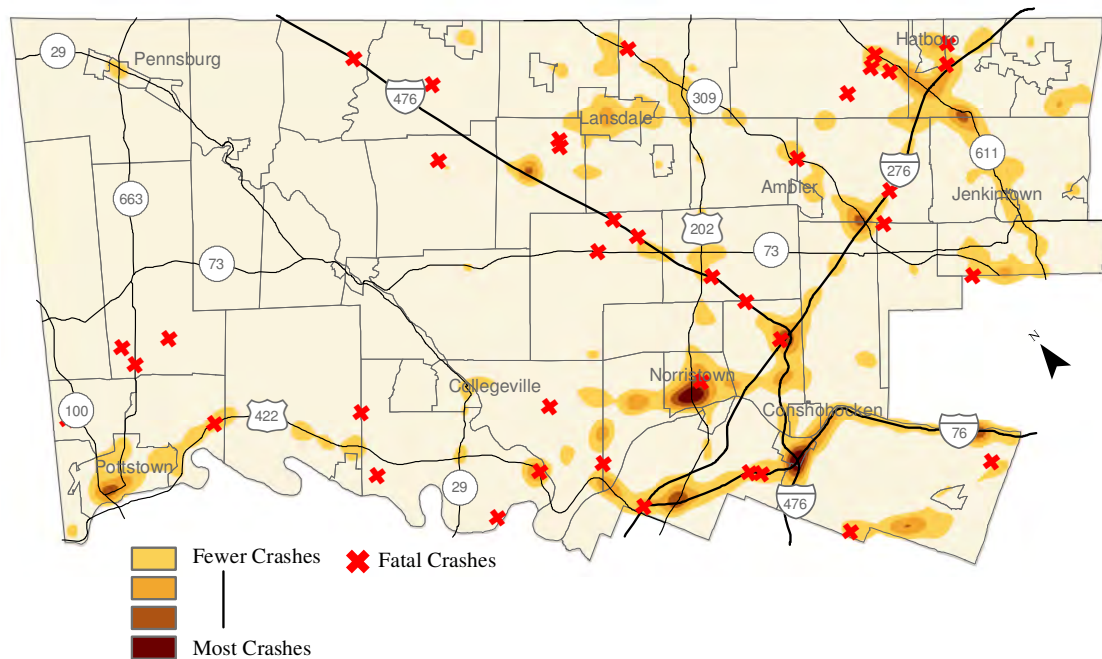
Source: Delaware Valley Regional Planning Commission

**FIGURE 57:** Average Annual Daily Traffic Counts

ROADWAY	1980	2000	2010
Schuylkill Expressway (I-76)	63,000	102,000	101,300
Blue Route (I-476)	20,154	103,145	105,890
Route 422	11,032	56,998	65,483
Route 100	17,869	32,173	30,446
Northeast Extension—PA Turnpike (I-476)	16,717	56,542	65,483
Route 309 Expressway	29,854	48,109	42,908
PA Turnpike (I-276)	41,693	105,584	118,174
<b>Total</b>	<b>192,319</b>	<b>504,551</b>	<b>529,684</b>

Sources: Delaware Valley Regional Planning Commission

**FIGURE 58: Vehicle Accident Locations**



Source: Delaware Valley Regional Planning Commission

**FIGURE 59: Average Crashes per Year in the Greater Philadelphia Area: 2008-2010**

COUNTY	CRASHES THAT CAUSED			PEOPLE WHO WERE	
	INJURY	FATALITY	PROPERTY DAMAGE	INJURED	KILLED
Bucks	3,082	52	3,151	4,324	54
Chester	1,834	31	2,606	2,452	34
Delaware	2,325	21	2,060	3,292	21
Montgomery	4,082	37	4,137	5,638	40
Philadelphia	8,235	85	2,259	11,881	93

Source: Delaware Valley Regional Planning Commission

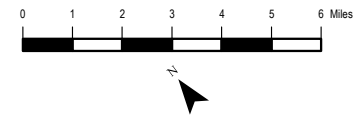
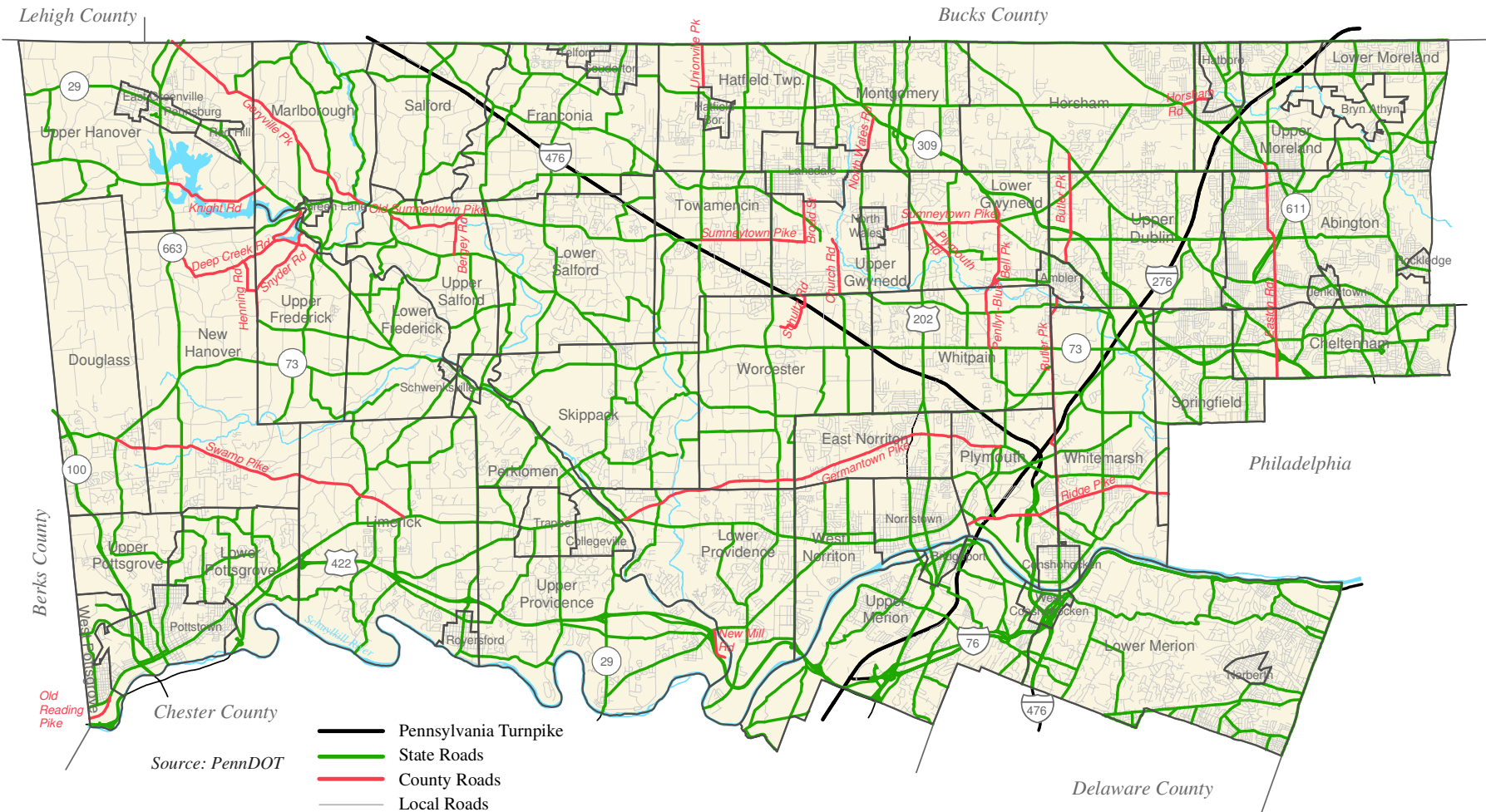
### Vehicle Crashes

Vehicle crashes continue to be a serious safety issue in Montgomery County. In 2011, there were 8,416 crashes in the county, 42 of which were fatal. Most of these crashes were concentrated along major highways in the county, including the Pennsylvania Turnpike and the Schuylkill Expressway. This figure is up 2% from the 8,235 crashes in the county in 2010. However, on a regional level, accident fatalities continue to decline since a peak of 489 deaths in 2007.

There are several factors that contributed to these fatalities. Aggressive driving contributed to 25 of the 45 fatalities—more than half—and is a behavior that is completely preventable. Other factors that come into play include impaired and distracted driving, seat belt usage, pedestrian safety, vehicles leaving the roadway, and poor intersection design. That being said, increasing seat belt usage, making streets safer to cross, eliminating view obstructions and eliminating potential distractions like text messaging could go a long way toward reducing the county’s crash rates even further.

In 2011, 30 of the county’s 62 municipalities had 100 crashes or more. Lower Merion Township had the greatest number of crashes by far, totaling 802, likely because of the Schuylkill Expressway which winds its way through the township. Other municipalities with large numbers of crashes include Upper Merion, Abington, Upper Moreland, and Upper Dublin Townships, as well as the Municipality of Norristown.

FIGURE 60: Roadway Ownership



Roadway Ownership

There are more than 3,300 miles of roads in the county. PennDOT owns about one-quarter of these, including interstates, expressways, and numbered highway routes (like PA 100 and PA 73). The Pennsylvania Turnpike owns and maintains 40 miles of expressway including the Mainline east-west turnpike and the Northeast Extension. The county,

one of three counties in Pennsylvania to own roads, owns 74 miles (or 2%) of roadway. Most are local roads, owned and maintained by municipalities.

Bridge Ownership

Bridges may be owned by any of these entities or by private companies, almost always a railroad. There are 1,009 bridges in Montgomery County -

**FIGURE 61: Roads and Bridges by Jurisdiction**

JURISDICTION	# BRIDGES	ROADWAY MILES
PennDOT	624	748
Pennsylvania Turnpike	129	40
Montgomery County	103	74
Local municipalities	136	2,439
Railroads	17	n/a
<b>Total</b>	<b>1,009</b>	<b>3,301</b>

Source: Montgomery County Planning Commission

PennDOT owns 624 of these; Montgomery County owns 103; local municipalities own 136.

### Intelligent Transportation Systems

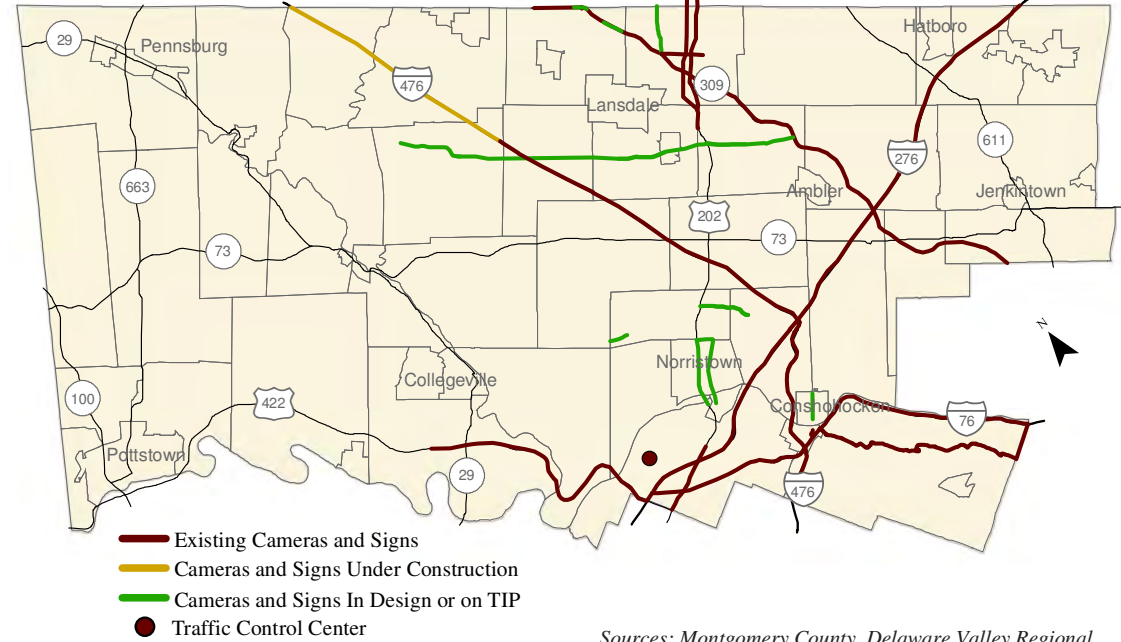
Intelligent Transportation Systems (ITS) are a collection of interconnected technologies used to collect and distribute information about the roadway to commuters so they can make better choices about their route and respond accordingly to changing roadway conditions such as traffic, accidents, and weather.

A partial list of the major elements of an ITS system includes technologies such as:

- Traffic control centers – oversees the operation of the region’s highways,
- Video cameras along highways, used by control centers to monitor real-time roadway conditions.
- Electronic (or variable) message signs – display real-time information to drivers,
- Traffic light timing and signal preemption,
- Ramp meters – devices that regulate the flow of traffic entering freeways according to current traffic conditions.

These elements work best when they are coordinated from a traffic control center at the county, regional, or state level. In Montgomery County, this is done out of

**FIGURE 62: ITS Cameras and Signs**



Sources: Montgomery County, Delaware Valley Regional Planning Commission

the PennDOT District 6 Traffic Control Center in King of Prussia.

In addition to real-time traffic conditions, ITS is also an integral element of emergency response (incident management). An ITS-enabled traffic signal system gives emergency vehicles with



Traffic control center at the PennDOT District 6 offices.

Source: PennDOT



Variable message sign on WB Pennsylvania Turnpike (I-276) in Whitmarsh Township.

*Transportation Improvement Program*

The Transportation Improvement Program (TIP) is a four year capital program that lists federally-funded projects, regionally significant projects that are not federally funded, other state-funded capital projects, public transit projects, bicycle and pedestrian improvement projects, Intelligent Transportation System improvements, and freight-related improvements. It is required by federal law in order to receive and spend federal transportation dollars, but it is only authorization to seek funding - it is neither a guarantee that funding will be available, nor is it a final schedule of project implementation.

Projects on the TIP represent the consensus of state and regional officials, who agree that these projects are the most critical, near-term improvements to be pursued. It is, however, fiscally constrained, which means that the total cost of all TIP projects cannot exceed the amount of federal and state funds the region expects to receive.

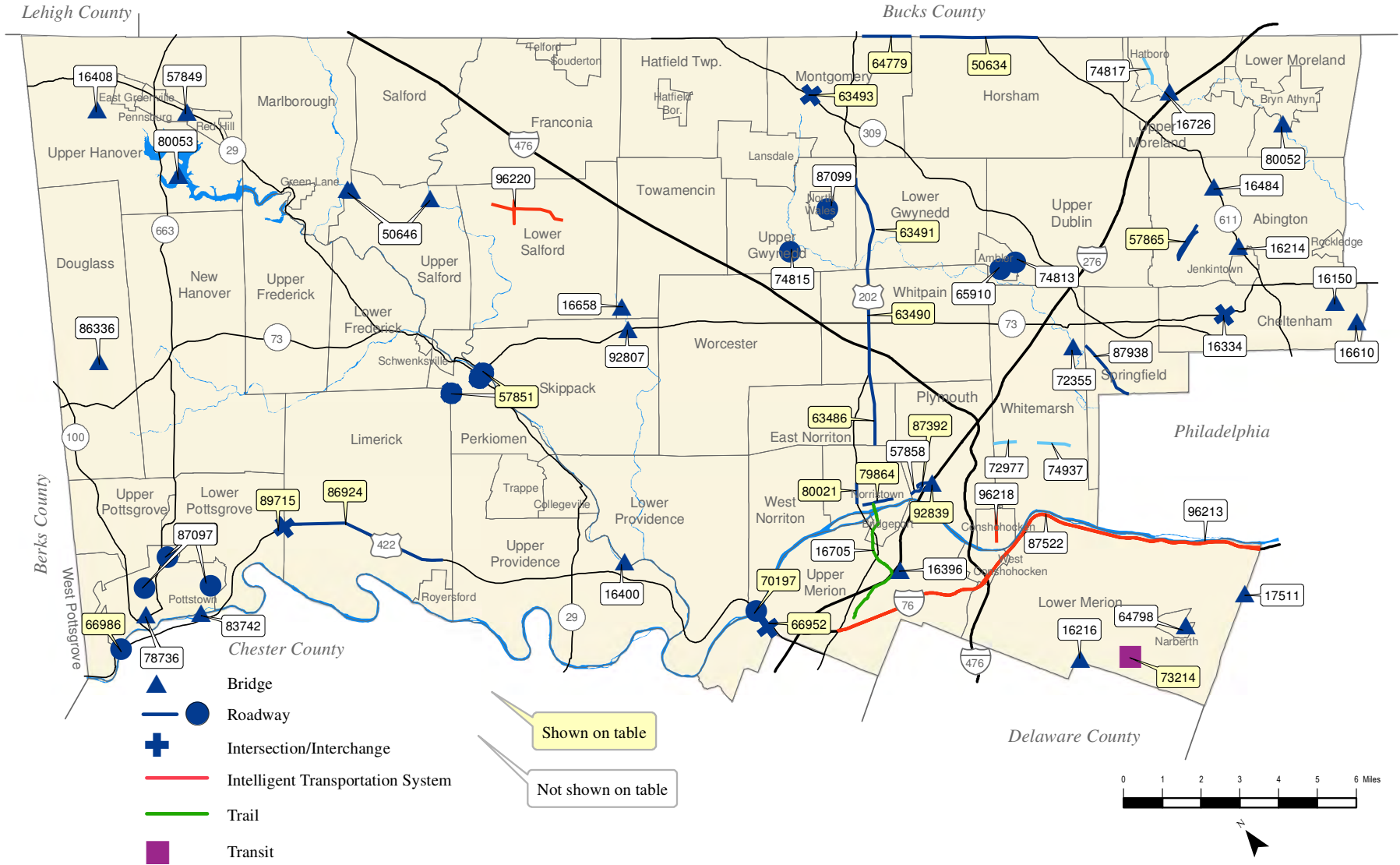
The TIP includes estimated project costs and schedules by project phase. It covers a four-year period on the federal fiscal year schedule of October 1 to September 30 and is administered by the Delaware Valley Regional Planning Commission. For counties in Pennsylvania, it is updated every other year. The most recent update is FY 2015. Once adopted, the TIP can be amended on a monthly basis with an action of the DVRPC Board. Montgomery County takes an active role in the transportation planning process that culminates in the production of the TIP.

Most TIP funding is administered by the U.S. Department of Transportation's Federal Highway Administration (FHWA) and Federal Transit Administration (FTA). Authorization for the release of those funds come from federal transportation legislation which, as of this January 2013, is a two-year bill called MAP-21 (Moving Ahead for Progress in the 21<sup>st</sup> Century). Actual dollars for this come from the Highway Trust Fund, a repository of funds collected by the 18.4 cents-per-gallon federal tax on motor fuels. Additional funds are provided by the state, local municipalities, and private developers.

**FIGURE 63:** Major TIP Projects FY 2015-2022 (partial list)

ID	PROJECT TITLE	DESCRIPTION
16705	Old Betzwood Bridge Trail	New bike and pedestrian trail bridge over Schuylkill River.
50634	County Line Rd Restoration	Three-lane cross section btw Kulp Rd and PA 611
57851	Plank/Otts/Meyers/Seitz Roads	Phase 1—Intersection improvements.
57865	Edge Hill Rd Reconstruction	Reconstruct roadway; provide drainage improvements, sidewalks
63486	US 202—Phase 3	Reconstruct roadway from Johnson Hwy to Township Line Rd
63490	US 202—Phase 1	Reconstruct roadway from Township Line Rd to Morris Rd
63491	US 202—Phase 2	Reconstruct roadway from Morris Rd to Swedesford Rd
63493	US 202—Five Points Intersection	Reconstruct intersection with PA 463, PA 309, and old US 202.
64779	County Line Rd Widening	Stump Rd to Lower State Rd, widen to 5 lanes, improve intersection
66952	PA 23/Valley Forge Rd	Relocate and widen N Gulph Road at Valley Forge Park
66986	US 422 Section M2A-Stowe	Replace the Schuylkill River bridge btw Stowe and PA 100 int.
70197	US 422 Section SRB	New bridge for WB US 422 over Schuylkill; replace EB bridge.
73214	Ardmore Station	New station building; new parking garage; pedestrian amenities.
79864	Lafayette Street—Phase 3	Reconstruct and widen from Barbadoes St to Ford St
80021	US 202 Markley Street—Phase 2	Reconstruct roadway from south of Main Street to Elm Street
86924	US 422 Resurfacing (PM2)	Paving and rehab of six miles btw Linfield and Royersford
87392	Lafayette Street—Phase 2	Make improvements to Ridge Pk, Conshohocken Rd, Diamond Ave
89715	US 422 Sanatoga Interchange	Improvements to interchange at Evergreen Road
92839	Ridge Pike Bridges	Replace 2 bridges over NS; widen to 5 lanes Turnpike to Carland

**FIGURE 64: Major Transportation Improvement Program Projects FY 2015-2022**



Source (table and map): Delaware Valley Regional Planning Commission

### Vehicles

#### Transit

#### Pedestrian Mobility

#### Bicycle Mobility

#### Aviation

#### Freight

#### PLANNING ISSUE

*Major system components of public transportation—such as stations, parking, bridges, track, power systems, and machine shops are aging and need major investment to bring them into a State of Good Repair.*

#### Transit

Public transportation is provided to large portions of the county by the Southeastern Pennsylvania Transportation Authority (SEPTA) and Pottstown Area Rapid Transit (PART). Additional shuttle bus service is provided by employers, apartment buildings, universities, and transportation management associations (TMAs).

SEPTA, the nation's sixth largest transit provider, operates a regional rail network of 13 rail lines, six of which serve the county; 119 bus routes, 43 of which serve the county; and the Norristown High Speed Line, a stand-alone interurban rail line between the 69th Street Transportation Center and the Norristown Transportation Center with 22 stations, six of which are in the county.

Montgomery County riders made almost 18 million trips on SEPTA buses in 2011, almost a million more than the previous year. They made more than 12 million trips on regional rail in 2011, a slight increase above 2009 but about 1.5 million more trips than in 2001. Overall, SEPTA has seen a big uptick in transit usage as gas costs have gone up. Additionally, more than 266,000 trips were taken on PART buses in 2011, a slight increase over the previous year.

Public transportation reduces the number of cars on the road, alleviating traffic congestion and improving air quality. The American Public Transportation Association (APTA), a national transit advocacy organization, reports that public transit generates 95% less carbon monoxide, 92% less volatile organic compounds, and 50% less carbon dioxide per passenger mile than private vehicles.

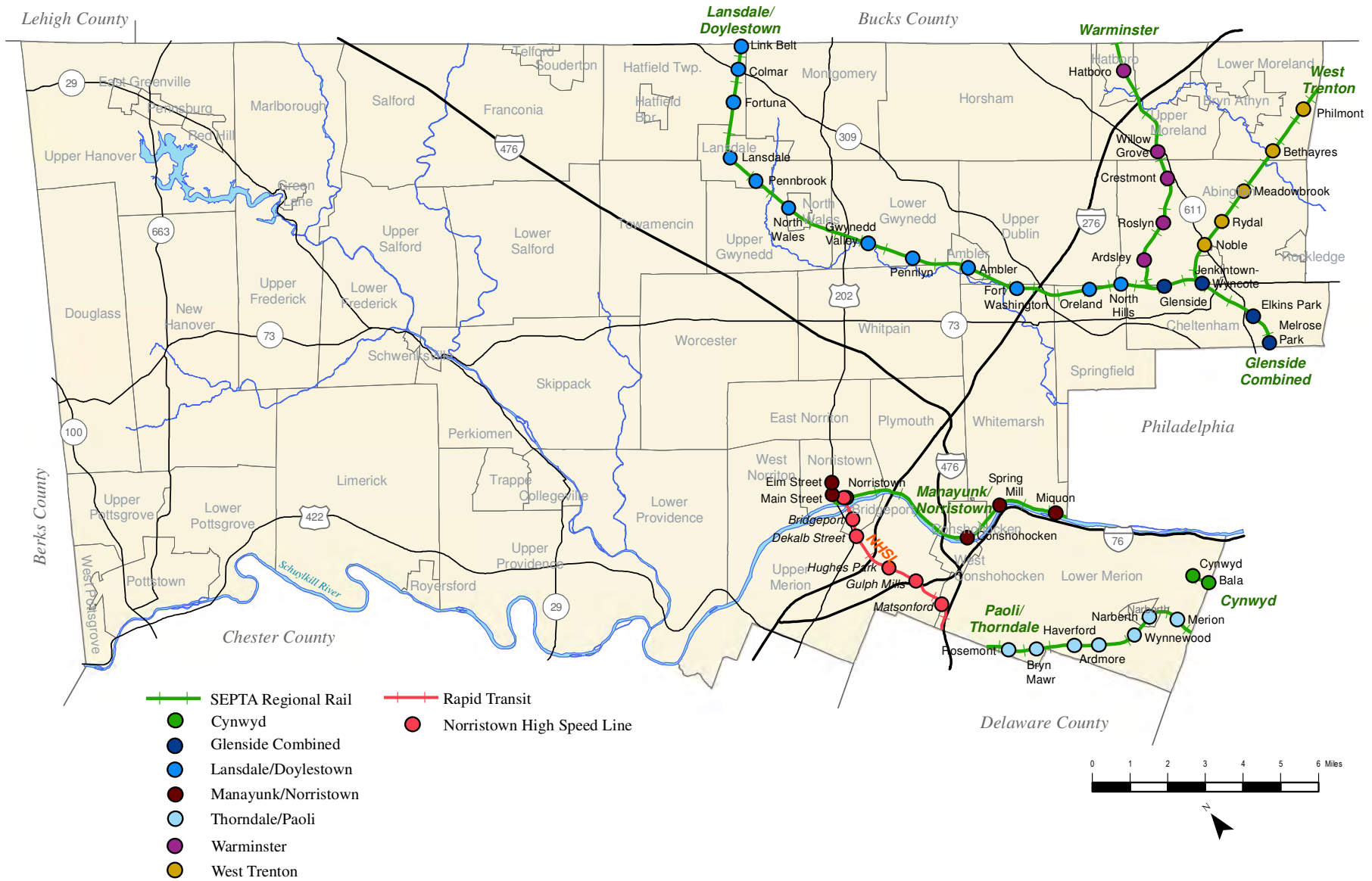
Funding for deferred projects was restored by the state in late 2013; while a portion of the operating and capital costs for transit comes from the fare sales, the difference is made up by federal, state, and local sources.

The cost of the system is more than just fuel and personnel. Equipment like buses, trains, and the machine shops that keep them running are aging, and infrastructure like tracks, bridges, and stations, has been around for decades. SEPTA will be using some of this

#### What's New?

- SEPTA began the transition from its current fare collection system to a new, state-of-the-art "smart" system. This New Payment Technology or NPT will work seamlessly across the entire SEPTA network, enabling fare payment on all buses, trolleys, subways, Regional Rail and CCT vehicles, as well as at SEPTA parking facilities. NPT will also offer riders the option to use a variety of payment options. Implementation is expected to be complete by 2015.
- SEPTA began the rollout of 120 new Silverliner V model rail cars for the Regional Rail fleet in October 2010 and were fully in service by 2013. The new cars replace SEPTA's aging Silverliner IIs and IIIs, which were in service since the 1960s.
- In the last several years, several stations on Montgomery County regional rail lines including Ambler, North Wales, Fort Washington, and Melrose Park were upgraded and received high-level platforms (meaning the platform is level with the train car door, making it easier for riders with disabilities to board).
- A four-story, 520-space parking garage opened at the Norristown Transportation Center in 2008. Bieber Tours leases the street-level waiting area and bus berth, and, along with Greyhound and other intercity bus carriers, provide passengers with intercity bus service to cities throughout the Northeast.
- Parking garages and other station improvements are planned for Jenkintown-Wyncote and Ardmore.
- SEPTA began to study the potential expansion of the Norristown High Speed Line (NHSL) into the King of Prussia area in the fall of 2012.
- In 2011, Montgomery County hired a consultant to study the feasibility of transit service to municipalities in the northwestern corner of Montgomery County.

FIGURE 65: Rail Transit Lines



Source: SEPTA

## THE COUNTY'S TRANSPORTATION NETWORK

restored funding to fund projects necessary to bring the entire system into a state of good repair and perform essential safety upgrades.

In addition, there are federal mandates to install safety measures, including regional rail signal system modernization and Positive Train Control (PTC). A PTC system, which is required to be operational by December 31, 2015 by the "Rail Safety Improvement Act of 2008," will help prevent train collisions by monitoring track conditions and, whenever necessary, applying the brakes.

SEPTA's current annual capital budget is approximately \$571.8 million (for FY 2015), an increase of about \$200 million from the year prior. And over the next 12 years, SEPTA is poised to spend \$3.7 billion on capital improvements.

In addition to intra-county service, the county is also served by inter-city modes like Amtrak (which has a station stop in Lower Merion, at the Ardmore train station) and private bus lines that serve the Norristown Transportation Center and provide service to cities throughout the northeast.



Silverliner V Regional Rail Train

**FIGURE 66:** *Transit Service Statistics*

SERVICE PROVIDER	MODE	NUMBER OF LINES	ANNUAL RIDERS (2011)
SEPTA	Bus	41	17,804,877
SEPTA	Rail/NHSL	6	12,074,854
PART	Bus	6	266,235
Greater Valley Forge TMA	Bus	2	58,000
<b>Total</b>	<b>Bus/Rail</b>	<b>55</b>	<b>30,204,000</b>

Source: SEPTA, PART, Greater Valley Forge Transportation Management Association

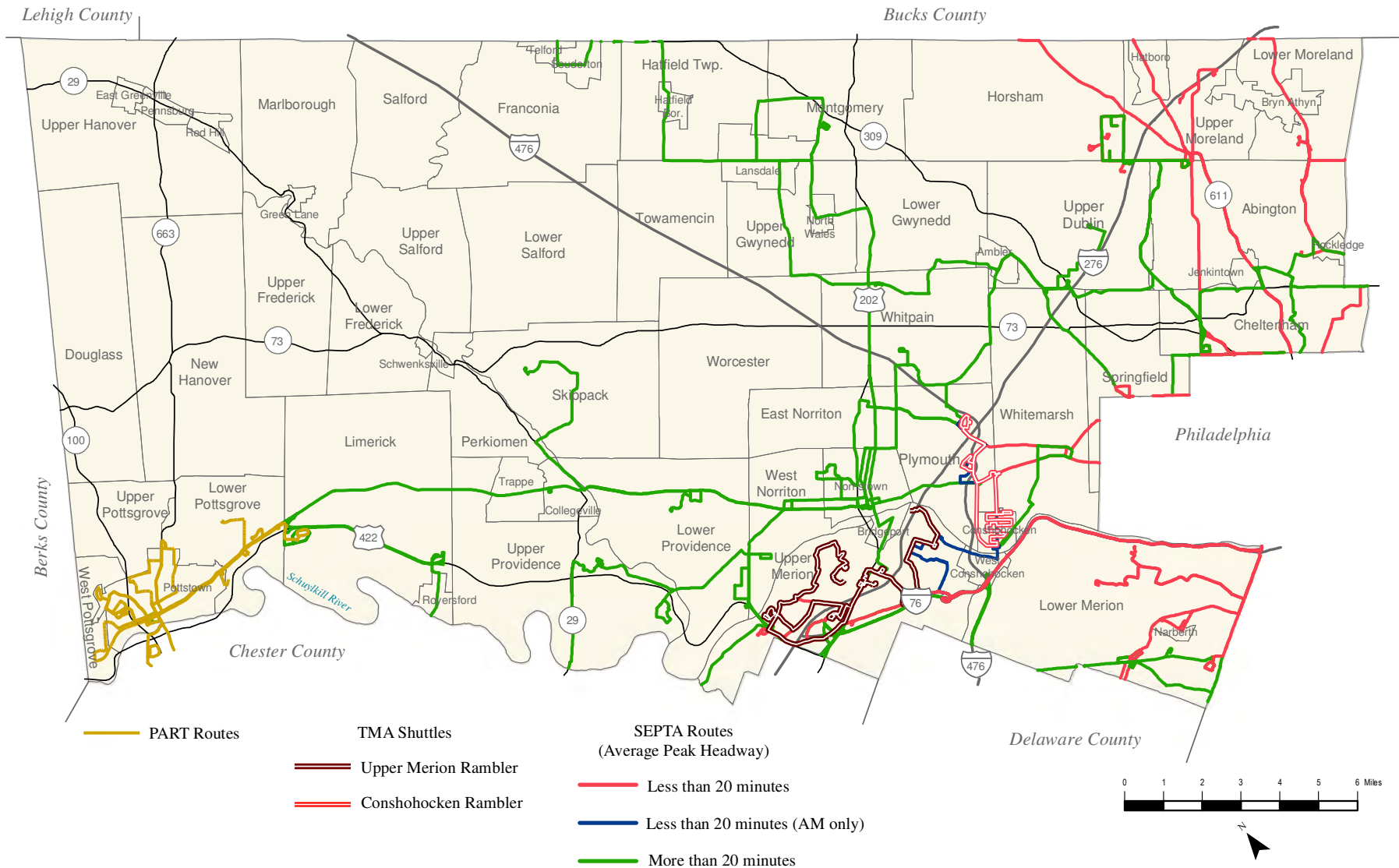


Funding has allowed for badly needed repairs to be made to the Bridgeport Viaduct; without these repairs, service on the Norristown High Speed Line into Norristown could have been severely impacted.



The newly rebuilt Ft Washington station along the Lansdale/Doylestown Line in Whitmarsh Township.

FIGURE 67: Bus Service



Source: SEPTA

Vehicles

Transit

## Pedestrian Mobility

Bicycle Mobility

Aviation

Freight

### PLANNING ISSUE

*It is difficult to walk easily and safely in much of the county, and even in walkable areas the sidewalk network is often incomplete and poorly designed.*

### Pedestrian Mobility

PennDOT's *Smart Transportation Guidebook* states that pedestrian activity is best accommodated by a connected network of sidewalks, complementary land uses, attractive streetscaping, controlled pedestrian crossings, and lower traffic speeds.

Sidewalks support safety and mobility. Some of the county's older downtowns and residential neighborhoods have a well-developed interconnected network of sidewalks. Some may not meet current national standards for width but they provide a separate area for pedestrians to walk that is distinct from the roadway. Newer suburbs that developed after World War II have fewer sidewalks, the product of a planning philosophy that favored cars. Even areas that do have pedestrian facilities may not be connected to any points of interest.

The term "walkability" refers to the friendliness of an area to walking. Many elements determine walkability, including sidewalks, street connectivity, the mix of land uses, residential density, the orientation and proximity of homes and buildings to watch over the street, a variety of points-of-interest, plenty of places to go to near the majority of homes, and street designs that work for people, not just cars.



*Many towns across the county have improved their sidewalks and streetscaping, making it easier for pedestrians to move around safely.*

### What's New

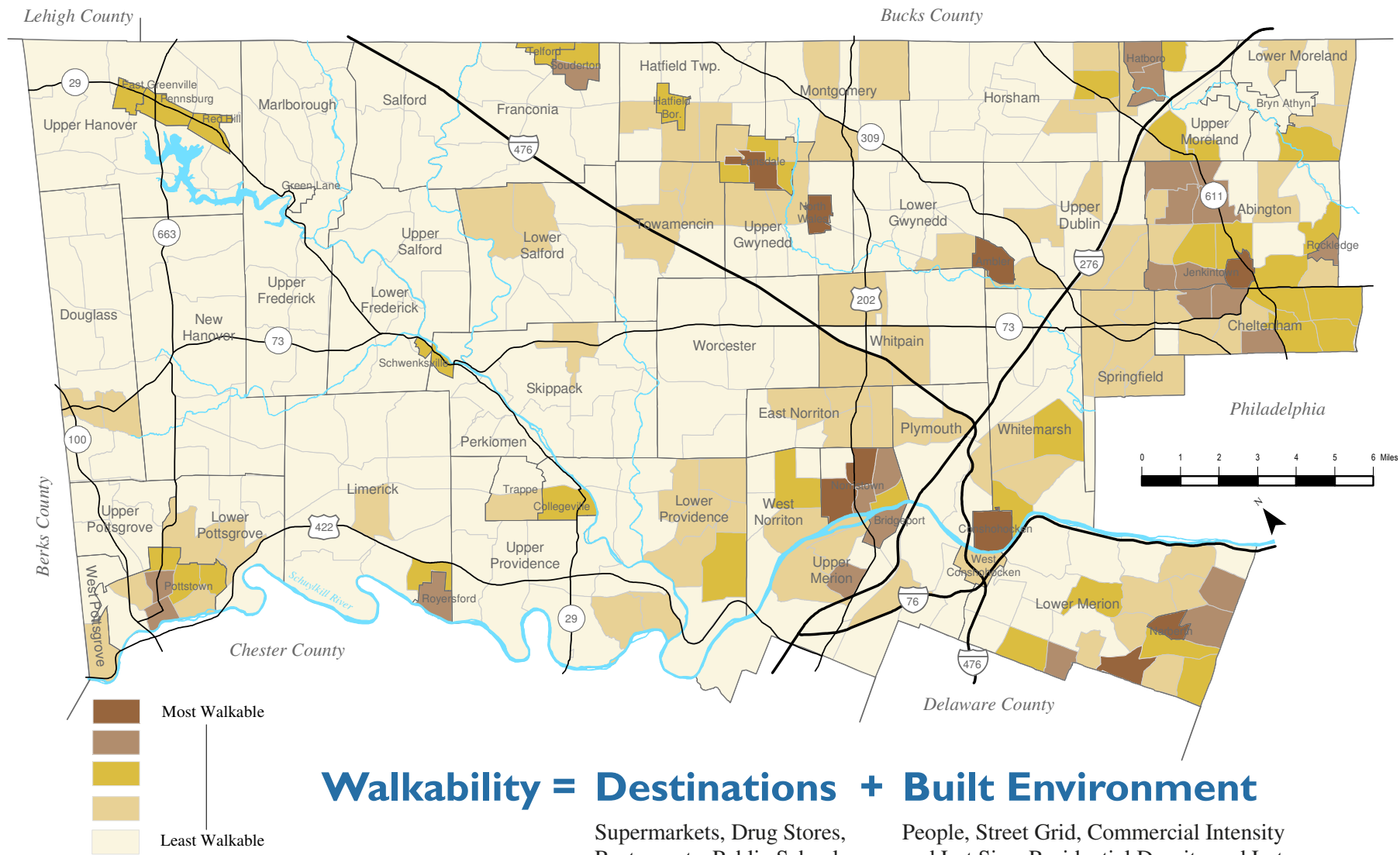
Over the past decade, there has been more interest in making places walkable:

- **Suburban Sidewalks** - Many suburban communities like Montgomery and Upper Merion Townships require sidewalks when in the past, developers may have been allowed to avoid building them.
- **Streetscaping** - Many towns have installed or improved their streetscaping to enhance walkability, such as Ardmore, Conshohocken, Bridgeport, Royersford, East Greenville, Roslyn, Pennsburg, West Conshohocken, Souderton, Hatfield, Lansdale, North Wales, Ambler, Rockledge, Jenkintown, Glenside, and Keswick.
- **Traffic Calming** - Some places, like Jenkintown, Limerick, and Upper Providence, have installed speed humps and other devices to slow traffic and make streets safer for pedestrians.
- **PennDOT** - Two new PennDOT publications, the *Smart Transportation Guidebook* from 2008 and *Improving Connectivity and System Function through Local Planning* from 2012, support stronger pedestrian networks.



*In many places, the sidewalk network is incomplete.*

**FIGURE 68: Walkability of County Neighborhoods**



Sources: Montgomery County Planning Commission and Board of Assessment data. Sidewalk location data was not available.

## THE COUNTY'S TRANSPORTATION NETWORK

Vehicles

Transit

Pedestrian Mobility

### Bicycle Mobility

Aviation

Freight

### Bicycle Mobility

Under state law, bicyclists riding on state roadways are granted the same rights afforded to drivers of cars and trucks, and bicycles are recognized by PennDOT as road-approved vehicles. Some use bicycles as an important (and daily) means of transportation, despite a lack of on-road protections that adequately address the safety concerns of cyclists.

In order for bicycling to have a significant impact on transportation in the county, it is critical that bicyclists be better accommodated, wherever feasible.

According to the American Community Survey, 1,032 people (0.25% of Montgomery County commuters) rode a bike to work in 2011. Nationwide, 0.56% of commuters used a bike which, while double the county rate, is still less than 1% of all commuters.

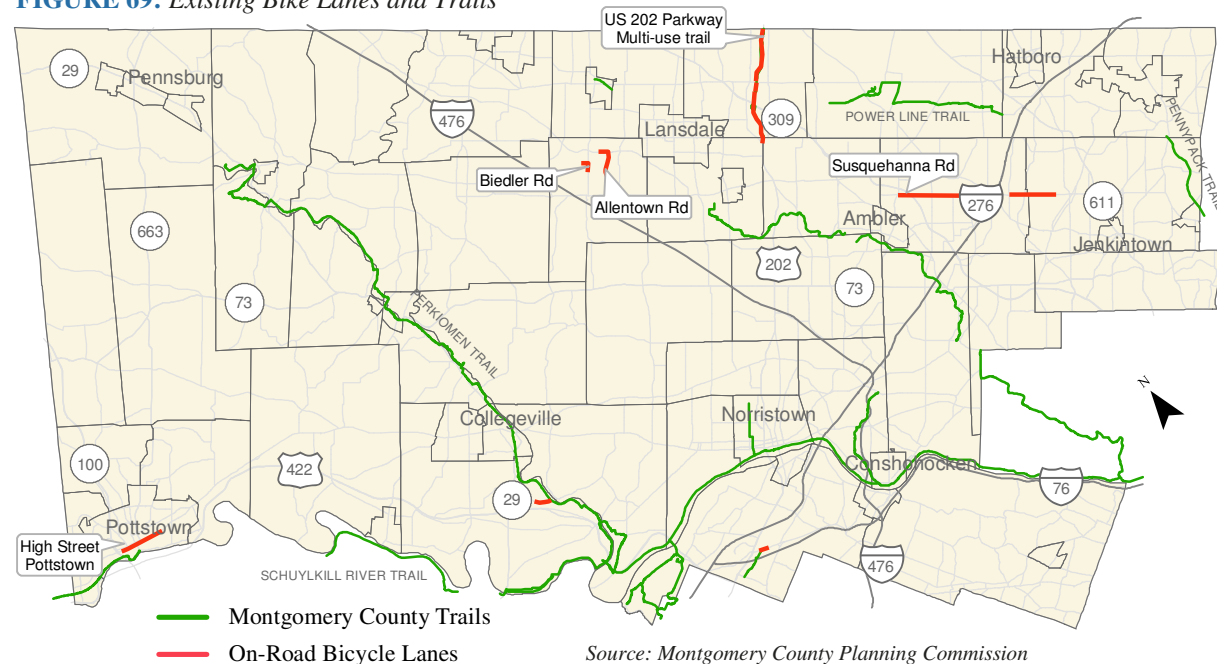
### What's New?

- With the completion of the US 202 Parkway and its parallel multi-use trail, there are now more than 11 miles of designated on-road bike lanes in Montgomery County.
- Employers encourage bicycling to work with annual bike-to-work challenges. Montgomery County participates in Greater Valley Forge TMA's bike-to-work challenge every summer. In 2012, the program shifted 2,336 trips from car to bike, totaling 37,697 miles.

### PLANNING ISSUE

*It is difficult to ride a bike on many Montgomery County roads because there are so few on-road protections for cyclists. Narrow shoulders and almost no bike lanes force riders to ride alongside cars, which makes riding more uncomfortable and dangerous.*

**FIGURE 69:** Existing Bike Lanes and Trails



Most of the roads that serve Montgomery County lack special bicycle facilities. This forces riders into vehicle travel lanes, which makes riding more dangerous and uncomfortable—and may make drivers nervous as well.

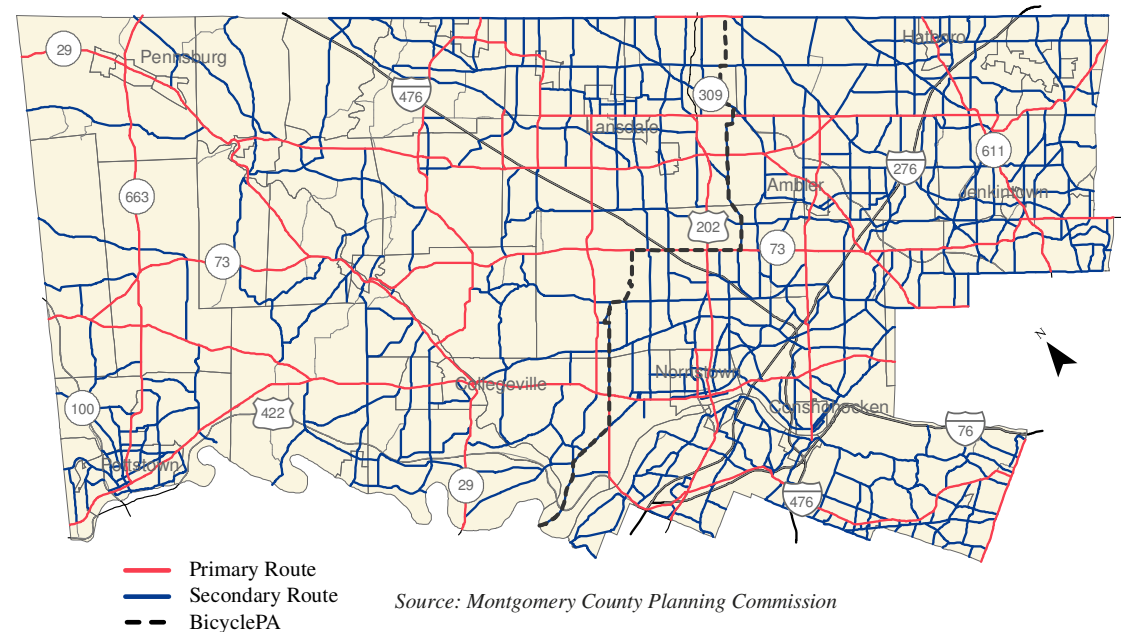
Some of the problems these riders encounter include narrow roads, speeding traffic, congestion, roadway obstructions, and limited facilities at destinations. In addition, most development is oriented towards vehicles rather than bicyclists, often making it harder for these users to access their destinations.

The lack of adequate on-road bike facilities in Montgomery County can be attributed to a few factors. For one, the limited cartway widths of certain roads obstruct easy widening to allow for bike lanes. But the fragmentary nature of roadway ownership makes contiguous bike facilities difficult to create. The majority of roads in the county are owned and maintained by either PennDOT (which handles the higher level roads that carry traffic throughout the county) or the local municipalities through which roads traverse.

PennDOT’s policy for on-road bike lanes is to place all liability and maintenance responsibilities onto the local jurisdiction—even for PennDOT-owned roadways. Both entities support and recognize the need for integrated on-road bike facilities. Recently PennDOT, working with DVRPC, several county governments, local municipalities, and bicycle advocacy groups have made progress to review and revise this policy.

Racks for bikes are available at several regional rail stations in the county. The amount varies by line, but all seven Montgomery County stations along the Paoli/Thorndale line have racks (33 total) with capacity for 93 bikes. Along the Lansdale/Doylestown line, 12 of 16 stations have a total 45 racks with the capacity for 98 bikes. Only two of the six county stations along the Manayunk/Norristown line (Norristown Transportation Center and Spring Mill) have racks—ten total, with space for 20 bikes.

**FIGURE 70:** Recommended On-Road Bike Routes



Source: Montgomery County Planning Commission



The county’s trail network provides a safe alternative to on-road riding.



Bike parking is available at 22 of SEPTA’s 41 regional rail stations.

Vehicles

Transit

Pedestrian Mobility

Bicycle Mobility

### Aviation

Freight

#### PLANNING ISSUE

*Rising fuel prices, increased airspace restrictions, and increased federal security requirements are among the factors behind the decreasing number of airport operations in both the county and region, placing the future of general aviation airports in jeopardy.*

### Aviation

Aviation plays an important role in Montgomery County's economy. In 2011, there were more than 100,000 operations (takeoffs and landings) at airports in the county. These flights were for training and recreation purposes, the transport of corporate business travelers, and emergency medical transportation services.

Policies, regulations, and laws governing airport operations are provided by the Federal Aviation Administration (FAA) and the Pennsylvania Department of Transportation, Bureau of Aviation, and administered through the Delaware Valley Regional Planning Commission (DVRPC). While Montgomery County does not directly regulate airports, by working with the surrounding municipalities, the county can aid in the establishment of policies that promote the preservation of airports and aircraft operations.

Montgomery County has five airports (down from 11 in the 1970s). Two of these are "reliever airports" (public or privately-owned airports designated by the FAA to relieve congestion found at commercial service airports like Philadelphia International Airport; three are "general aviation" airports, which provide limited corporate and charter service, and emphasize personal, local, and recreational aviation services. The total number of operations (defined as a takeoff or landing) at these airports has also declined in the last 20 years. Except for Wings Field, the total number of operations has dropped for all airports in the county since 1995. Perkiomen Valley, which ran more than 40,000 operations in 1995 only saw 10,500 in 2011. Horsham Valley Airways Heliport provides helicopter service primarily to corporate users. Other privately operated helipads or helistops are used by individuals, corporations, and hospitals for emergency transport helicopters.

For service to national and international destinations, Montgomery County residents are served by Philadelphia International Airport, Lehigh Valley International Airport in Allentown, PA, and Trenton-Mercer Airport and Atlantic City International Airport, both in New Jersey.

### What's New?

- The runway at the Willow Grove Naval Air Station-Joint Reserve Base (NAS-JRB) closed in March 2011, six years after the Department of Defense's Base Realignment and Closure (BRAC) process identified the base as surplus.
- Recent FAA changes to the dimensions of controlled airspace around Philadelphia International Airport have lowered the approach altitudes of planes coming in to Philadelphia, resulting in lowered approaches over areas of Montgomery County like Lower Merion Township.

### Part 77

Federal regulations that affect airport planning are found in Federal Aviation Regulations (FAR) Part 77.

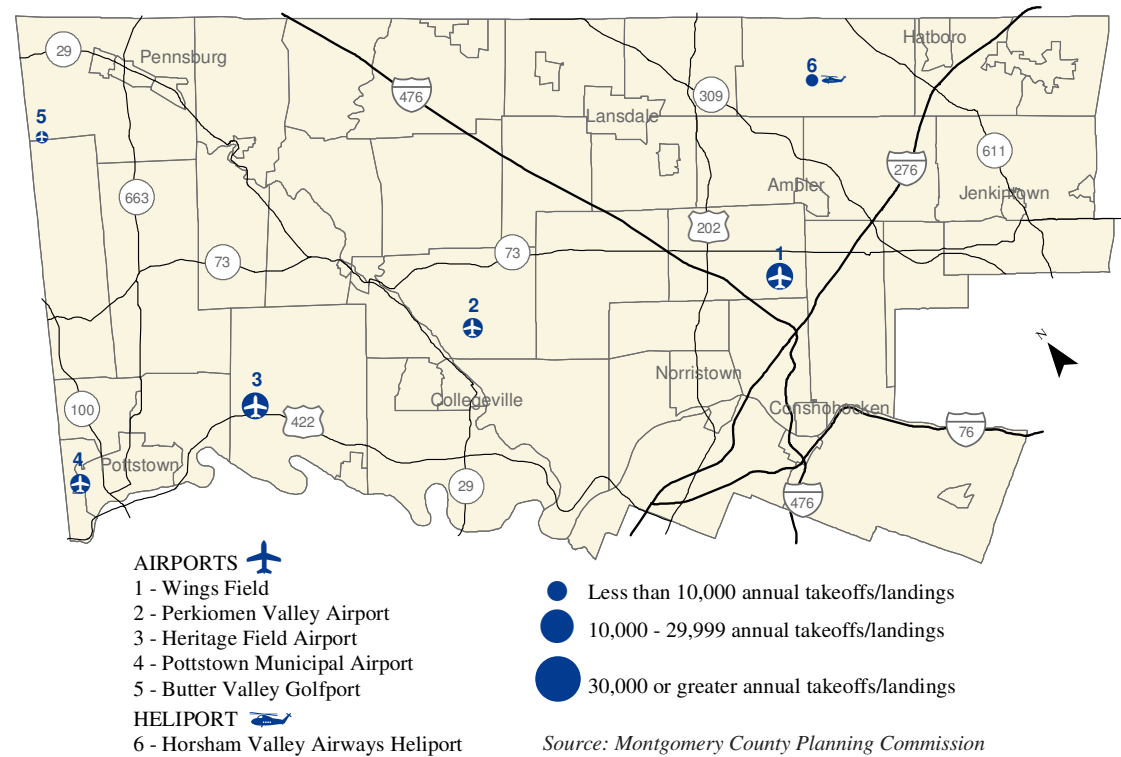
These regulations establish "surfaces," which are defined as airspace around airports that are protected from hazardous unmarked obstructions. Obstructions are any tall man-made or natural objects that have the potential to interfere with aircraft operations by penetrating the lower level of established surfaces.

In addition, the Federal Aviation Administration has established safety zones. These zones are land areas surrounding airports where land uses that could affect safe airport operations should be controlled. The exact measurements of surfaces and safety zones vary by the length and type of runway, instrument landing system, and the aircraft size.

### Airport Hazard Zoning

In 1984 the Pennsylvania legislature passed Act 164, the Airport Zoning Act. The act requires all municipalities to adopt airport zoning regulations to control tall obstructions within airport hazard areas. Act 164 also recommends controlling incompatible land uses within airport hazard areas. The airport hazard areas are based on FAR Part 77 regulations.

**FIGURE 71: Airports and Heliports**



Wings Field in Whitpain Township



Heritage Field in Limerick Township



Pottstown Municipal in Pottstown Borough

**FIGURE 72: Airport Operations and Economic Impact**

AIRPORT NAME	AIRPORT TYPE	MUNICIPALITY	TOTAL 2011 TAKEOFFS/LANDINGS	TOTAL JOBS	TOTAL PAYROLL	TOTAL OUTPUT
Butter Valley Golfport	General Aviation	Upper Merion Township	3,000	2	\$70,300	\$268,200
Heritage Field	Reliever	Limerick Township	37,217	106	\$4.9 million	\$18.1 million
Horsham Valley Heliport	Heliport	Horsham Township	600	16	\$625,100	\$3.0 million
Perkiomen Valley	General Aviation	Skippack Township	10,520	19	\$610,400	\$1.9 million
Pottstown Municipal	General Aviation	Pottstown Borough	22,275	16	\$384,100	\$1.8 million
Wings Field	Reliever	Whitpain Township	35,130	105	\$3.7 million	\$17.2 million
Total			108,742	264	\$10.3 million	\$42.3 million

Source: The Economic Impact of Aviation in Pennsylvania, PennDOT Bureau of Aviation, October 2011.

Vehicles

Transit

Pedestrian Mobility

Bicycle Mobility

Aviation

### Freight

#### Freight

The freight or “goods movement” supply chain is a global network of interconnected corridors along which raw materials and finished goods are moved from their points of origin to markets and on to consumers for use or consumption. The supply chain depends upon multiple transportation modes that includes pipelines, ships, planes, trains, and trucks. Three of these modes are the ways freight is moved through Montgomery County.

Trucks are the predominant mode for moving freight or goods in the county. The DVRPC simulation model estimates that trucks drive an average of 1.6 million miles on Montgomery County roadways every day. Single-unit trucks (where the cab and cargo area are part of the same frame) with three or more axles account for more of those miles than smaller trucks; 54% of all truck trips are taken on arterial highways. According to the U.S. Census Bureau’s County Business Patterns, there were 168 for-hire truck transportation establishments in the county in 2010, which employed a total of 3,142 workers and had an annual payroll of \$137,423,000. In addition to the for-hire trucking businesses, separate truck fleets are operated as part of other businesses like quarries or food processing.

On the rail side, there are 136 miles of freight railroad track in the county, more than any other county in the region. This includes rail owned by SEPTA, but shared by freight carriers during overnight hours. The major Class I carrier operating in the county is Norfolk Southern, which owns the double-track line parallel to US 422 called the Harrisburg Line. It is cleared for double stacking (increasing the capacity of a freight rail line by stacking two twenty-foot equivalent unit (TEUs) freight containers one on top of the other) and is also used by shippers CSX and Canadian Pacific. Local “short line” railroad service is provided along several other tracks by East Penn, Pennsylvania Northeastern, and Upper Merion and Plymouth railroads.

Although they are the least visible mode of transportation, pipelines do have a presence in Montgomery County.

#### What's New

- Freight rail traffic is likely to increase significantly in the near future, as shipments of crude oil from North Dakota move through the county to refineries along the Delaware River in Delaware County. New rock fracturing technology made available in 2008 has created a boom in domestic crude oil production from the Bakken formation in western North Dakota. Multiple Philadelphia-area fuel producers, like the Trainer refinery in Delaware County, plan to ship this oil in via rail, on Norfolk Southern’s Harrisburg Line, which runs parallel to US 422.
- Truck traffic continues to increase on county roadways, driven by increasing demand for goods and manufactured products.

There are 188 miles of pipeline in Montgomery County that transport gasoline, oil, and natural gas. Pipelines generally fall into one of three categories when designating their use: gathering, transportation, and distribution. Gathering and distribution pipelines both use an interconnected series of short, narrow pipelines. Gathering pipelines move product from nearby tanks or wells to a processing facility, while distribution pipelines move products to homes, businesses, tanks, and storage facilities. Transportation pipelines are long, wide pipes that are used to move products between cities and across countries or continents.

#### Freight Activity Nodes

The map illustrates areas of the county where the highest concentrations of freight activity are located. These were determined by identifying concentrations of freight-related land uses like manufacturing and their proximity to expressway on-ramps and/or freight rail lines. Once identified, Census data at the block group level was used to determine the number of freight-related jobs in those clusters. Any cluster with fewer than 1,000 freight-related jobs was eliminated. Areas with 1,000 to 2,500 freight-related jobs were identified as a small node; areas

#### PLANNING ISSUE

*Good freight movement is directly tied to job creation and retention, but traffic congestion can impede truck movement and slow the flow of goods into and throughout the region. Accommodating freight operations is vital to ensuring the impact to jobs and job growth.*

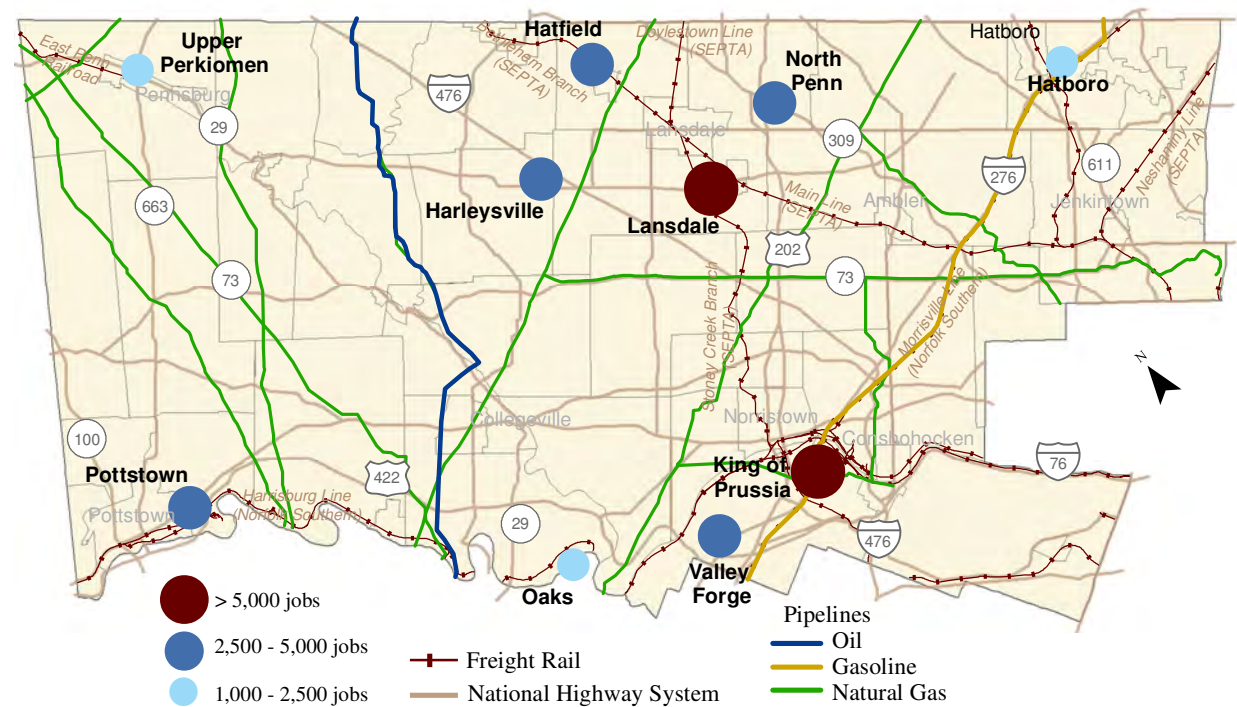
**FIGURE 73: Freight Activity Nodes**

with between 2,500 and 5,000 freight-related jobs were identified as a medium-sized node; areas with more than 5,000 freight-related jobs were considered large.

**National Highway System**

The National Highway System (NHS) is the designation for a vast national network of strategic highways that includes the Interstate Highway System, as well as other roads that serve strategic transportation facilities like major airports, train stations, and rail or truck freight terminals. There are more than 220,000 miles of roads designated as National Highway System roads. This constitutes roughly 6% of the nation's roads; however those roads carry 40% of the nation's auto traffic, and 75% of all heavy truck traffic.

Roughly 90% of all Americans live within 5 miles of an NHS road. There are 436 miles of NHS roads in Montgomery County, which include interstate highways such as the PA Turnpike, the Blue Route (I-476), and the Schuylkill Expressway (I-76), as well as all principal arterials like Skippack Pike (PA 73), Dekalb Pike (US 202), and Lancaster Avenue (US 30).



Source: Montgomery County Planning Commission



Norfolk Southern freight train crossing Hanover Street in Pottstown Borough.



Norfolk Southern diesel engine pulls a freight train along the Harrisburg line.





# THE HOMES OF MONTGOMERY COUNTY



**Existing Housing Totals**

Housing Characteristics

Housing Costs and Affordability

Senior Housing

Group Homes and Special Needs Housing

Jobs-Housing Balance

Future Housing Demand

**Existing Housing Totals**

*Housing Units in Montgomery County*

Over the past 60 years, Montgomery County has consistently added a large number of homes at a wide range of housing densities, but the total number of units added each decade has slowly decreased. This is not surprising as the county becomes more built out and the effects of growth pressure are different now than they were in the post-World War II expansion years. Infill and redevelopment in urbanized areas are just as likely to provide new residential units as undeveloped land in more rural parts of the county.

Most recently, housing construction in Montgomery County, and in many areas of the United States, has been stifled by a housing bubble that burst in the second half of the last decade, which was followed by a national recession. During this time, the county has experienced historically low development activity, with residential construction dropping to less than half of what was being built only ten years ago.

The economy and construction levels will eventually recover to some degree as has been the nature of economic cycles in the past. Indicators, such as housing starts and sales data both nationally and locally, were starting to show signs of improvement in 2012 and 2013. Shrinking household sizes and a surplus of jobs in Montgomery County over resident workers will continue to put pressure on housing growth in the county.

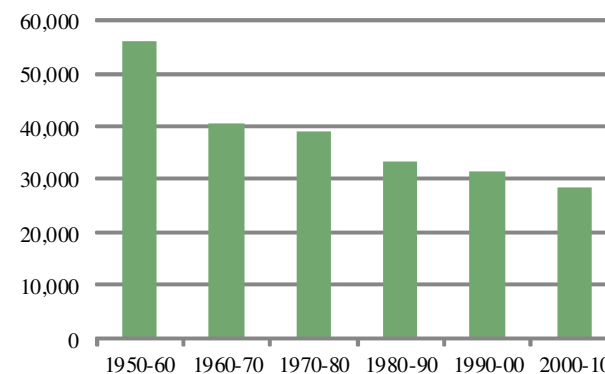


*Infill residential development, such as the Townhomes at Cannon Square in Lansdale, can accommodate growth so that fewer acres of undeveloped land are consumed.*

**What's New**

- There were 325,735 housing units in Montgomery County in 2010, an increase of 28,301 or 9.5% from 2000. While the county's increases have been shortening each decade, the Delaware Valley region saw an increase in the number of units added over the last decade, largely due to a resurgence in urban housing in the city of Philadelphia. Housing in central cities has been rebounding across the country as more younger people and immigrants are drawn to urban living choices.
- A reversal in the trend of detached housing dominance occurred over the last ten years. Single-family detached homes only accounted for 37% of all housing units added between 2000 and 2010. Several factors accounted for the shift in residential construction from detached to multifamily or attached housing including an aging population, the economic slowdown, changes in lifestyles and the depletion of available land.
- Countywide housing density increased from 2.6 units per residentially developed acre in 2000 to 2.7 units per acre in 2010. It is still well below the housing density of 1970, which was 3.1 units per acre.

**FIGURE 74:** *Housing Units Added by Decade*



Source: U.S. Census Bureau

### Housing Types

Like most suburban counties, the dominant housing type in Montgomery County is the single-family detached house. By 2010, over 54% of all homes were stand-alone units with only one family or household. That still leaves a lot of room for other housing types, such as attached units like townhouses, rowhomes, and twins, or multifamily developments like apartment or condominium buildings. Historically, these higher-density housing types were most often found in and around the county's boroughs. By the 1970s, large-scale townhome developments and multifamily apartment buildings were expanding into more areas, sometimes around other dense development, such as a shopping mall, but also along major arterial roads in lesser developed but growing areas of the county.

Today, multifamily and attached housing construction is still relatively active despite the overall dip in production. Many of these projects are being built as redevelopment or infill in areas where the existing infrastructure can support new growth. Sites along the Schuylkill River waterfront and near transit facilities are increasingly popular.

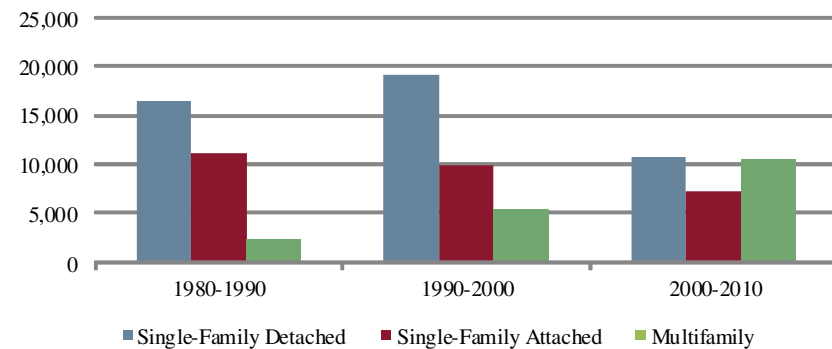
### Housing Density

The number of homes per acre of residentially developed land is the residential density. This reveals how much land is consumed by each house and by residential development as a whole for a neighborhood or municipality. A single-family detached home built on a one acre lot constitutes a density of one dwelling unit per acre of land, while at the same time, a 10-unit apartment building built on a one acre lot constitutes a density of 10 dwelling units per acre of land. In general, boroughs and older, developed townships closer to Philadelphia have higher densities than townships located in the central and western parts of the county.

Much of the residential development from the last forty years has been built at a lower density than the development that preceded it. However, the shift to denser housing types being built over the last decade has started to reverse that trend. Residential development consisted of 2.7 units per residentially developed acre in 2010, up from 2.6 units per acre in 2000. Residential land uses as a whole are still at a much lower density compared to 1970 when the countywide figure was 3.1 units per acre.

Density often first becomes an issue, and one that can become quite controversial, at the local or neighborhood level. Residents quickly notice increasing densities in their neighborhood as infill development occurs, farmland develops, or larger lots subdivide. However, denser development has many benefits when designed properly, including lower housing costs, cheaper and more efficient infrastructure, better walkability, more opportunities for public transit, shorter driving distances, and less open space consumption.

**FIGURE 75:** Housing Types Added by Decade



Source: U.S. Census Bureau



Densities for residential development vary across the county. While detached homes have generally gotten larger over time, they do not have to consume as much land as the development in Limerick pictured above. The neotraditional development of Woodmont in Lower Moreland (pictured below) consists of single-family detached homes with small lots, plentiful open space and walking trails.



Existing Housing Totals

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Jobs-Housing Balance

Future Housing Demand

**PLANNING ISSUE**

*There are a variety of housing factors that can make neighborhoods less desirable or lead to decline. Some communities may struggle with lower than average rates of homeownership if the housing stock is aging, lacks modern amenities, or is undersized.*

**Housing Characteristics**

*Age of Housing*

Montgomery County’s status as a high growth suburban employment center with a rich heritage is reflected in its array of housing styles and ages. Within the county, one can find plenty of newer single-family detached subdivisions, urban enclaves with rowhomes and twins from over fifty years ago, recent residential conversions of industrial land or structures, and large estate homes dating back to the 18th century.

A little more than half of the county’s housing stock was built in the last fifty years with the median year built being 1965. There is a greater percentage of modern housing in the county compared to Pennsylvania where the median year built is 1961. Compared to the nation’s median year built of 1976, the county’s housing is considerably older.

Older homes certainly add character and historical distinction to many neighborhoods in the county. However, they can also pose a challenge when some fall into disrepair, or the challenges of updating and renovation create a competitive disadvantage in the eyes of homebuyers.

*Housing Tenure*

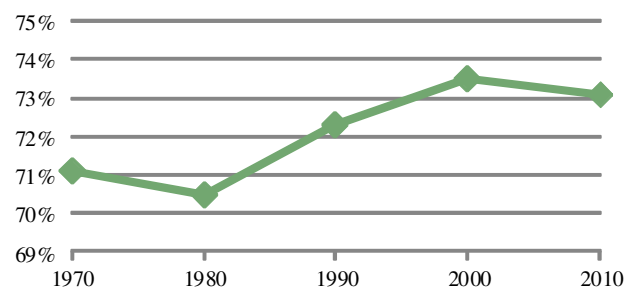
Over the past decade, the rate of home ownership has actually declined in the country, state, and every county in the DVRPC region. This decline is fairly small and not surprising since the banking industry and government regulators have tightened loan standards, foreclosures have increased, and falling housing prices have convinced some home sellers to rent instead of sell.

One additional factor for a declining ownership rate is the number of multifamily units that were added in the decade. There were over 10,000 multifamily units added and many of those units were renter-occupied apartments. Well-maintained apartments are an important asset for the county, providing flexibility for the workforce and attractive housing options for those not ready to buy. The county’s boroughs, with more apartments and higher density housing, have the highest rates of renter-occupied housing, while the county’s rural and more suburban townships tend to have the highest owner-occupied housing rates.

**What’s New**

- In Montgomery County, the home ownership rate was 73.1% in 2010, well above the national rate of 65.1%. The bursting of the housing bubble at the end of the decade sparked a surge in rental housing.
- While lot sizes have been shrinking and living area expanding for single family detached homes over several decades, both measures declined further since the Great Recession started. From 2009 through 2013, the median lot size for detached homes was 16,030 square feet, and the median living area of the same homes was 2,918 square feet, compared to a median lot size of 18,598 square feet and living area of 3,094 square feet from 2000 to 2008.

**FIGURE 76:** Owner Occupied Housing Units as a Percent of Total Occupied Units



Source: U.S. Census Bureau

### Substandard Units

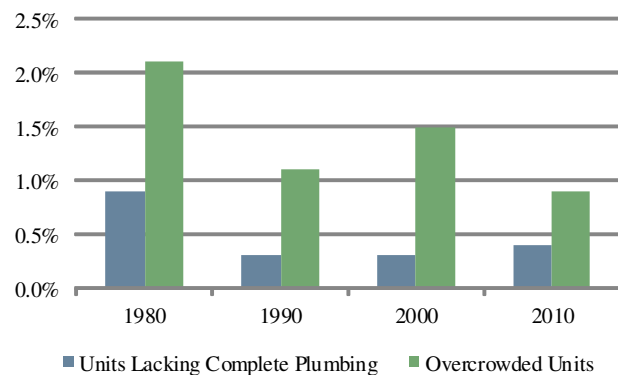
Substandard units are those that either lack plumbing or are overcrowded. They are an important indicator of housing condition, especially when concentrated at the community or municipal level where they can potentially weaken a neighborhood.

There are relatively few substandard units countywide, approximately 1.2% of the total occupied units in 2010. This was a decrease from 2000 when 1.8% of homes were substandard. The reduction comes from a drop in overcrowded units, which also dropped at national and statewide levels.

### Bathrooms

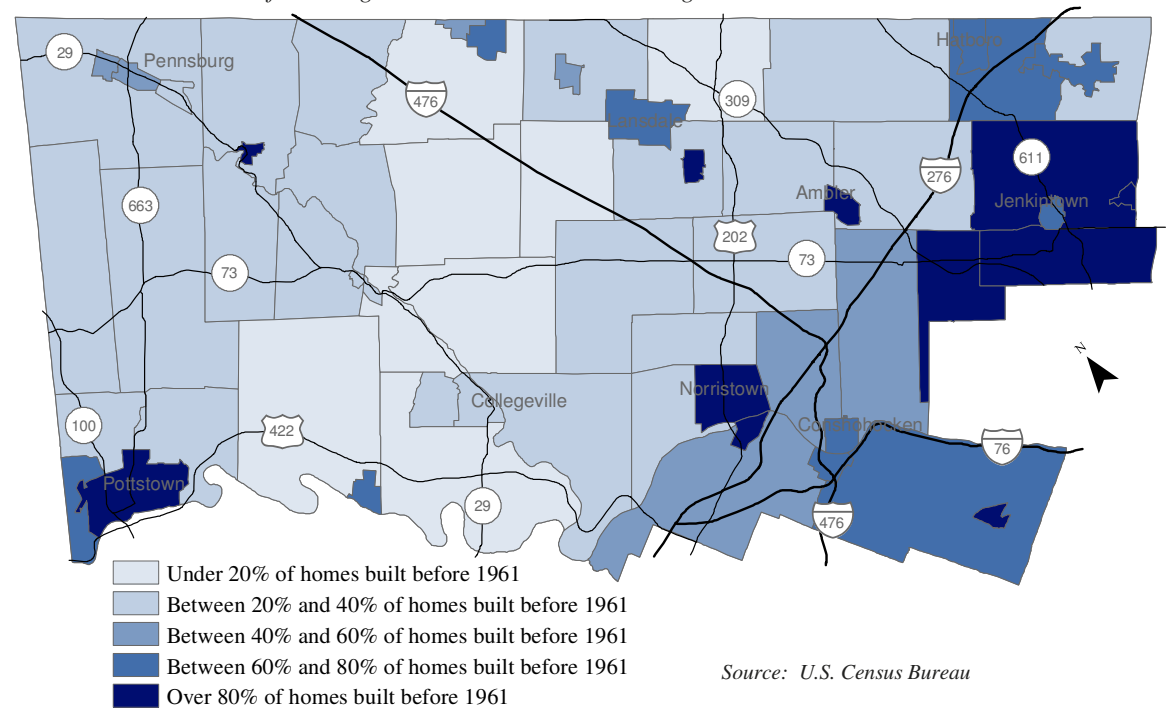
A home with only one bathroom can be significantly less marketable than those with two or more. Even those who prefer smaller homes usually want more bathrooms. Between 2000 and 2012, the average number of bathrooms in new single-family homes increased from 2.8 to 2.9, and from 2.4 to 2.6 in single-family attached homes. Neighborhoods with a higher percentage of homes with less than two bathrooms may be less marketable than other areas.

**FIGURE 77: Substandard Units as a Percent of Occupied Units: 1980-2010**



Source: U.S. Census Bureau

**FIGURE 78: Percent of Housing Built More Than 50 Years Ago**



Source: U.S. Census Bureau

### Home and Lot Size

It is a general trend in the United States that single-family detached homes have gotten larger over the last century. This is especially true for suburban counties, such as Montgomery County, where the median detached home size has increased by fifty percent since the 1960s. Interestingly, lot sizes have actually been shrinking over the last couple of decades while home sizes continue to grow larger. Homebuyers still seek more living area for their dollar, but they are willing to do so on a smaller area of land. It also helps that some newer developments are designed more efficiently and provide common open space, paths, and other amenities as a substitute for bigger private yards around each home.

**FIGURE 79: Median Lot Size and House Size for Single-Family Detached Homes**

	1960s	1970s	1980s	1990s	2000s
Median Lot Size	20,000 sf	21,573 sf	21,828 sf	18,896 sf	18,377 sf
Median Home Size	2,043 sf	2,160 sf	2,328 sf	2,634 sf	3,078 sf

Source: Montgomery County Planning Commission of Montgomery County Board of Assessment data

### Existing Housing Totals

### Housing Characteristics

### Housing Costs and Affordability

#### Senior Housing

#### Group Homes and Special Needs Housing

#### Jobs-Housing Balance

#### Future Housing Demand

### PLANNING ISSUE

*Housing is a basic need that is not always easily afforded. As housing prices have escalated beyond inflation rates—even with the nation’s economic downturn in the recent past—providing “homes within reach” remains a challenge.*

### Housing Costs and Affordability

Ensuring that homes are affordable—which generally is defined as annual costs not exceeding 30% of a household’s income—is not a legal requirement in Pennsylvania. Yet this issue is crucial to residents who seek homes that meet their needs without breaking the bank.

In 2013, the median price for a home in Montgomery County was \$267,000. The median price for a new unit reached a high of \$405,000 in 2006—and settled to just over \$375,000 in 2013. Many households would be hard pressed to afford these prices. There are affordable housing options in the county, including homes for rent or sale, homes built with subsidies from various government programs, and homes built by private developers. Many units have been built with assistance from the county’s Affordable Housing Trust Fund, which is funded through a variety of sources, including HUD HOME grants and county recording fees for deeds and mortgages.

The Montgomery County Housing Authority (MCHA) oversees a network of public housing across the county, including 615 public housing units in four high-rise towers (designed for elderly and disabled residents) and four general occupancy communities. Almost all of the public housing units are occupied, with an annual turnover rate of 44 units (7.2%) and a lengthy waitlist. There are about 2,500 Housing Choice (formerly Section 8) vouchers available county-wide. Additionally, there are also a few thousand privately owned units that are subsidized for low income individuals.

High housing prices are not solely caused by market forces. Regulatory obstacles, such as a shortage of land zoned for higher density housing or large minimum lot sizes, affect the supply of affordably-priced housing.

There are financial obstacles as well. A buyer may not have the savings for a down payment and closing costs; a renter may lack the money for a security deposit. An individual or family may be in debt, which makes it difficult to qualify or be able to afford a mortgage. A different type of financial obstacle affects developers. Many developers prefer to build expensive homes rather than more affordable homes because profits are higher.

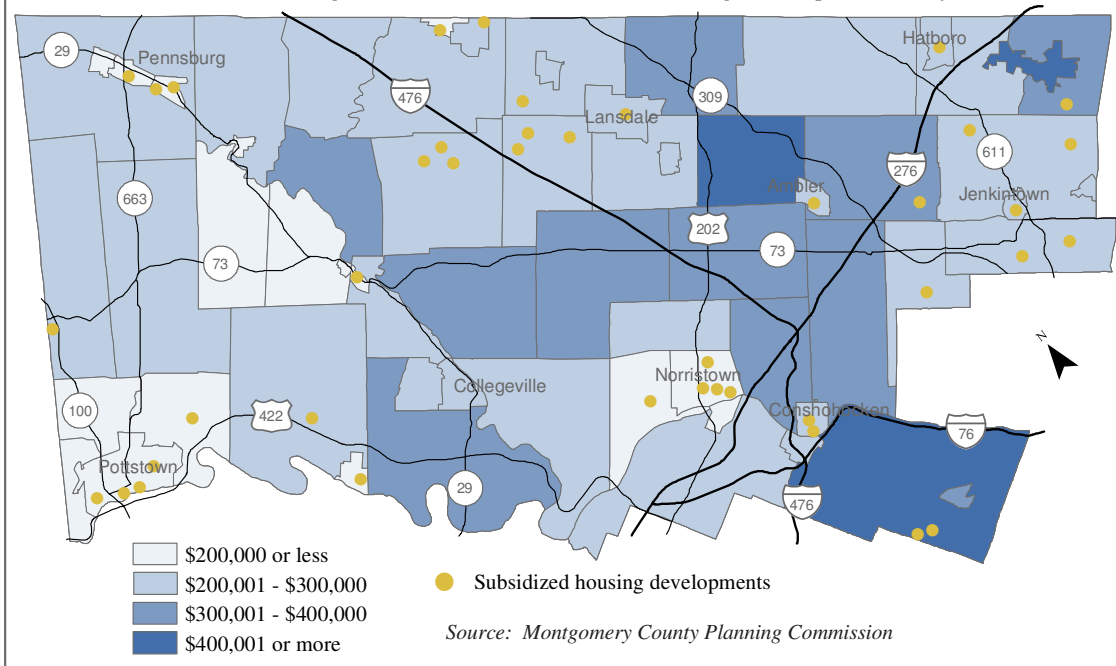
### What’s New

- The Commonwealth of Pennsylvania created a statewide housing trust fund, signed into law in November 2010. This legislation created a fund that enables the Pennsylvania Housing Finance Agency (PHFA) to build or rehabilitate housing for low- to moderate-income people, the elderly, and those with disabilities. This has no annual appropriation, relying instead on distributions from the National Housing Trust Fund and private sector monies.
- Many new affordable housing units have been built over the last 10 years. For example, Ardmore Crossing in Lower Merion mixes market-rate units, deed-restricted affordable units, and an affordable senior housing development. Federation Housing, Inc. recently completed and opened its first project outside of Philadelphia, a new 3-story apartment complex for low and moderate income seniors in Cheltenham’s Elkins Park neighborhood. On the horizon are a 51-unit multifamily rental development in Souderton for low and moderate income families and a new 60-unit senior development in Lansdale, which will be adjacent to the North Penn YMCA and will have a senior center on-site.
- On a municipal level, some municipalities have been taking steps to encourage affordable housing construction. Lower Merion Township adopted its Mixed-Use Special Transit (MUST) overlay zoning district ordinance in 2006. This ordinance permits mixed-use buildings within 1,500 feet of the Ardmore regional rail train station as well as a density bonus for moderate income housing construction.



*Many market-rate developments have affordable housing prices that are aimed at a broad section of homebuyers, like these new townhouses in Royersford.*

**FIGURE 80: Median Housing Sale Prices and Subsidized Housing Developments as of 2013**



A household with the county's median household income could conservatively afford to purchase:



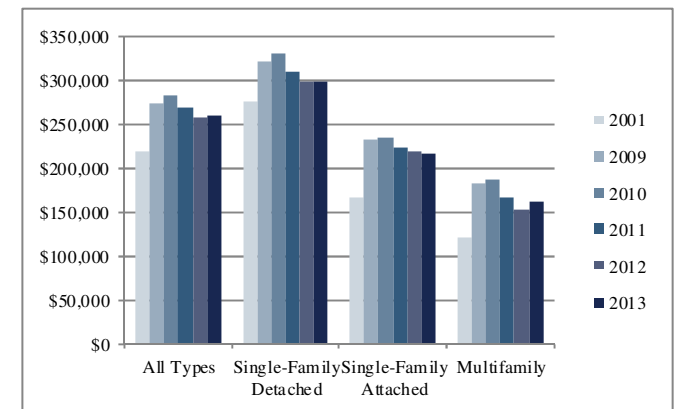
This model assumes other costs such as outstanding auto or student loans, credit card and bill payments, as well as annual property taxes and mortgage insurance costs. Found at: <http://www.freddiemac.com/homeownership/calculators/>

**FIGURE 81: Selected Monthly Owner Costs as a Percentage of Household Income in Montgomery County**

PERCENT OF HOUSEHOLD INCOME TOWARD MONTHLY OWNER COSTS	HOUSEHOLDS AS OF 2009	HOUSEHOLDS AS OF 1999
Less than 20%	35.3%	32.4%
20.0—24.9%	16.7%	18.4%
25.0—29.9%	13.8%	15.8%
30.0—34.9%	9.5%	6.5%
35.0% or more	24.6%	16.3%
Not computed	0.2%	0.4%

Source: U.S. Census Bureau

**FIGURE 82: Countywide Sale Prices (in 2013 Dollars)**



**FIGURE 83: Government Subsidized Housing Income Limits for Montgomery County (as of 2014)**

	2 PERSON HOUSEHOLD	4 PERSON HOUSEHOLD
30% of Median Family Income*	\$18,950	\$23,850
Very Low Income (Less than 50% of Median Family Income)	\$31,550	\$39,400
Low Income (51-80% of Median Family Income)	\$50,450	\$63,050

\*The FY 2014 Median Family Income for the Philadelphia MSA (which includes Montgomery County) is \$78,800. Source: U.S. Department of Housing and Urban Development

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Future Housing Demand

#### PLANNING ISSUE

*More than 70,000 seniors ages 65 and over will join the county's ranks by the year 2040—it will be crucial to continue providing senior housing options as our baby boomers age and have the desire to both age in place and have adaptable living arrangements.*

### Senior Housing

Housing that is appropriate for an aging population is an issue that has county-wide importance. For starters, the state's senior-friendly tax laws and the county's central location in the Philadelphia region have helped make the county a very attractive place in which seniors choose to live. Having housing options that fit the shifting needs of the county's senior population allows them to age in place and ultimately, to stay near the things that matter most, such as their families, health care resources, and support networks. As our baby boomers continue to age, we should assume that the county's housing needs will continue to change.

Senior housing is primarily concentrated around private housing, age restricted communities, assisted living facilities and nursing homes. And as technology and in-home care improves and housing options grow, it appears that more and more people choose to age in place, either in their own homes or with a family member who provides assistance. "Mother-in-law suites" may provide an option for seniors that still want independence and have the desire to stay close to family.

Age restricted communities are popular with the county's senior population—the percentage of seniors age 65 and over living in age restricted communities doubled between 2000 and 2010. Nearly half of the county's age restricted developments have been built since 2000, many in the North Penn and Indian Valley regions. And some communities may shift to be age targeted—with senior-friendly elements like ground floor master bedrooms, convenient locations, smaller unit sizes, or recreational amenities but without any age restrictions on residents.

Continuing care retirement communities (known as CCRCs or lifecare communities) fill a unique housing need that includes a combination of independent living units, assisted living facilities, and nursing care within a development. Additionally, there are 26 housing developments with just over 2,000 dwelling units that serve the needs of low and moderate income seniors, such as Ardmore House in Lower Merion and the Sidney Pollack House in Pottstown.

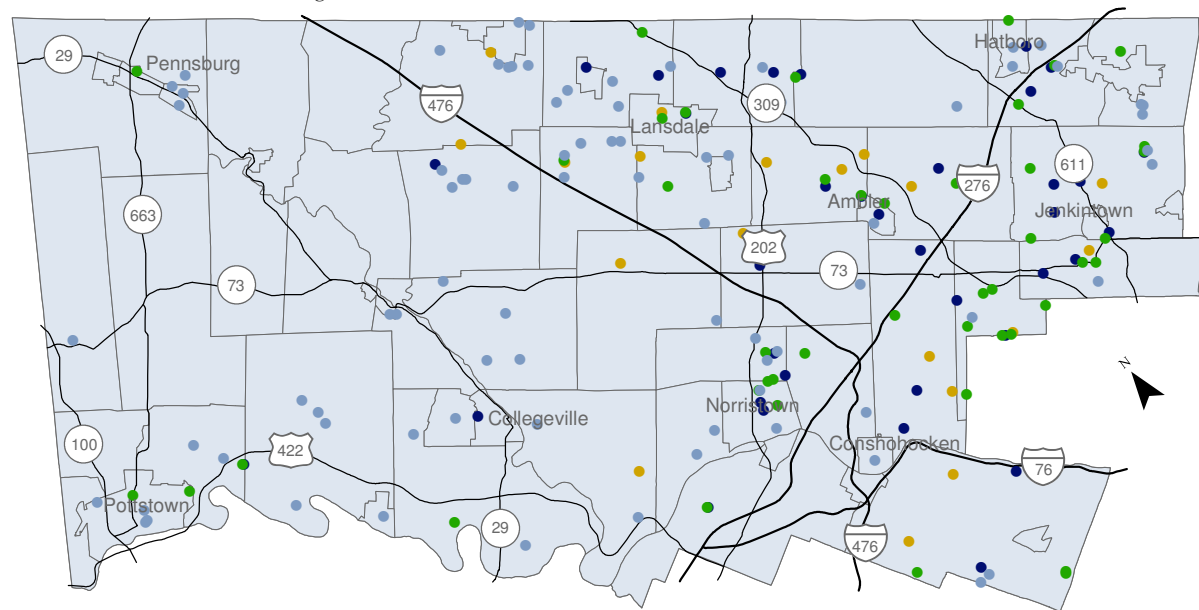
### What's New

Baby boomers have started to turn 65—which is playing a big part in the changing landscape of aging and new home construction in Montgomery County.

- By 2040, 33% of county residents will be 55 and older. 21% of county residents will be 65 and older.
- More than 50—or half—of the county's age restricted developments have been built since 2000.
- The number of people ages 65 and over turning to nursing homes and assisted living facilities has gone down over the last ten years as seniors are living longer, healthier lives and can more easily arrange for in-home care for their daily needs.
- Changes in technology as well as the building community have allowed many new innovations to enter the marketplace—ranging from pre-fabricated in-law suites that can be added onto one's home to innovative site planning ideas to foster community and cooperation among neighbors.
- Although today's seniors are wealthier than previous generations, median household income drops significantly as people age—this is especially evident in the 65+ age bracket when it can be assumed that many householders in this category no longer receive an annual salary. Affordable housing options for seniors will continue to be important.



**FIGURE 84: Senior Housing**



- **Personal Care Homes**  
- meet the needs of people who need some help with daily activities but not around-the-clock nursing care
- **Nursing Homes**  
- provide continuous nursing care, primarily to elderly residents
- **Independent Living Facilities**  
- communities where units are restricted to households where at least one member is at least age 55; residents live independently without nursing care
- **CCRCs**  
- communities with a mix of independent units, personal care units, and nursing facilities that offer a tiered approach to providing for the needs of aging residents



Many new senior housing developments have been built in the last decade to accommodate the county's growing 55+ population.



The county's seniors are living longer and healthier lives—and a variety of housing choices have sprung up to accommodate people in different phases of their lives.

Sources: Montgomery County Planning Commission, Montgomery County Office of Housing and Community Development

**FIGURE 85: Senior Housing Statistics: 2010**

HOUSING CHOICE FOR PEOPLE 65 AND OVER	ESTIMATED PEOPLE (2000)	ESTIMATED PEOPLE (2010)	TOTAL CHANGE (2000-2010)	PERCENT CHANGE (2000-2010)	ESTIMATED PEOPLE (2040)	TOTAL CHANGE (2010-2040)	NUMBER OF FACILITIES, UNITS AND/OR BEDS
Private home or apartment	91,910	93,371	1,461	1.59%	148,006	54,635	—
Independent age restricted units	9,980	19,099	9,119	91.37%	30,275	11,176	16,186 units
Assisted living	2,800	2,139	-661	-23.61%	3,391	1,252	56 facilities and 4,070 beds
Nursing home	7,107	6,118	-989	-13.92%	9,698	3,580	61 facilities and 7,174 beds
<b>Total</b>	<b>111,797</b>	<b>120,727</b>	<b>8,930</b>	—	<b>191,369</b>	<b>70,642</b>	—

\* The estimated number of people is based on a total generated by the Delaware Valley Regional Planning Commission's population estimates and the assumption that seniors will be making housing choices in 2040 in the same proportions as they were in 2010. Thus, the percent of total calculations for 2040 would be the same as they are for 2010. It is likely, however, that housing options will shift over the next 30 years as new ideas, trends, and technologies take hold. Nursing home unit totals are from the Pennsylvania Department of Health, Assisted living unit totals are from the Pennsylvania Department of Aging.

Existing Housing Totals

Housing Characteristics

Housing Costs and Affordability

Senior Housing

### Group Homes and Special Needs Housing

Jobs-Housing Balance

Future Housing Demand

#### PLANNING ISSUE

*Providing housing for the county's most vulnerable puts a roof over people's heads, as well as provides stability and raises morale. But finding suitable locations for this housing is not always easy when faced with decreasing funding sources and community opposition.*

### Group Homes and Special Needs Housing

Some residents of Montgomery County struggle to live independently—and there are programs in place to provide assistance in a variety of situations.

Homelessness should not be thought of as an urban problem, as plenty of people in this county lack a permanent home and may find themselves sharing space with family or friends to avoid losing shelter completely.

There are a variety of shelter and housing facilities available to the county's homeless population. There are 195 year-round emergency shelter beds in 10 facilities in the county, the majority of which are for the use of households with children in either Norristown or Pottstown. There are 11 transitional housing developments with 232 beds for households with children and an additional 34 beds for single adults. Some of these facilities are for victims of domestic violence and their children. There are ten developments with 155 permanent supportive housing beds in the county. Fifty-eight of those beds are targeted for the chronically homeless. The county's Office of Behavioral Health/Development Disabilities is a major provider of permanent supportive housing, owning and operating 40 beds for households without children.

People with disabilities, either mental or physical, may also need specialized housing. There are residential options for residents with physical or emotional difficulties, with a significant amount of services concentrated in Norristown. In 2011, the U.S. Census reported that the county had just over 70,000 civilian disabled non-institutionalized residents, representing about 9% of the civilian non-institutionalized population. The disabled institutionalized population, which is in addition to the above total, includes residents of nursing homes, psychiatric hospitals, and schools for the mentally retarded. Forty-two percent of the disabled population that is age 18 and over is classified as having an "independent living difficulty" - which is indicative of the need for housing solutions for the disabled.

### What's New

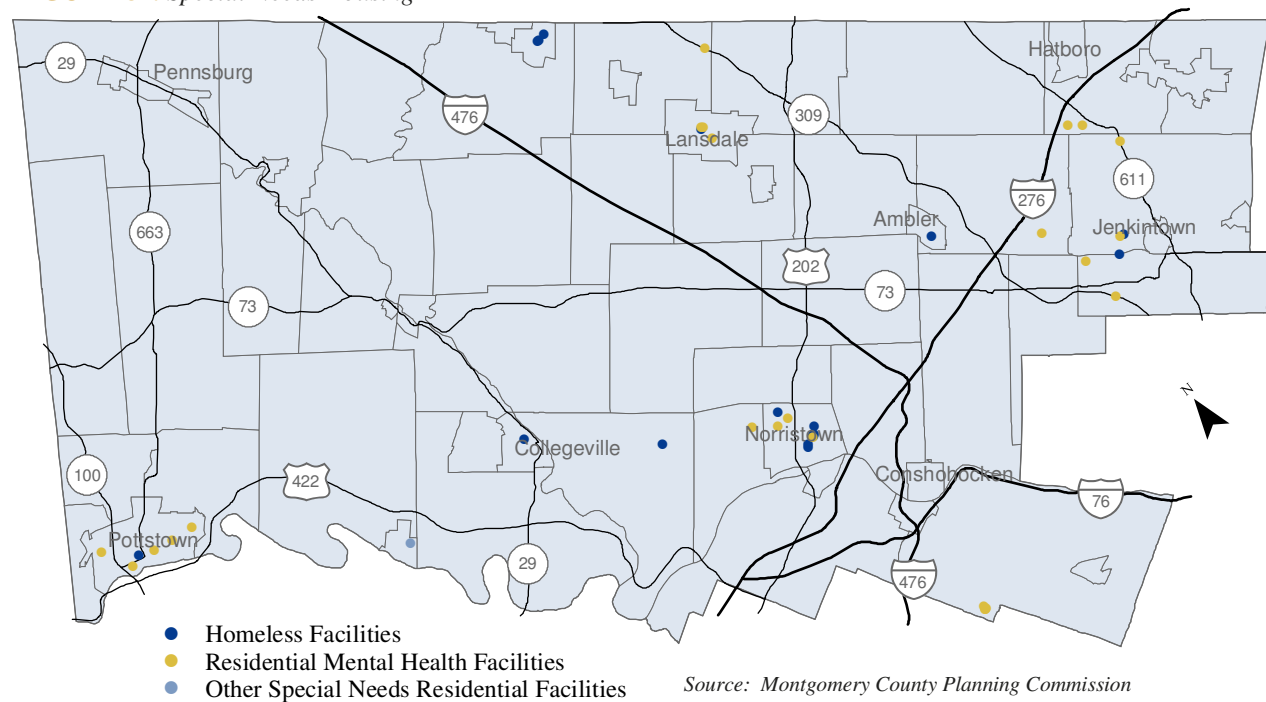
- Montgomery County's new *Roadmap for Housing Sustainability* outlines a new way of thinking when it comes to providing housing for the county's most vulnerable residents. This new strategy seeks to re-house families and individuals at a minimal cost, by providing assistance locating new housing, short-term rental assistance, and follow-up case management. Residents can remain in a more stable situation when housing is provided "first"—helping to prevent homelessness when possible. Along with the county's desire to rethink the way it provides social services, *Your Way Home Montgomery County* was launched—a new partnership among the county, local philanthropic organizations, and non-profits—to end homelessness and housing instability in the county.
- The Point in Time Survey (PIT), conducted annually by the MCHC Homeless Action Team, reported (in January 2013) 464 homeless people, many of whom were adults with children living in shelters and transitional housing. This is an increase over the numbers seen in 2012, partially due to two programs being recategorized as temporary housing. The chronic homeless count was 18 and no chronically homeless families—decreases in both due to the rapid rehousing strategy the county has adopted.
- Montgomery County's Homeless Prevention Center started in 2010 and provides assistance to residents who are homeless or at risk for homelessness. This centralized phone screening service provides assessment specialists who conduct an initial screening and then refer consumers to housing or homeless provider agencies or resources. Information is also available regarding shelters for individuals and families; food pantries; substance abuse and behavioral health resources; developmental disabilities resources; rental and utility assistance.

**FIGURE 86: Disabled Population**

	POPULATION UNDER 5 YEARS	PERCENT OF POPULATION	POPULATION 5-17 YEARS	PERCENT OF POPULATION	POPULATION 18-64 YEARS	PERCENT OF POPULATION	POPULATION 65 YEARS AND OVER	PERCENT OF POPULATION	TOTAL	TOTAL PERCENT
With a hearing difficulty	295	0.6%	917	0.7%	6,145	1.2%	14,153	12.1%	21,510	15.2%
With a vision difficulty	84	0.2%	610	0.5%	4,770	1.0%	6,174	5.3%	11,638	8.2%
With a cognitive difficulty	—	—	3,134	2.3%	15,256	3.1%	8,172	7.0%	26,562	18.8%
With an ambulatory difficulty	—	—	361	0.3%	16,382	3.3%	19,999	17.1%	36,742	26.0%
With a self-care difficulty	—	—	1,320	1.0%	6,519	1.3%	7,740	6.6%	15,579	11.0%
With an independent living difficulty	—	—	—	—	13,411	2.7%	15,778	13.5%	29,189	20.7%
<b>Total</b>	<b>295</b>	<b>0.6%</b>	<b>4,837</b>	<b>3.6%</b>	<b>32,287</b>	<b>6.5%</b>	<b>33,123</b>	<b>28.3%</b>	<b>141,220</b>	

Source: U.S. Census Bureau

**FIGURE 87: Special Needs Housing**



Source: Montgomery County Planning Commission



Existing Housing Totals

Housing Characteristics

Housing Costs and Affordability

Senior Housing

Group Homes and Special Needs Housing

### Jobs-Housing Balance

Future Housing Demand

#### PLANNING ISSUE

*Parts of the county have many more jobs than houses, which leads to longer commute times, more congestion, higher costs, and more energy consumption.*

### Jobs-Housing Balance

Montgomery County is the third largest county in Pennsylvania and has been among the fastest growing areas of the Commonwealth. In recent decades, the county has grown not only in terms of population, but also in jobs. In fact, there are more jobs than resident workers, making the county a “net importer” of workers, which is rare among counties that don’t feature a dominant central city. This dynamic increases the need for housing to accommodate workers looking to live closer to their jobs.

The jobs-housing balance is another factor besides population projections that can be used to guide potential residential development. The jobs-housing balance compares the number of jobs in a community with the number of housing units to determine if an area has too few homes or if an area has too few jobs. Having too few of either jobs or homes can lead to transportation, employment, and tax revenue problems.

The Philadelphia region has a jobs to housing ratio of 1.3, based on the number of jobs and homes in the region in 2010. Montgomery County has a jobs-housing ratio of 1.8. These ratios can be used as a guide to local municipalities trying to create a balanced ratio.



*Housing and employment centers can mix to enhance access for workers and employers while cutting down on transportation costs.*

### What’s New

- Conshohocken has improved its mix of residential and office land uses. After twenty-five years of converting underutilized or abandoned industrial land along the Schuylkill River into successful office buildings, the borough added over 1,000 high-density condos and apartments. These residential developments, which include the Londonbury, Riverwalk at Millennium, and Grande at Riverview, provide urban multifamily housing along the waterfront that is attractive to many of the professionals working in the nearby offices.
- Some municipalities are already considering changes to their zoning codes that will better promote more residential uses in and around commercial centers. One example is Lower Merion Township, which increased densities along City Avenue while incentivizing mixed uses.

There are a number of benefits local governments can reap by encouraging a balance between the number of jobs and the number of households within their communities. These include:

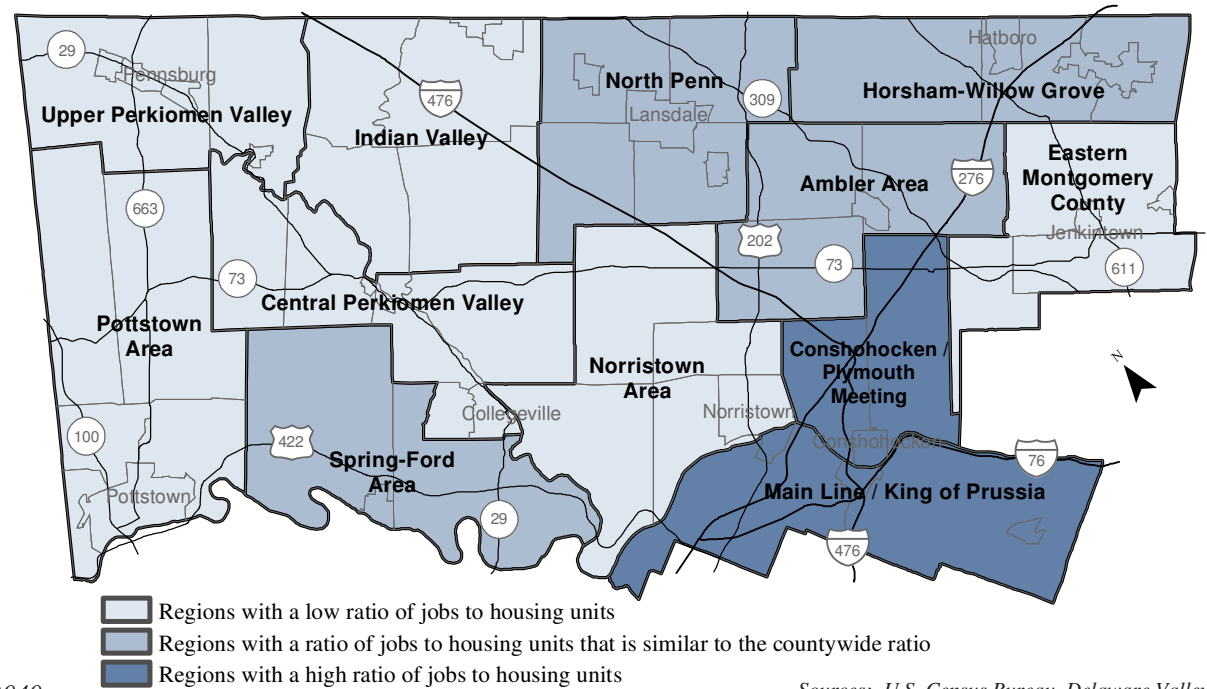
- The costs of traveling long distances for commuters would decrease if more employees lived in areas closer to where they worked. Commuting times could be substantially reduced if there were a better jobs-housing balance in the county. Shorter vehicular miles traveled by commuters would also reduce overall congestion.
- Some employers are having problems filling positions in part because of worsening congestion and inadequate amounts of reasonably priced housing. Therefore, municipalities that strive to create additional housing and transportation opportunities will support their employers and tax base.
- Municipalities with low numbers of jobs typically have tighter budgets and lower property, income, and business tax revenues than those with high numbers of jobs.

### Projected Regional Jobs-Housing Ratios

Jobs-housing ratios for 2040 are based on current population and employment projections. However, municipalities are not predestined to follow these projections and can change their land use regulations to affect future growth. Communities in regions with high ratios can adjust their policies to allow more housing, while communities with low ratios can attempt to encourage more jobs, although this is not always easy to do.

In 2040, certain regions are expected to have high jobs to housing ratios, including the Main Line / King of Prussia and Conshohocken / Plymouth Meeting regions. Residential uses in office parks, mixed use districts, and more multifamily development would provide more housing near the employment centers in these regions. This could shorten commuting times and provide employers with a readily available workforce.

**FIGURE 88: Jobs-Housing Ratios by Regional Planning Area**



**FIGURE 89: Regional Jobs-Housing Ratios: 2010 and 2040**

REGIONAL PLANNING AREA	JOBS-HOUSING RATIO 2010	PROJECTED JOBS-HOUSING RATIO 2040
Upper Perkiomen Valley Region	1.03	0.95
Indian Valley Region	1.21	1.20
Pottstown Region	0.87	0.85
Central Perkiomen Valley Region	0.92	0.87
Spring-Ford Region	1.61	1.59
North Penn Region	1.67	1.70
Norristown Region	1.19	1.21
Main Line / King of Prussia Region	2.80	2.78
Horsham-Willow Grove Region	2.05	2.09
Ambler Region	1.98	2.01
Conshohocken / Plymouth Meeting Region	2.70	2.77
Eastern Montgomery County Region	1.20	1.20
<b>Montgomery County Total</b>	<b>1.66</b>	<b>1.66</b>

Sources: U.S. Census Bureau, Delaware Valley Regional Planning Commission

Sources: U.S. Census Bureau, Delaware Valley Regional Planning Commission



Dense residential development, such as the Riverwalk at Millennium apartments in Conshohocken, can help create a healthy balance between jobs and housing.

Existing Housing Totals

Housing Characteristics

Housing Costs and Affordability

Senior Housing

Group Homes and Special Needs Housing

Jobs-Housing Balance

**Future Housing Demand**

**Future Housing Demand**

By 2040, Montgomery County is expected to have 896,000 people, an increase of 96,000 persons. These people, along with smaller households throughout the county, will generate demand for approximately 39,000 additional homes to accommodate them. The forecasts in this section represent a logical approach to determining overall housing need based on several variables, including population trends, changes in household compositions, current and expected vacancy rates, and housing type preferences. The estimates of housing types were performed using an analysis of housing choice made by different household types for new homes over the last decade. They are based on the assumption that future household types will make similar housing choices as their counterparts today.

While the percentage of family households with children in 2040 is expected to remain stable at about a third of all households, there will be an increase in the percentages of nonfamily households, including those households consisting of a single person living alone. These households overwhelmingly prefer multifamily and attached housing which will drive these denser housing types to a greater share of production than detached homes.

**FIGURE 90:** Household Composition as a Percentage of All Households: 1980-2040

HOUSEHOLD TYPE	1980	2010	2040 PROJECTED
Family Households w/ Children Under 18	37.5 %	32.3 %	32.2 %
Other Family Households	38.8 %	35.6 %	33.8 %
Householder Living Alone	20.4 %	26.3 %	27.3 %
Other Nonfamily Households	3.2 %	5.8 %	6.7 %

Sources: U.S. Census Bureau, Montgomery County Planning Commission

**FIGURE 91:** Additional Units Forecasted for Year 2040

HOUSEHOLD TYPE	TOTAL UNITS ADDED	SFD UNITS ADDED	SFA UNITS ADDED	MF UNITS ADDED
Family Households w/ Children Under 18	12,150	8,800	2,350	1,000
Other Family Households	8,150	3,100	3,250	1,800
Householder Living Alone	13,550	1,300	4,550	7,700
Other Nonfamily Households	5,150	500	1,550	3,100
<b>Total</b>	<b>39,000</b>	<b>13,700</b>	<b>11,700</b>	<b>13,600</b>

Source: Montgomery County Planning Commission

**FORMULA for Calculating Future Housing Units**

- 896,741 - 23,491 = 873,250  
*Total Future Population - Future Group Quarters Population = Total Population in Households.*
- 873,250 ÷ 2.49 = 350,703  
*Total Population in Households ÷ Future Average Household Size = Unadjusted Total Future Housing Units.*
- 350,703 × (1 + 0.04 (4%)) = 364,731  
*Unadjusted Total Future Housing Units × (1 + Future Vacancy Rate) = Total Future Housing Units*
- 364,731 - 325,735 = 38,996  
*Total Future Housing Units - Existing Housing Units = New Future Housing Units needed by 2040.*

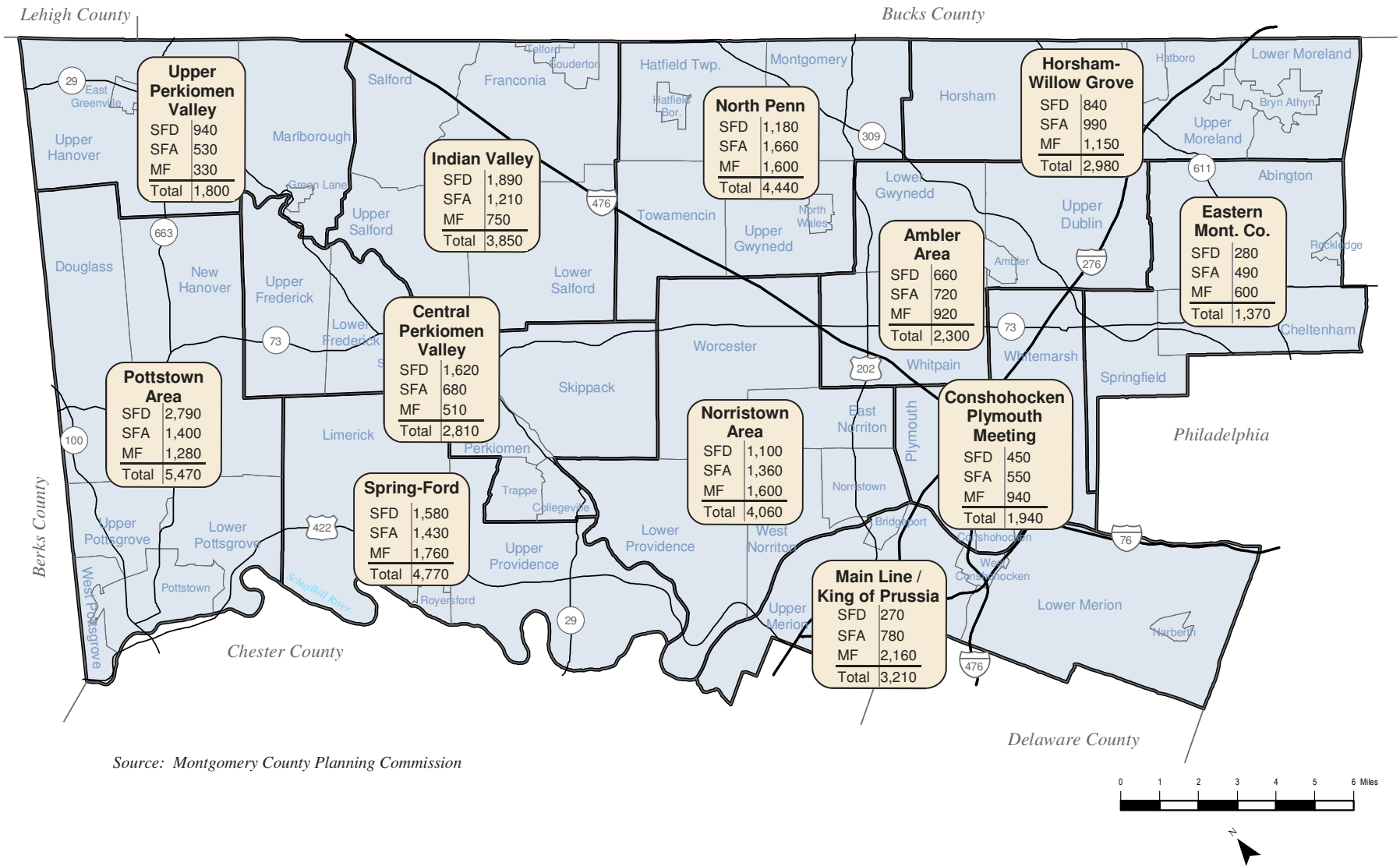
The result of step 4 above is rounded to 39,000 New Housing Units added by 2040.

- The 2040 group quarters is based on the share of the population in 2010 that was in group quarters.
- The average household size for 2040 is based on a logarithmic projection using historic trends.
- The 2040 housing vacancy rate is based on historic norms.

**PLANNING ISSUE**

The county will need to accommodate 39,000 additional housing units by 2040 in order to meet projected demand.

**FIGURE 92:** Additional Housing Units Forecasted for 2040 by Planning Regions



Source: Montgomery County Planning Commission





# THE COUNTY ECONOMY



**Jobs of County Residents**

Jobs in the County

County Businesses

Downtown and Main Street Areas

Office, Industrial, and Brownfield Areas

Retail Commercial Areas

Tourism

Agriculture and Farm Preservation

Employment Forecasts and Economic Trends

**PLANNING ISSUE**

*The unemployment rate for the county—though greatly improved since the Great Recession—has been higher than average since 2008. Increasing job growth and matching residents to employers will be a continuing concern for the county.*

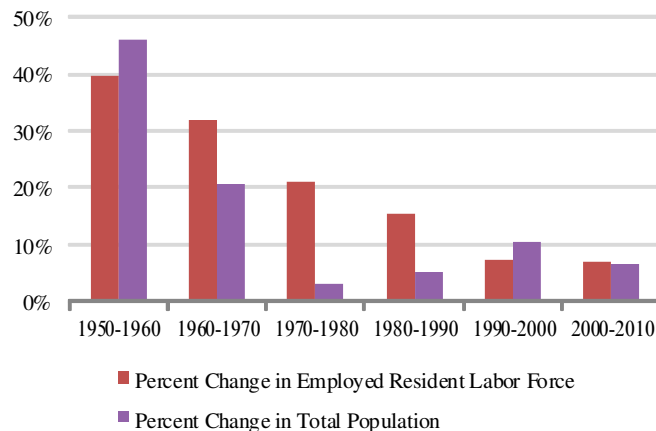
**Jobs of County Residents**

*Resident Labor Force*

Montgomery County’s economy begins with the strength of its resident labor force. A well-educated population with diverse skillsets combined with strong local schools and colleges have given local businesses a qualified workforce. In fact, the number of jobs located in the county exceeds the number of residents here to fill them, resulting in the county being a net importer of workers from other jurisdictions.

The employed labor force, which represents all county residents with jobs regardless of the location of those jobs, grew by seven percent over the last decade, keeping pace with the overall population growth during the same time period. County residents are fortunate to have access to a surplus of jobs located within the county in addition to regional opportunities.

**FIGURE 93:** Growth in Employed Resident Labor Force Compared to Total Population



Source: U.S. Census Bureau, American Community Survey

The Montgomery County Workforce Investment Board (MCWIB) oversees the county’s job training and placement services and is staffed by the county’s Commerce Department. The MCWIB is focused on improving the

supply of qualified workers to match the needs of local businesses through a variety of programs and initiatives including:

- The Keystone Works program pairs dislocated workers with businesses seeking to hire. A prospective employee can work for up to 8 weeks part time while still receiving unemployment compensation and gaining valuable job training. If the business ultimately hires the worker, it can receive a financial incentive.
- Short term pre-employment training for dislocated workers is offered to provide skills targeted to a specific industry as identified by actual employers.
- A pilot program called Mobile Outreach Skills Training (MOST) provided specific training for applicants with a host manufacturing company. The program will be continued with similar training programs for targeted businesses in the county.
- MCWIB staff works closely with technical schools and employers in the county in order to develop, communicate, and use flexible transitions from educations to careers.

**What’s New**

- The Great Recession followed by a slow recovery has impacted the economy in Montgomery County as it has in most places. Unemployment has been uncharacteristically high in the county since 2008, reaching over seven percent of the labor force at its peak. By 2014, the unemployment rate was dropping back closer to 5% .
- The aging baby boomer population will be approaching retirement in the coming years, but the current economy may result in some continuing to work beyond retirement. This could delay opportunities for younger residents entering the workforce who are already facing high unemployment rates.

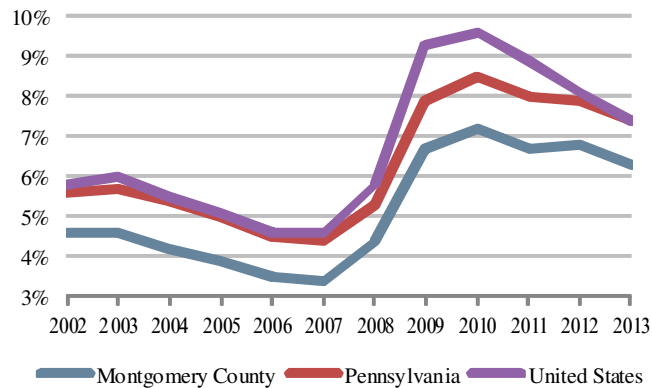
### Occupations and Industries of Residents

Like the country overall, Montgomery County’s resident workers have become more likely to work in a professional or management occupation since 2000. These categories cover a broad spectrum of jobs that include the fields of business, finance, computers, science, law, education, the arts, and healthcare practice. Service occupations have also increased as a percentage of resident occupations. These occupations include food preparation and serving, cleaning and maintenance, personal care, healthcare support, and protective services.

Conversely, occupations typically associated with manual labor, such as those found in the fields of manufacturing, construction, transportation, material moving, and farming have declined over the same time period. Other jobs not considered manual labor, but often lower paying than professional or management positions, such as sales, office, and administrative support also account for a smaller percentage of resident occupations than they did in 2000.

Similar occupations may be related to different industries, but approximately half of the county’s working residents were employed in a services industry in 2011. Service industries include professional services, scientific services, education, healthcare, social assistance, arts/entertainment, recreation, and food services. Outside of the service sector, the largest percentage of county residents work in manufacturing, retail trade and F.I.R.E. (financial, insurance, and real estate) industries.

**FIGURE 94:** Annual Unemployment Rate: 2002-2013



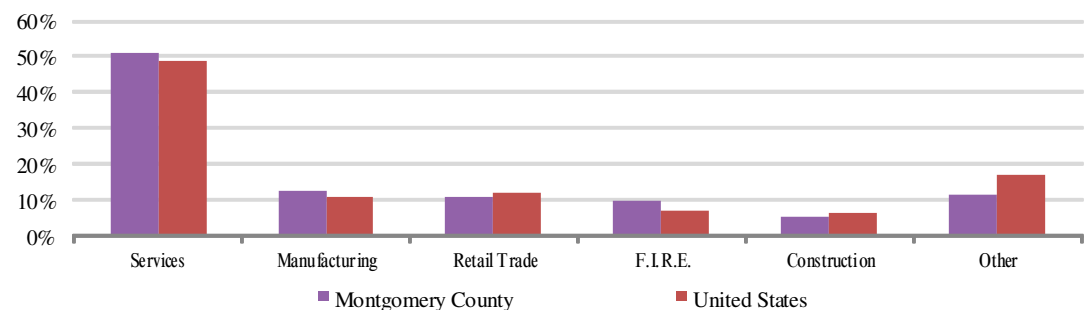
Source: Bureau of Labor Statistics

**FIGURE 95:** Occupations of Resident Labor Force: 2013

OCCUPATION CATEGORY	OCCUPATION SECTOR	RESIDENT WORKERS	PERCENT OF RESIDENT LABOR FORCE
PROFESSIONAL / MANAGEMENT	Management, Business, and Financial Occupations	79,043	19.2%
	Computer, Engineering, and Science Occupations	35,614	8.6%
	Education, Legal, Community Service, Arts, and Media Occupations	52,885	12.8%
	Healthcare Practitioners and Technical Occupations	31,725	7.7%
SERVICES	Healthcare Support Occupations	6,989	1.7%
	Protective Service Occupations	5,926	1.4%
	Food Preparation and Serving Related Occupations	18,801	4.6%
	Building and Grounds Cleaning and Maintenance Occupations	11,199	2.7%
	Personal Care and Service Occupations	12,052	2.9%
SALES / OFFICE	Sales and Related Occupations	46,359	11.2%
	Office and Administrative Support Occupations	53,269	12.9%
NATURAL RESOURCES / CONSTRUCTION	Farming, Fishing, and Forestry Occupations	368	0.1%
	Construction and Extraction Occupations	15,589	3.8%
	Installation, Maintenance, and Repair Occupations	10,415	2.5%
PRODUCTION / TRANSPORTATION	Production Occupations	16,534	4.0%
	Transportation Occupations	9,745	2.4%
	Material Moving Occupations	5,958	1.4%
<b>Total</b>		<b>412,471</b>	<b>100%</b>

Source: U.S. Census Bureau, American Community Survey 3-Year Estimates (average of responses between 2011-2013).

**FIGURE 96:** Industries of Resident Labor Force: 2013



Source: U.S. Census Bureau, American Community Survey 3-Year Estimates (average of responses between 2011-2013).

Jobs of County Residents

**Jobs in the County**

County Businesses

Downtown and Main Street Areas

Office, Industrial, and Brownfield Areas

Retail Commercial Areas

Tourism

Agriculture and Farm Preservation

Employment Forecasts and Economic Trends

**PLANNING ISSUE**

*In addition to effects from the Great Recession, job growth in Montgomery County was relatively stagnant in the '00s compared to previous decades.*

**Jobs in the County**

Most of the jobs data in the next two sections are based on the published data from the Bureau of Labor Statistics (BLS). It is recognized that not every job is counted under the BLS totals, with the largest omission being a lack of self-employed positions. The BLS offers an acceptable and most importantly, consistent method of viewing employment data. However, the most accurate depiction of total jobs in the county is the 2010 estimate formulated by the Delaware Valley Regional Planning Commission (DVRPC), which was 542,264 jobs for Montgomery County. This estimate was also used in the 2040 forecasts at the end of this chapter.

Regardless of the data source, it is clear that the county's economy took a hit beginning in 2008 due to the Great Recession. Approximately 30,000 jobs were lost in a two year period, causing a spike in unemployment and the closing of some commercial buildings. Prior to the last decade, employment rapidly expanded during the 1970s and 1980s as Montgomery County challenged Philadelphia as a site for new businesses and the expansion or relocation of existing businesses. During the 1990s, employment growth continued at a more modest but consistent pace. Over the last decade, there was a dip in employment levels early on, but the numbers were rising from 2003 through 2008 before the downturn hit.

The positive trends taken from the last forty years show that Montgomery County has had a stronger than average economy when it comes to job creation. Since 1970, the county increased its job totals by 95%, while national and state employment totals went up by 82% and 36%,



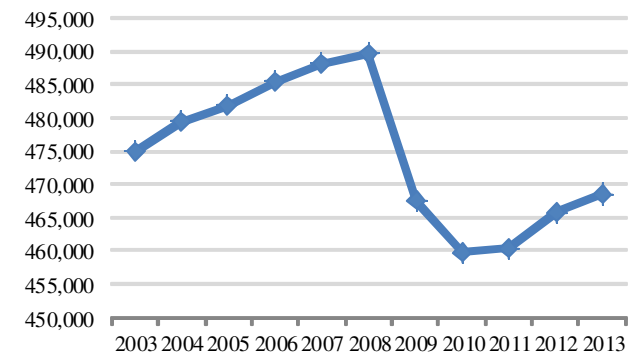
*King of Prussia, the county's largest employment center is known for its shopping malls, but is also strong in office and light industrial uses.*

**What's New**

- There are fewer jobs in Montgomery County in 2013 than there were in 2000. While most of the jobs were lost due to the Great Recession over the last five years, job gains during the decade were still modest in the period preceding the Recession.
- Self-employed jobs are more difficult to count, but the Census Bureau does track the number of establishments with no employees, which can be used to approximate self-employed activity. Interestingly, this number did not go down after 2008 like most other employment figures. It remained at over 64,000 establishments, which also represented a 15% gain since 2000. This indicates that while many businesses were forced to downsize or close during the recession, entrepreneurial activity was still strong, likely due to some of the newly unemployed venturing out on their own.

respectively. When the county economy has struggled or experienced setbacks, it has generally been due to larger forces affecting the national economy as a whole.

**FIGURE 97:** Total Employment Change in Montgomery County according to the BLS: 2003-2013



*Source: Bureau of Labor Statistics (This does not include every job, including the self-employed.)*

### Employment Centers

Montgomery County has a large variety of employment centers—areas with concentrations of businesses and jobs often located along major roadways. While businesses and industries within each center can be related or feed off one another, the centers themselves vary in size and characteristics.

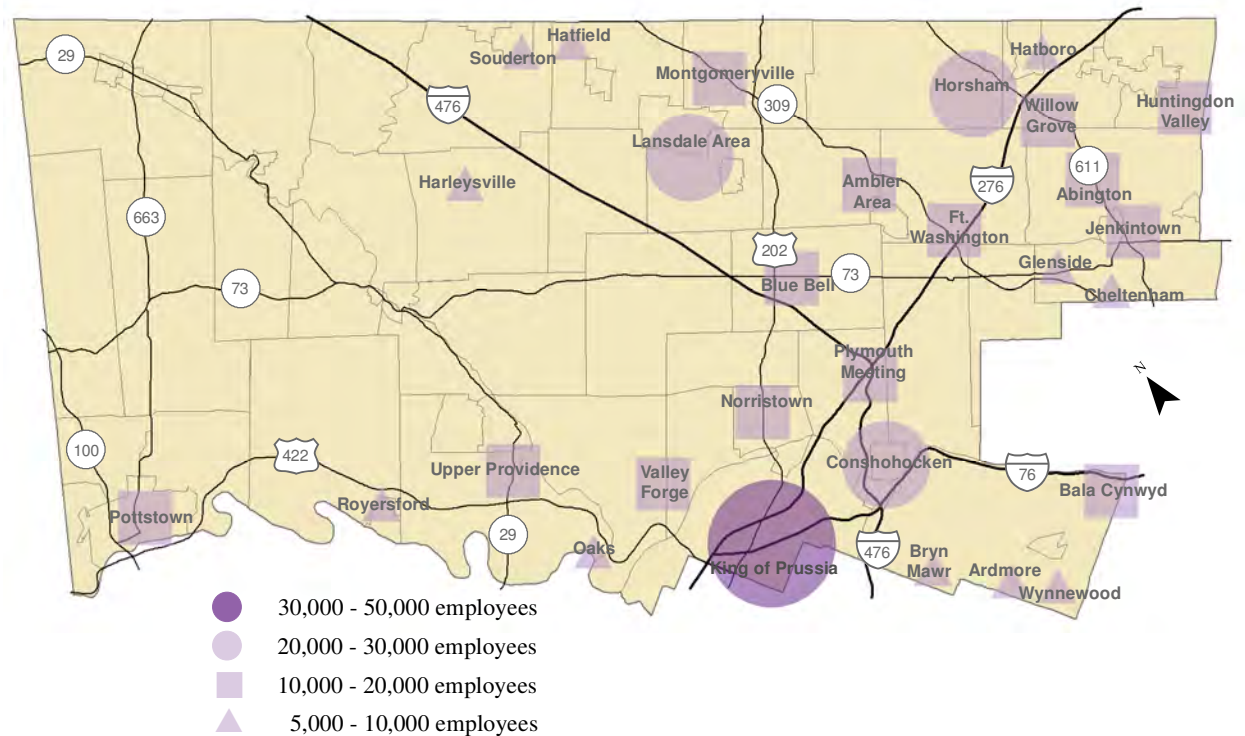
**King of Prussia** is the largest employment center with approximately 50,000 employees. The area is known for its retail core, featuring The Court and Plaza at King of Prussia, the largest indoor mall in the United States in terms of leasable retail area. However, the area's location at the junction of the Pennsylvania Turnpike, I-76, and Routes 202 and 422 has fostered many office and industrial uses in the King of Prussia Industrial Park and two other office parks in the Gulph Mills area. Lockheed Martin is the area's largest single employer.

The **Lansdale** area employment center includes Merck, the largest employer in Montgomery County, which operates two campuses in Upper Gwynedd that include offices, research and development laboratories, and manufacturing facilities. The area features a few other pharmaceutical related businesses in the vicinity of Merck as well as other office, retail and manufacturing companies in parts of Lansdale and Kulpville.

The **Conshohocken** area employment center is known for its cluster of high density office developments at the junction of four municipalities along the Schuylkill River waterfront. Much of this development was built in the last twenty years as a combination of public and private efforts to remediate underutilized or vacant industrial sites into Class A office space.

The **Horsham** area employment center was best known as the home to the Willow Grove Naval Air Station until the Navy shuttered the base in 2011. However, the area is still one of the largest employment centers in the county with a wide range

**FIGURE 98:** Major Employment Centers in Montgomery County: 2010



Source: U.S. Census Bureau, On The Map

of activity including retail, professional services, finance and insurance, as well as light manufacturing and warehousing. Redevelopment of the air base will result in additional employment opportunities in the coming years.

There are 25 smaller employment centers in Montgomery County ranging between 5,000 and 20,000 employees. Clusters of employment in a center are often separated or mixed with other uses as well.



The Conshohocken employment center is known for its Class A office space along the Schuylkill River waterfront.

Jobs of County Residents

Jobs in the County

**County Businesses**

Downtown Areas

Office, Industrial, and Brownfield Areas

Retail Commercial Areas

Tourism

Agriculture and Farm Preservation

Employment Forecasts and Economic Trends

**PLANNING ISSUE**

*A few industries that have been historically strong in the county, such as manufacturing and information, have seen significant employment declines over the past decade.*

**County Businesses**

Montgomery County has a fairly diverse base of industries and enterprises, which in the past has enabled the county to weather broad economic downturns as well as specific industry shortcomings. The majority of the county’s industries are classified in service providing sectors as opposed to goods producing sectors. In fact, only 14% of the total jobs in 2013 were held in goods producing industries. It wasn’t always this stark of a contrast. Going back to 1970, over 40% of jobs in the county were in goods producing industries. That percentage was halved by 2000, when there were 20% of jobs in goods producing industries.

According to the 2012 *County Business Patterns*, private industry groups from the service sector with over 10,000 employees include company management, general hospitals, restaurants, insurance carriers, building/dwelling services, employment services, and grocery stores. One goods producing industry, pharmaceutical manufacturing and research, is also considered among the county’s largest industries, although the Census Bureau withholds actual employment figures due to the small number of companies.

**FIGURE 99:** *Top Employers in Montgomery County*

#	COMPANY	INDUSTRY SECTOR
1	Merck & Co., Inc.	Pharmaceutical Manufacturing & Research
2	Abington Memorial Hospital	Health Care
3	Main Line Hospitals	Health Care
4	Giant Food Stores	Retail Trade
5	GlaxoSmithKline	Pharmaceutical Manufacturing & Research
6	Montgomery County	Public Administration
7	United Parcel Service	Transportation and Warehousing
8	North Penn School District	Educational Services
9	SEI Investments Company	Finance and Insurance
10	Wal-Mart Associates	Retail Trade

Source: PA Center for Workforce Information and Analysis

**What’s New**

- The manufacturing sector in Montgomery County has lost 30,000 jobs since 2001. It is currently the fourth largest industry in the county behind healthcare, retail, and professional, scientific, and technical services. The county’s manufacturing sector still ranks first in Pennsylvania, as the economy and loss of jobs to cheaper labor markets has affected many high manufacturing employment areas in the commonwealth and nation.
- The other industry sector that rapidly declined this decade was the information sector. The largest losses in this sector occurred during the first half of the decade as technology reduced demand for traditional media publications and wired telecommunications.
- The largest increase in employment is in the professional, scientific, and technical services sector, which gained over 12,000 jobs since 2001. Its fastest growing subsector services were scientific research and development and accounting services.
- County businesses continue to evolve. Recently, Dow Chemical purchased Rohm & Haas and announced it will move some operations to the Pfizer campus, which Pfizer had bought from Wyeth. Almac, an Irish pharmaceutical company, consolidated its North American operations at a new headquarters in Lower Salford.



*Pharmaceuticals, both manufacturing and research & development, have been an important part of the county economy.*

**FIGURE 100:** Industries in Montgomery County by Private Sector Jobs: 2013

INDUSTRY SECTOR	2013 JOBS	% OF TOTAL 2013 JOBS	% CHANGE 2003—2013	LOCATION QUOTIENT
Agriculture, Forestry, Fishing and Hunting	272	0.1%	8%	0.06
Mining, Quarrying, and Oil and Gas Extraction	167	0.0%	33%	0.05
Utilities	2,262	0.5%	2%	1.08
Construction	19,555	4.5%	-19%	0.88
Manufacturing	42,433	9.8%	-29%	0.92
Wholesale Trade	22,640	5.2%	1%	1.03
Retail Trade	56,541	13.1%	1%	0.98
Transportation and Warehousing	8,655	2.0%	-9%	0.53
Information	11,447	2.6%	-35%	1.1
Finance and Insurance	33,498	7.7%	-8%	1.55
Real Estate and Rental and Leasing	6,619	1.5%	-20%	0.87
Professional, Scientific, and Technical Services	52,315	12.1%	17%	1.68
Management of Companies and Enterprises	12,515	2.9%	59%	1.56
Administration & Support, Waste Management and Remediation	32,241	7.4%	-1%	1.02
Educational Services	11,425	2.6%	11%	1.13
Health Care and Social Assistance	68,155	15.7%	13%	1.01
Arts, Entertainment, and Recreation	6,548	1.5%	14%	0.84
Accommodation and Food Services	29,811	6.9%	7%	0.64
Other Services (excluding Public Administration)	16,124	3.7%	15%	1.01
<b>Total</b>	<b>433,223</b>	<b>100%</b>		

Source: Bureau of Labor Statistics

**FIGURE 101:** Public Sector Jobs in Montgomery County: 2013

GOVERNMENT LEVEL	2013 JOBS	% CHANGE 2003—2013
Federal Government	2,677	-23%
State Government	4,649	-5%
Local Government	28,120	8%
<b>Total</b>	<b>35,446</b>	<b>3%</b>

Source: Bureau of Labor Statistics

### Location Quotients

Location Quotients (LQ) are accepted measures of how concentrated a specific industry is in a county or region as it compares to the same industry from a larger base such as the state or nation. They can reveal what makes the county unique in comparison to the national average. The LQs from the chart on the left represent a ratio of the percentage of total jobs within a particular industry *in the county* divided by the percentage of total jobs within the same industry *in the nation*.

LQs greater than one indicate that the industry is more highly concentrated in the county than it is nationwide. These industries are usually considered export-oriented industries because they tend to serve more than just the local economy and bring money into the county rather than just circulate money that is already in the county.

LQs less than one indicate that the industry is less concentrated in the county as compared to the nation and likely serves other businesses or industries within the county as opposed to a larger customer base.

The LQs presented in the chart are intended only as a start to providing more understanding of the employment figures and the county's economy. It may be useful to look at more detailed or specific industries within the sectors shown or consider the Philadelphia region as a whole before drawing definite conclusions.

## THE COUNTY ECONOMY

Jobs of County Residents

Jobs in the County

County Businesses

### Downtown and Main Street Areas

Office, Industrial, and Brownfield Areas

Retail Commercial Areas

Tourism

Agriculture and Farm Preservation

Employment Forecasts and Economic Trends

#### PLANNING ISSUE

*Half of the county's downtowns and main streets have relatively weak retail cores even though they are focal points for the community. Reinvigorating these weaker downtowns and strengthening the others is a continuing challenge.*

### Downtown and Main Street Areas

The county has many traditional downtown and main street areas, ranging from large places like Ardmore or Pottstown to relatively small areas like North Wales or Pennsburg.

These places are economic engines and focal points for the community-at-large, places where people of all incomes and ages can gather. Unfortunately, over the past 60 years, the county's older downtowns and main street areas have declined as new shopping centers and retail approaches have risen.

Reenergizing main street areas can be challenging because of on-going market issues, parking concerns, land constraints, building obsolescence, aging infrastructure, image problems, organizational inertia, and economic trends.

In Montgomery County, local governments work to improve downtowns and main streets with many approaches, such as Main Street Programs, Elm Street Programs, Business Improvement Districts, revitalization planning, tax incentives, land consolidation, market analyses, anchor tenant attraction, new housing, small business programs, expanded parking, simplified codes, upgraded infrastructure, streetscape improvements, traffic calming, façade improvement programs, historic preservation, visitor signage, better building design, improved parks, and special events.



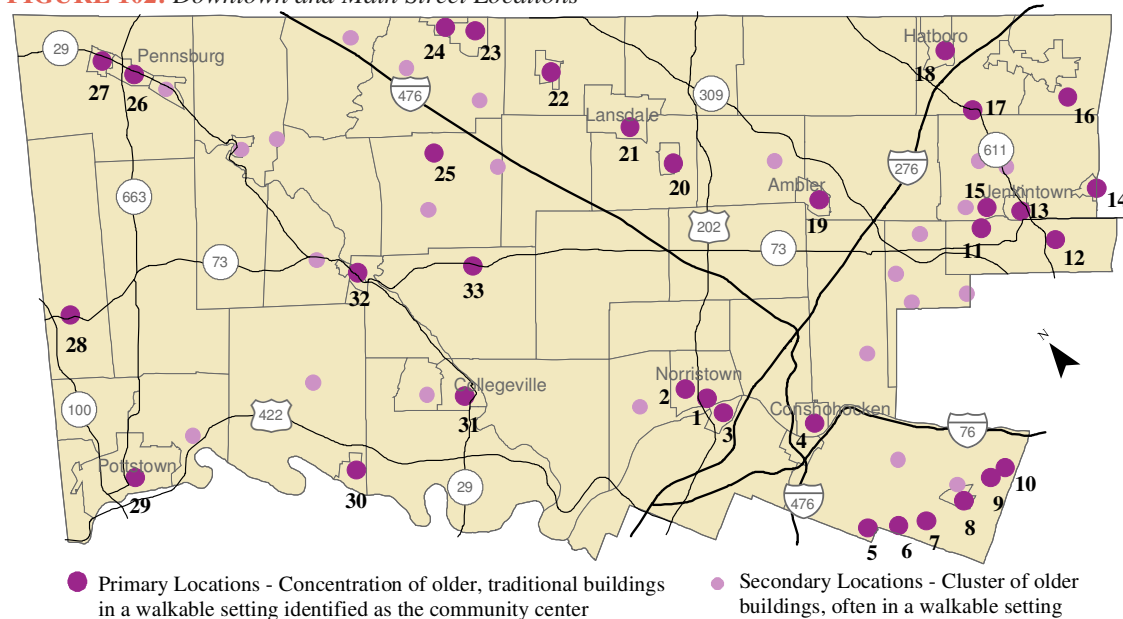
### What's New

How have the county's downtowns and main streets fared since 2000? Pretty good overall, although many places still struggle. Successful approaches have included:

- **New Employment Centers** - Taking advantage of their access to two major highways, Conshohocken and West Conshohocken have become new-economy employment centers.
- **Arts and Culture Anchors** - Many communities have successfully added or rehabilitated performance theaters or movie theaters, including Ambler, Bryn Mawr, Jenkintown, Norristown, Pottstown, Souderton, and East Greenville. Lansdale's performing arts center was temporarily closed in 2011, and many of the county's theaters survive on shoestring budgets.
- **Immigration** - Norristown, particularly the West Marshall Street business district, has seen new life brought by its Hispanic immigrants.
- **Attraction of Nearby Wealth** - Ambler and Narberth have vibrant downtowns that attract many high income visitors from neighboring areas.
- **Housing** - Large amounts of new housing have been added around many of the county's older downtowns, often on old industrial land. This residential development brings new customers and visitors for local businesses.

*In 2011, the county conducted an analysis of 23 revitalization communities and found that housing construction and prices increased significantly over the county rate. Population also increased in these municipalities. This shows that demand to live in these places has increased; nevertheless, many downtown portions of these places continue to struggle, particularly with the aftereffects of the Great Recession.*

**FIGURE 102: Downtown and Main Street Locations**



**FIGURE 103: Downtown and Main Street Descriptions**

Source: Montgomery County Planning Commission

#	NAME	DESCRIPTION
1	Norristown Downtown	County seat, two theaters, scattered retail, large area
2	Norristown Marshall Street	Neighborhood retail, low vacancy, Hispanic oriented
3	Bridgeport	Scattered retail
4	Conshohocken	Fully occupied business district catering to offices
5	Bryn Mawr	Large upscale retail area with movie theater and library
6	Haverford	Small upscale retail area
7	Ardmore	Large retail area with library and Suburban Square
8	Narberth	Fully occupied business district with movie theater
9	Merion-Cynwyd	Active, newer business district
10	Bala Cynwyd	Small retail area with movie theater
11	Glenside	Large retail area with library
12	Elkins Park	Two retail areas, one transit oriented and one car oriented
13	Jenkintown	Large retail area with movie theater and library
14	Rockledge	Spread out commercial district
15	Keswick	Large music venue in compact commercial district
16	Bethayres	Dense village area with library and restaurants
17	Willow Grove	Historic core near many shopping centers

#	NAME	DESCRIPTION
18	Hatboro	Active retail area with library and many restaurants
19	Ambler	Active area with movie theater, theater, and restaurants.
20	North Wales	Small retail area in railroad town
21	Lansdale	Large retail area with library
22	Hatfield Borough	Small retail area in railroad town
23	Souderton	Retail area with theater and renovated mill buildings.
24	Telford	Small retail area around renovated station and parking.
25	Harleysville	Compact village with major employers
26	Pennsburg	Small downtown and village area.
27	East Greenville	Small downtown and village area with movie theater
28	Gilbertsville	Compact village
29	Pottstown	Large downtown with theater and community college
30	Royersford	Retail area on hill leading to new riverfront development
31	Collegeville	Small downtown retail area near Ursinus College
32	Schwenksville	Small retail area on Perkiomen Trail
33	Skippack	Compact village with restaurants and theater

## THE COUNTY ECONOMY

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Jobs in the County

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### Office, Industrial, and Brownfield Areas

Retail Commercial Areas

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Employment Forecasts and Economic Trends

#### PLANNING ISSUE

*In this hyper-competitive world, the county's business parks and employment centers will have to evolve to attract top-flight companies and talent.*

### Office, Industrial, and Brownfield Areas

Montgomery County has a full spectrum of office and industrial uses, representing all the different types that have been built since the founding of the nation, from old mills along rushing streams to large steel and chemical plants to modern LEED-certified office buildings.

Although there are many places with employment concentrations in the county, such as King of Prussia, Plymouth Meeting, Fort Washington, Conshohocken, and Horsham-Willow Grove, there are also many scattered industrial and office uses all over the county, often in fairly surprising locations. This broad spread of employment areas gives county residents the opportunity to be relatively close to their place of employment.

Since the state passed the Pennsylvania Land Recycling Program in 1995, which reduced liability and created alternative approaches for cleaning up a site, many of the county's old industrial brownfield sites have been redeveloped. The changes created by this law are most visible in the Conshohocken/West Conshohocken area.



*Environmentally-friendly office and research facility.*

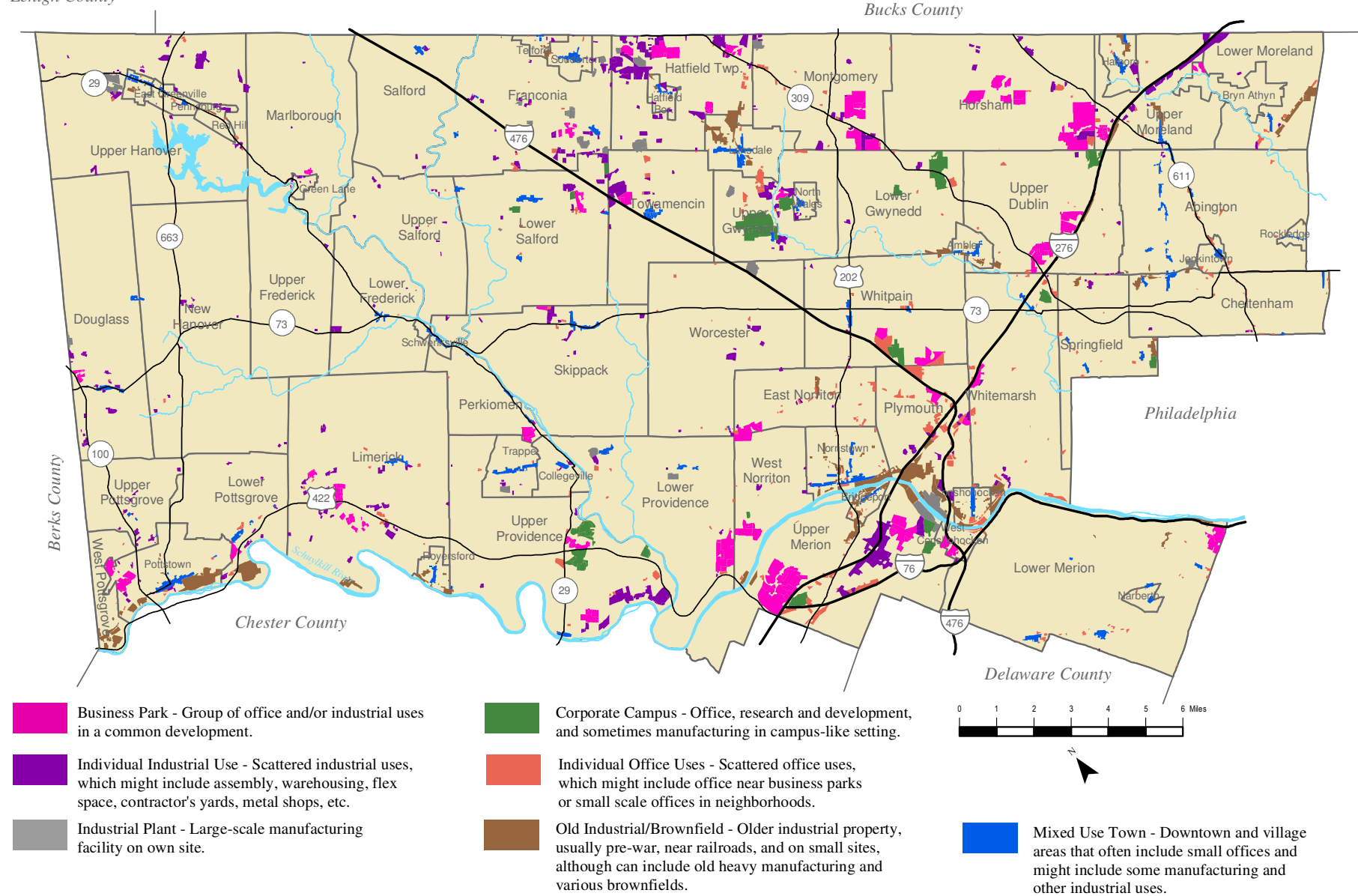
### What's New

The county's office and industrial employment centers have continued to evolve to keep up with the times:

- **Brownfields Redevelopment** - Many brownfields have been redeveloped, such as the reuse of the Anchor Glass property in Royersford for townhouses and apartments, more office and residential development in Conshohocken, the conversion of the Turbo Lofts in Lansdale to condos, and the conversion of the Stoveworks in Hatboro to apartments.
- **Changing Corporate Campuses** - Some corporate campuses, such as Unisys, Prudential, and Pfizer, have started allowing new tenants, encouraging a variety of uses, and intensifying the overall development to use underutilized land and create a more interesting work environment. Over time, some campuses, like the Baptist Center in Upper Merion, essentially become business parks as new buildings and tenants are added.
- **Evolving Business Parks** - To stay competitive and appeal to younger workers, property owners in some business parks have advocated for allowing more land uses, including residential, and more intensity. Lower Merion in the Bala Cynwyd area, Lower Providence, in the Valley Forge Corporate Center, Upper Dublin in Fort Washington, and Upper Merion in King of Prussia have changed their zoning to allow their business parks to evolve.
- **Green Buildings** - Many corporations want to be in green buildings that are energy efficient and environmentally friendly, such as the SKF USA Headquarters in Towamencin, the Colorcon Global Headquarters in Lower Salford, the 125 East Elm Office building in Conshohocken, and GAI in Upper Merion.

**FIGURE 104: Types of Office and Industrial Development**

Lehigh County



Source: Montgomery County Planning Commission

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**PLANNING ISSUE**

*With a full supply or oversupply of retail space, older shopping centers and highway commercial areas will need to reinvent themselves.*

**Retail Commercial Areas**

Montgomery County has much retail space and remains a regional shopping mecca. Since 2000, the county has added 6,500,000 square feet of shopping center and big box space, for a 2012 total of over 29,200,000 square feet. This is about 36 square feet per person, while the national average is 23 square feet per person for shopping centers. The county has about 9,600,000 square feet of other retail space, for a total of approximately 38,600,000 square feet.

The dramatic increase in retail space occurred while retail expenditures per household declined and more shopping was done online. Based on expenditures of approximately \$16,000 per household, the county only needs 19,600,000 square feet of retail space to meet its residents’ needs. However, Montgomery County is a regional draw for shoppers, which explains some of the excess supply. Nevertheless, if all the enclosed malls and the outlet center were subtracted from the county’s total square footage, the county would still have over 30 million square feet of space.

With so much retail space and with new space likely to open as retailers seek to enter the market or improve their businesses, older commercial centers will need to change to remain competitive.

**FIGURE 105:** Retail Supply and Demand by County Regions

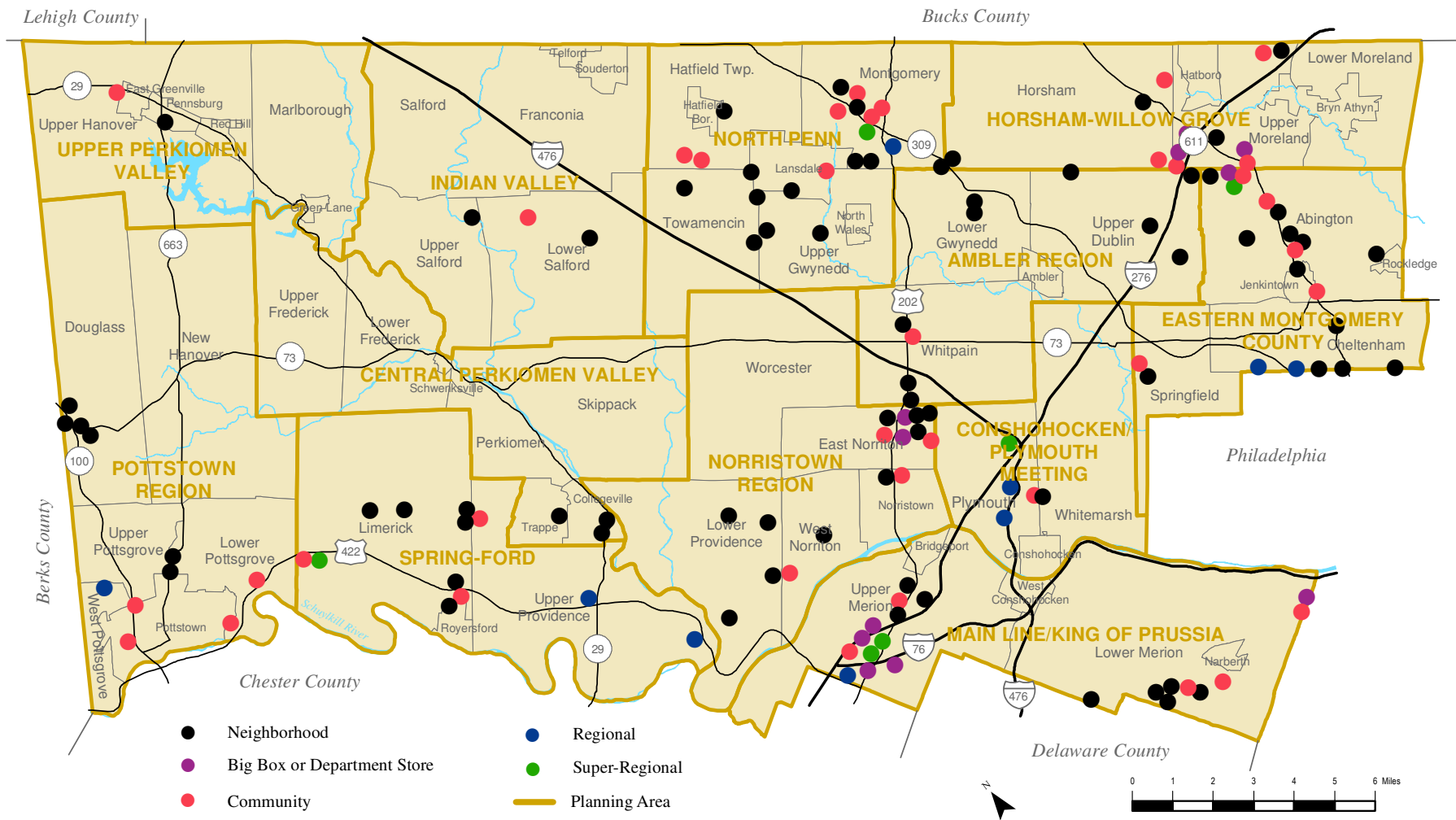
REGION	2012 RETAIL SQUARE FOOTAGE	ESTIMATED 2010 RETAIL DEMAND	ESTIMATED 2040 RETAIL DEMAND	COMMENTS
Ambler Region	1,630,000 sf	1,750,000 sf	1,940,000 sf	Go to Montgomery, Plymouth, and Abington for regional shopping
Central Perkiomen Valley	670,000 sf	910,000 sf	1,110,000 sf	Go to Route 422 Corridor for regional shopping.
Conshohocken/Plymouth Meeting	3,060,000 sf	1,100,000 sf	1,280,000 sf	Contains 1,020,000 square foot mall and large IKEA store.
Eastern Montgomery County	6,090,000 sf	2,870,000 sf	3,030,000 sf	Contains two enclosed malls with 2,530,000 square feet.
Horsham-Willow Grove	2,900,000 sf	1,680,000 sf	1,910,000 sf	Go to Abington for regional shopping.
Indian Valley	810,000 sf	1,000,000 sf	1,260,000 sf	Go to Montgomery for regional shopping.
Main Line/King of Prussia	6,820,000 sf	2,730,000 sf	2,960,000 sf	King of Prussia malls have 2,800,000 square feet.
Norristown Region	3,770,000 sf	2,170,000 sf	2,450,000 sf	Go to Plymouth and King of Prussia for regional shopping.
North Penn	6,180,000 sf	2,350,000 sf	2,670,000 sf	Contains 1,120,000 square foot mall.
Pottstown Region	2,720,000 sf	1,380,000 sf	1,700,000 sf	Go to Limerick outlets and North Coventry for regional shopping.
Spring-Ford	3,550,000 sf	1,100,000 sf	1,320,000 sf	Contains 600,000 square foot outlet center.
Upper Perkiomen Valley	590,000 sf	420,000 sf	540,000 sf	Go to Quakertown for regional shopping.

**What’s New**

Retailing in Montgomery County has continued evolving:

- The Plymouth Meeting Mall and King of Prussia Malls have added restaurant clusters, while the Montgomery Mall and Plymouth Meeting Mall have added supermarkets. In New Jersey, the Echelon Mall has been reinvented with the addition of a main street, apartments, offices, and other uses.
- Retail along the Route 422 Corridor exploded over the past decade, when over 4,000,000 square feet of space was added. The more notable new centers include the Philadelphia Premium Outlets, the area’s first suburban outlet center, the Providence Town Center, a main-street style lifestyle center, and Upland Square, a power center.
- The food business has changed. Old standbys Clemens and Genuardi’s are gone. Wegmans is new to the local market, while Giant Food, Whole Foods, and Trader Joe’s all grew. Discount stores, like Target, have added food; discount wholesalers have expanded; and drug and convenience stores increased their food presence.
- Many new banks, drugstores with drive-throughs, and convenience stores with gas have been built.

**FIGURE 106: Shopping Centers in Montgomery County, 2012**



Source: Montgomery County Shopping Center Inventory, 2012



Philadelphia Premium Outlets in Limerick



King of Prussia Mall in Upper Merion



Main Street Java Ribbon Cutting in Souderton

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*Tourism has a big impact on the local economy, creating jobs and a financial boon at local hotels, restaurants, retail establishments, and other entertainment facilities...but the next challenge is to draw visitors to some of the county's "hidden gems."*

### Tourism

The travel industry is a major part of the state and county economy. According to the Greater Philadelphia Tourism Marketing Corp, tourism brought a \$9.34 billion economic impact to the Greater Philadelphia region in 2011 as well as more than 86,000 jobs.

So what does Montgomery County have to offer? It's home to some of the biggest tourist attractions in the region, drawing visitors from beyond its borders on a daily basis. The county has some of the region's biggest shopping centers—including the King of Prussia Mall and Limerick's Philadelphia Premium Outlets. The King of Prussia Mall receives more than 20 million visitors each year.

King of Prussia is also home to one of the area's newest attractions, the Valley Forge Casino Resort. Opened in March 2012, this is the first "resort" casino in the region, which means that gamblers are limited to members, those attending an event at the Valley Forge Convention Center, or people who've spent some money in one of the center's other businesses or restaurants. And despite being the smallest casino in the state, gross revenues topped \$18 million for FY 2011-2012.

Just down the road, the Greater Philadelphia Expo Center at Oaks holds a variety of trade shows, festivals, and sporting expositions year round, with estimates of more than 300,000 visitors annually.

Other visitors may come for the county's historical, cultural amenities, or outdoor amenities. Valley Forge National Historical Park, with its breathtaking history and scenic vistas, receives upwards of 1.6 million visitors annually. The county is home to a variety of smaller parks and scenic multi-use trails that bring visitors to walk, bike, or ride horses. And first class museums like the Berman Museum of Art at Ursinus College bring upwards of 30,000 visitors to Collegeville each year.

### What's New

- Regional trends look positive for tourism. Visitor numbers have increased over the last decade, with 38 million people visiting the Greater Philadelphia region in 2011. The majority of the region's visitors come from the Northeast region of the country, but the Philadelphia area gets visitors from across the country and around the world. Overnight visits are on the rise as well. All of these guests to the area filled more than 8.3 million hotel rooms in 2011.
- Websites, social media, and mobile apps are all changing the way that people travel and plan their trips. From booking a room at a hotel, choosing a route, buying tickets to a show or reserving a table at a restaurant, travelers have any number of options when it comes to planning a trip online. This can also be evidenced by the increase in mobile device visitors to the visitphilly.com website (19% of traffic in the first quarter of 2012, as compared to 8% in the first quarter of 2011 and 3% in 2010).



Valley Forge National Historical Park gets more than a million visitors every year who come to learn more about the Revolutionary War.



Montgomery County has many tourist destinations, ranging from museums and historic sites to shopping and entertainment facilities. From where George Washington slept to the latest in fashion and culture, there's something for just about everyone.

**FIGURE 107:** 2011 Tourism Spending in Montgomery County and the Region (in Millions of Dollars)

	LODGING		FOOD AND BEVERAGE		RETAIL		RECREATION		TRANSPORT		TOTAL	
	MONEY SPENT	REGIONAL RANK	MONEY SPENT	REGIONAL RANK	MONEY SPENT	REGIONAL RANK	MONEY SPENT	REGIONAL RANK	MONEY SPENT	REGIONAL RANK	MONEY SPENT	REGIONAL RANK
Bucks County	114.4	4	162.4	3	102.8	3	81.2	3	266.5	4	727.3	3
Chester County	119.5	3	150.9	4	95.6	4	73.7	4	244.6	5	684.4	4
Delaware County	85.4	5	137.3	5	87.0	5	73.7	4	270.2	3	653.6	5
Montgomery County	271.1	2	224.6	2	142.2	2	84.4	2	465.5	2	1178.8	2
Philadelphia	727.2	1	804.5	1	509.5	1	356.8	1	3003.2	1	5401.2	1

Sources: VisitPA.com and the Pennsylvania Department of Community and Economic Development

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*Agriculture and agribusiness are important parts of the county's economy, but new suburban development may threaten this way of life. Farmers will need to adjust to new trends to stay current with these changing times.*

### Agriculture and Farm Preservation

Farming and farm preservation are key components of the county's rural landscape. Farming provides many benefits to the county, such as jobs, fresh food, and open space.

#### Farmland Preservation

Act 43 of 1981 paved the way for farmland preservation to happen across the state. In 1990, the county created an Agricultural Land Preservation Board, and the farm preservation program was born. Through a combination of state, county, and municipal efforts, there are 146 preserved farms across more than 8,600 acres in the county as of 2012. In short, the owner of a preserved farm accepts a conservation easement on his or her property that prohibits development and non-farming activities in exchange for a payment and continued ownership of the farmland. Preserved farms produce fruits, vegetables, feed crops, livestock, and other horticultural products, including Christmas trees and apples.

#### Other Farm Programs

Other efforts exist to help farmers protect their farms:

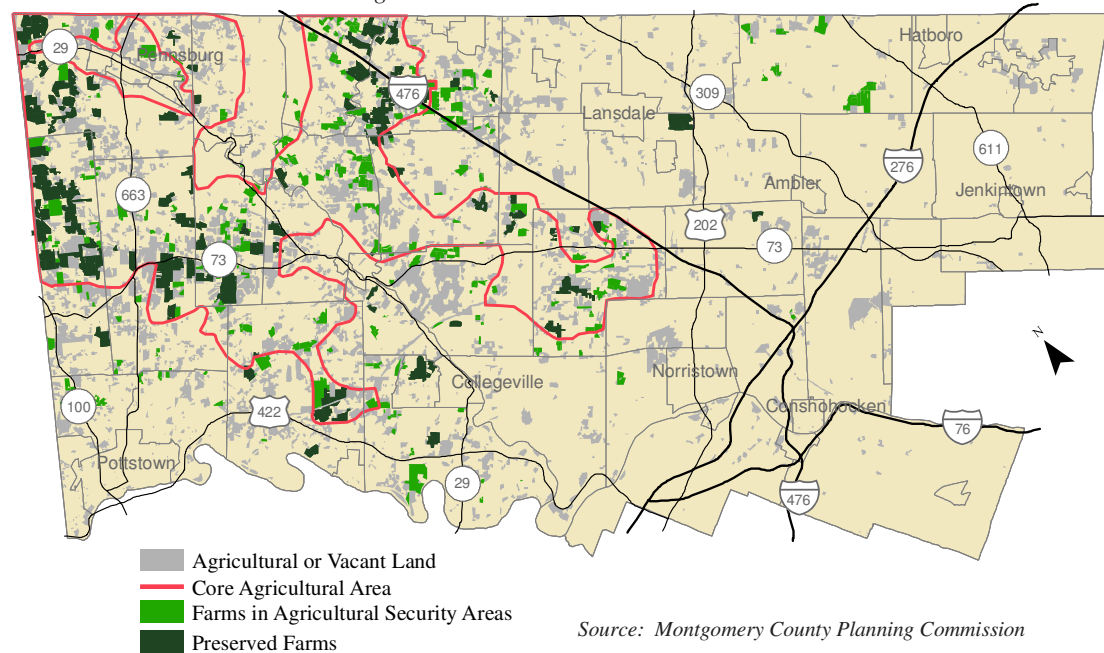
- The USDA's Natural Resource Conservation Service (NRCS), which gives technical assistance to reduce soil erosion and water quality impairment.
- The USDA Farm Service Agency (FSA), which helps farmers with the financial assistance provided by the federal government under its Farm Bill. FSA programs encourage environmental stewardship and protect our county's agricultural and natural resources.
- Penn State's Cooperative Extension, which provides research-based information to the community, particularly about agriculture and consumer living.
- The PA Department of Agriculture, which oversees the state's Agricultural Security Areas (ASAs), the first step towards farmland preservation. Created by Act 43 of 1981, joining an ASA is voluntary but gives farmers special consideration from state and local governments as well as protection from nuisance challenges and (to some extent) eminent domain takings.

### What's New

- A heightened interest in purchasing local and /or organic products have given a boost to several farming trends over the last ten years. Community supported agriculture (CSA, a program in which consumers pay an advance monetary share to a farm or group of farms in exchange for produce during the growing season) and organic farming have both increased in popularity in Montgomery County, with more and more farmers turning to innovative ways of connecting with consumers while making a living off of their land. Restaurants like Trax Café in Ambler and supermarkets like Wegmans or Acme have also shown an interest in providing local products to patrons.
- Between 1997 and 2007, the DVRPC region (including Philadelphia and 8 nearby counties) lost 92,286 acres of farmland, a 20.8% loss that is well above the national 3.4% decrease in cropland and pastureland.
- The county has lost many farms and farmers over the past six decades because of new development, higher operating costs, and volatile markets. In 1950, the county had a total of 2,802 farms across 161,000 acres, more than half the county's total area. In the most recent census, from 2012, the county's farm total was 596 farms (down from 719 farms in 2007) with 30,780 acres (down from 41,908 acres in 2007) in farming.



**FIGURE 108: Farms and Farming Areas**



Source: Montgomery County Planning Commission

- Act 319 (the Clean and Green Act), enacted in 1974, allows farm property owners (with at least 10 acres devoted to agriculture or woodland use) to receive preferential tax assessment for their land based on its use if the land has been used for agriculture or forestry for the previous three years. This program is overseen locally by the county’s Board of Assessment Appeals. A rollback tax is charged to the current landowner if and when the use changes or if the land is removed from the program (i.e. is not preserved under the terms of this Act). The maximum period a rollback may be charged is for the most recent seven years. A six percent interest charge will be imposed on the rollback tax amount.

### The Farm Economy

When the full impact of farming and food processing is taken into account, agriculture is the state’s largest industry. In 2012, the state had nearly \$7.4 billion in sales of agricultural products. According to the state’s Department of Agriculture, dairying (specifically milk) is the principal moneymaker in the state, with a total sales value of \$1.9 billion as of the 2012 Census of Agriculture. Livestock is crucial to Montgomery County, with 34,362 head of livestock and poultry with a total sale value (including their products) of \$7.2 million in 2012. Milk was an important product from the county’s livestock, with just over nearly \$2 million in sales. Overall, the market value of all agricultural products produced in the county was \$25.6 million.

The economics of farming also include numerous agri-businesses that help to support or are supported by farming. These include, but are not limited to, food processing plants, equipment dealers, and various wholesalers. According to the 2012 *County Business Patterns*, there were 69 food manufacturing establishments in the county (a drop from 2000 levels, but still a significant part of the county’s economy). Meat-processing plants, such as Hatfield Quality Meats and Leidy’s (found in the North Penn and Indian Valley areas), employ a majority of these workers. Other food-related industries include bakeries, dairy product manufacturing, chocolate & confectionary product manufacturing, and fruit and vegetable preserving and manufacturing.



Farms and the farming industry in Montgomery County include small family farms, family friendly entertainment-oriented facilities, and large industrial plants that manufacture and sell products across the region.

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### Employment Forecasts and Economic Trends

#### PLANNING ISSUE

*New commercial buildings, homes, day care centers, and transportation improvements will be needed to support the more than 63,000 jobs forecasted to be added to Montgomery County over the next 30 years.*

### Employment Forecasts and Economic Trends

Employment is projected to rebound from the cuts seen over the last several years. However, some areas of the county are better situated than others to have stronger employment gains. Countywide, 63,243 jobs are projected to be added to the county by 2040. Fast growing employment areas, such as those along Route 422 (Douglass Township, 44.9% gain and Limerick Township, 30.1% gain) and areas of the county with a strong industrial base, such as Franconia Township (35.1% gain by 2040), are projected to have the biggest percent gains. Numerically, Upper Merion and Horsham Townships are projected to have the biggest employment gains by 2040 (5,051 and 6,451 jobs, respectively).

To better plan for workforce training and support programs, the county's Workforce Investment Board has studied the industries which will grow or decline in the future. In the short term, business services and healthcare are two areas expected to grow. However, due to the expiration of patents and industry consolidation, it is expected the pharmaceutical industry will stagnate. Over the long term, it is expected that the manufacturing industry will begin to see slight increases. The healthcare industry is expected to grow in the long term as well due to the nation's healthcare reform regulations which will boost demand, increase healthcare investment and in turn increase hiring in the healthcare industry.

In the near term, the county will likely see shifts in how people work and how businesses and workforces are organized. Technology is constantly changing the way (and where) people work, exchange information, and sell products. Individuals will delay retirement and remain in the workforce, creating an increasingly older consumer market. At the same time, delayed retirement and cuts in jobs means that the number of jobs available in the short term is low. Over the long term, however, retiring baby boomers will provide new employment opportunities.

**FIGURE 109:** *Montgomery County Employment Forecasts*

	TOTALS
2010 Employment	542,264
2015 Employment Forecast	548,136
2020 Employment Forecast	558,371
2025 Employment Forecast	575,496
2030 Employment Forecast	592,621
2035 Employment Forecast	601,597
2040 Employment Forecast	605,507
Change in Forecasted Employment, 2010-2040	63,243
Percent Change in Forecasted Employment, 2010-2040	11.7%

Source: DVRPC



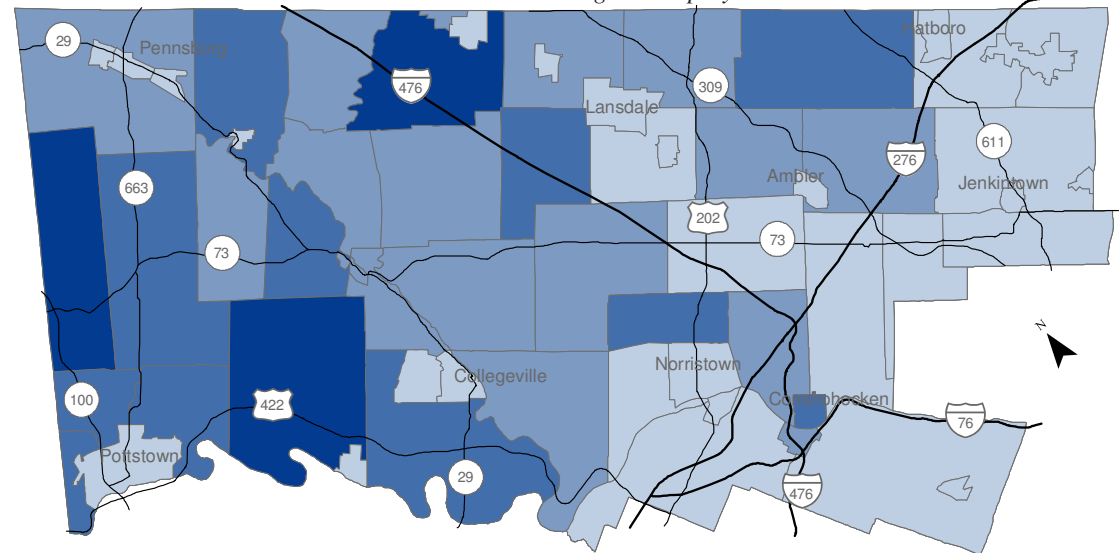
*Opportunities in the health care field and in the arts are expected to increase in the future.*

**FIGURE 110: Industries Projected for Near Term Growth**

DESCRIPTION	2012 JOBS	2015 JOBS	NUMBER CHANGE	PERCENT CHANGE
Arts, Entertainment and Recreation	12,242	13,356	1,114	9%
Management of Companies and Enterprises	11,212	12,080	868	8%
Real Estate including Rental and Leasing	28,543	30,438	1,895	7%
Finance and Insurance	51,707	55,063	3,356	6%
Educational Services (Private)	19,563	20,596	1,033	5%
Health Care and Social Assistance	72,789	76,396	3,607	5%
Professional, Scientific, and Technical Services	69,910	72,891	2,981	4%
Railroad Rolling Stock Manufacturing	47	106	59	126%
Manufacturing and Reproducing Magnetic and Optical Media	164	324	160	98%
Other Pipeline Transportation	42	64	22	52%
Wireless Telecommunications Carriers	492	704	212	43%
Soap, Cleaning Compound and Toilet Preparation Manufacturing	395	547	152	38%
Gambling Industries	84	113	29	35%
Scenic and Sightseeing; Transportation and Land	17	22	5	29%
Securities and Commodity Exchanges	115	147	32	28%
Beverage Manufacturing	97	123	26	27%
Waste Collection	512	649	137	27%

Source: Montgomery County Workforce Investment Board, Local Plan July 1, 2012-June 30, 2017

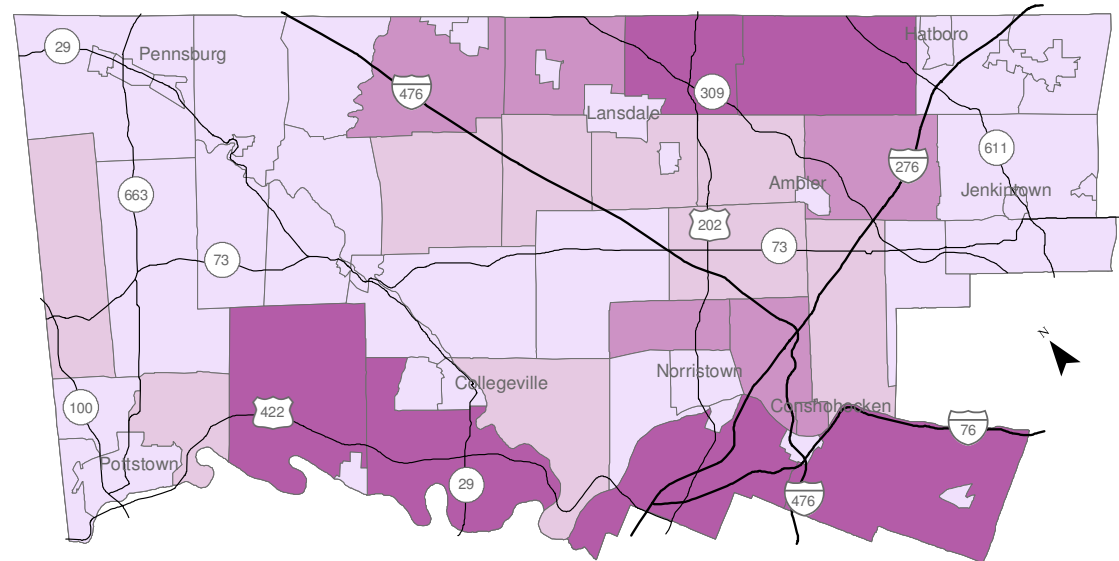
**FIGURE 111: Forecasted Percent and Number Change in Employment Between 2010 and 2040**



**Forecasted Employment Increases by Percent**



Source: Delaware Valley Regional Planning Commission



**Forecasted Employment Increases by Number**



Source: Delaware Valley Regional Planning Commission





**THE COUNTY'S  
INFRASTRUCTURE BACKBONE**



### Sewage Facilities

Water Facilities

Solid Waste

Stormwater Management

Energy

Communications

Emergency Services

Other Governmental Facilities

#### PLANNING ISSUE

*In developing places, the extension of sewer lines into farmland and open areas can spur new development. In developed areas, the sewage system is aging and will need new investment.*

### Sewage Facilities

All developments rely on some type of sewage facilities, such as an individual on-lot septic system or a public sewage treatment system. These facilities ensure that domestic waste is properly collected, treated and disposed. However, if not operated and maintained properly, negative health and water quality impacts can result.

#### History and the Regulatory Environment

The planning, permitting, construction, and operation of wastewater facilities is regulated by numerous federal, regional, state, and local requirements. The most significant federal legislation pertaining to water quality issues of wastewater is the Clean Water Act (CWA).

The provisions of the CWA establish procedures for federal assistance for public wastewater facilities, establish effluent limitations for dischargers, require states to set water quality standards for all streams, and establish the National Pollution Discharge Elimination System (NPDES) program.

The Pennsylvania Sewage Facilities Act (Act 537) of 1966 (revised in 1974) requires municipalities to develop and implement Official Sewage Facilities Plans to ensure adequate sewage service for existing needs and new growth. Additionally, Chapters 71, 72, and 73 of the Pennsylvania Code describe the regulations required to administer the



*Schwenksville sewage treatment facility.*

### What's New

- **Infiltration and Inflow (I/I)** - Many municipalities are bearing the burden of a failing sewage infrastructure. Much of this failure is due to excessive infiltration and inflow into sewer pipes from groundwater and stormwater. Groundwater seeps into sewer pipes through holes, cracks, joint failures, and faulty connections. Stormwater rapidly flows into sewers via roof drain downspouts, storm drains, and other access points. Most I/I is caused by aging infrastructure that needs maintenance or replacement. This is a significant financial issue for many municipalities and involves the PA DEP. For affected municipalities, PA DEP requires a Corrective Action Plan, where the municipality describes their actions to remove I/I. Based on this, DEP and the municipality work out a Connection Management Plan, where metering confirms the amount of I/I reduction that has occurred from the actions taken. Limited sewer connections are permitted based on the capacity freed up from the I/I remediation efforts.
- **New Methods of Disposal** - The latest developments in wastewater technology are dynamic and constantly being proposed and/or improved. These new systems are shaping the County by allowing development where it may have otherwise been impractical. Low pressure collection systems, grinder pumps, effluent pump sewer systems, vacuum sewer systems, and small diameter systems are just a few forms of collection and conveyance alternatives to traditional public systems. An example of such a system is a mound system placed in the open space of a Salford Township cluster subdivision. Like almost all septic systems, it will continue to function properly if well maintained.

sewage facilities planning program and provide standards for sewage disposal systems.

There are a number of groups that exercise separate, but closely interrelated, roles concerning wastewater management within Montgomery County. Municipal sewer authorities and local sewer departments are mainly responsible for the daily operation and maintenance of the public sewage treatment plants and conveyance facilities.

Under Act 537, municipal governing bodies are charged with developing official sewage facilities plans, adopting the plans, and implementing the recommendations of the plans. A number of regulatory agencies also play a role in the overall sewage facilities treatment process:

- DEP and the Delaware River Basin Commission (DRBC) each exercise oversight responsibilities and set water quality objectives.
- The Montgomery County Planning Commission fills an advisory role in reviewing revisions and amendments to municipal official sewage facilities plans and planning module applications for individual developments.
- The Montgomery County Health Department oversees the bulk of the on-lot sewage system program, including conducting site evaluations, issuing permits, and conducting inspections. They also review municipal official Act 537 plans and planning module submissions for on-lot sewage systems.

### Description of Existing Sewage Facilities

There are currently 43 municipally owned and operated treatment plants within Montgomery County. Portions of eastern Montgomery County continue to be served by Philadelphia’s sewage treatment system. The county *Sewage Treatment Facilities 2005 Status Report* provides a map and details of these facilities.

There are approximately 35 non-municipal, nonindustrial waste treatment plants operating in the county. These plants accommodate a wide variety of uses

including apartment complexes, military installations, hospitals, nursing homes, mobile home parks, campsites, commercial establishments, schools, residential subdivisions, and a correctional institution. Also, many industrial properties in the county have specialized sewage treatment facilities. The County’s rural areas rely on on-lot wastewater systems. On-lot systems are sewage systems on the property of the homeowner that treat and dispose of domestic waste through natural processes. On-lot systems are commonly used in rural and semi-rural areas with low density development and limited access to public sewage systems.

### Sewage Facilities Choices

Sewage facilities options have expanded beyond the conventional septic system and municipal sewage treatment facility. Assisted by new treatment technology, development is occurring in areas previously inaccessible to sewage facilities. On-lot and community systems are being proposed where there are no public sewers or excess capacity is unavailable. Municipalities are confronted with proposals involving sewage facilities alternatives considered to be experimental a few years ago. Review of these proposals requires consideration of such varied issues as the ability of the system to meet regulatory requirements, municipal land use policy, and socioeconomic and environmental costs. Effluent discharge methods are also changing.



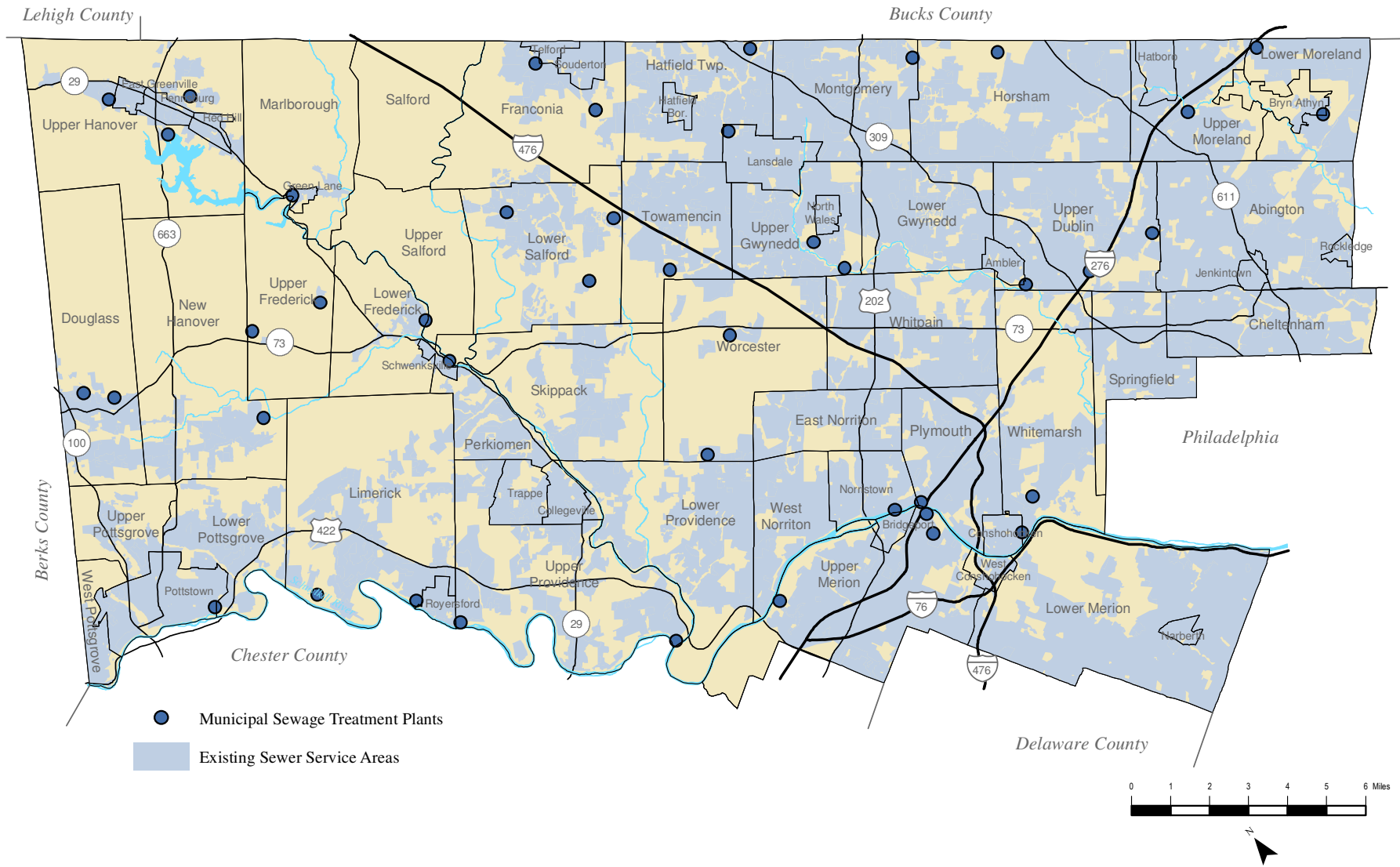
A water intake station on the Perkiomen Creek.

**FIGURE 112:** Sewage System Components

SYSTEM	COLLECTION	TREATMENT	DISPOSAL
On-lot Disposal Systems	Collection lines minimal; a lateral and possibly some type of pump.	Septic or aerobic tank, sand filter or rotating media; drip irrigation; single unit package treatment plants are available.	Absorption field or a sand mound; spray, or stream discharge.
Community Systems	Collection line or force main, small diameter sewers, vacuum sewers, pressure sewers or individual septic tanks with effluent collection. May need lift stations and grinder pumps.	Septic or aerobic tank, sand filter or rotating media; lagoons, centralized community plant.	Absorption field or a sand mound; spray, or stream discharge.
Public or Centralized Systems	Collection line or force main, pressure or vacuum sewers, small diameter pipe.	Sewage treatment plant.	Stream discharge or spray irrigation.

# THE COUNTY'S INFRASTRUCTURE BACKBONE

**FIGURE 113: Existing Sewer Service Areas**



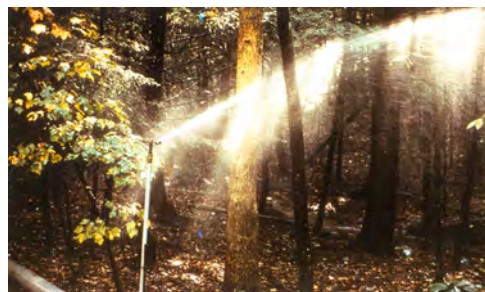
Source: Montgomery County Planning Commission

Almost all public sewage systems constructed in the county discharge treated wastewater to surface waters. In fact, 42 of the 43 public treatment plants within the county discharge their effluent directly to a waterway. Land disposal of wastewater can be an appropriate alternative to stream discharge systems. However, due to the large land area required for these systems, this alternative is more appropriate for individual residential, non-municipal, and small municipal systems, or in cluster-type developments in rural resource areas, or in rural areas where a group of failing on-lot systems needs to be addressed. Spray and drip irrigation systems are the most common forms of land disposal options.

### New and Alternative On-Lot Sewage Options

Individual on-lot systems are located on a developed lot and employ either subsurface or surface disposal of the treated effluent. Septic systems are one of the most common types of on-lot sewage facilities. They employ a treatment tank that allows for liquid waste to percolate through the soil where it is neutralized and broken down further.

There are several variations from a septic system that are driven by soil, site, and operational conditions. The majority of the county’s soils are classified as having limitations—sometimes severe limitations—for on-site disposal, due to shallow depth to groundwater. Therefore, very few new ‘at grade’ subsurface disposal systems are installed today in the county. Instead, mound systems, which include a sand and gravel bed raised above the ground surface, are more common. Sewage treatment technology has progressed to the point where environmental constraints such as poor soil types or steep slopes or the lack of sewage treatment capacity in municipal systems may no longer preclude growth.



A spray irrigation system

**FIGURE 114:** *Dispersal Options for On-Lot Sewage Facilities*

NAME	DESCRIPTION	ADVANTAGES	DISADVANTAGES
Bed/Trench	Effluent from the septic or aerobic tank is treated in the bed/trench media and the surrounding soil.	Commonly used, minimal maintenance	Requires a relatively deep limiting zone
Contour System	Effluent is spread over a broad area of buried pipe in a shallow trench that follows the contour of the land.	Larger area for effluent dispersal than most systems.	Systems that are too long may require pressurization, requires a level bottom of the trench.
Drip Irrigation/Trickle Systems	Applies pretreated wastewater to soil slowly and uniformly through a network of thin, flexible tubing placed at shallow depths in the soil.	Minimal site disturbance, flexible tubing can be placed around trees and shrubs, and complex terrain.	Possibility of clogging.
Gravelless and Chamber Systems	Vaulted cross-section, flat, uncontained bottom, uses a material other than gravel in the trench, provide some capacity to store effluent until it can be absorbed into the soil.	Faster installation and increased volume of void space per unit length compared to conventional trenches.	Cost.
Elevated Sand Mound	Mound consists of a raised drainfield, sandfill on top of a gravel-filled bed.	Overcomes site restrictions (limiting zones due to unsuitable soils).	Aesthetics, cost.
Vapotranspiration	Employ the combined effects of evaporation from soil and transpiration from plants to dispose of wastewater effluent.	Can be used on sites with very porous soils and in close proximity to water wells (50 feet).	Not as effective in areas with high rainfalls, high humidity, low average daily temperatures and low levels of solar radiation.
Pressure/Low Pressure	Shallow, dosed soil absorption systems.	Can be specially designed to overcome site constraints such as high water table, can be located on sloping ground or on uneven terrain.	Cost.
Recirculating Sand Filter	Septic or aerobic tank to remove solids, effluent is pumped to a sand filter tank, effluent can be recirculated through the filter multiple times.	Higher quality effluent due to the recirculation.	Requires annual maintenance and the sand must be replaced roughly every 10 years.

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#### PLANNING ISSUE

*The availability of a safe and reliable water supply is very important for economic growth, but protecting water resources for future generations is critically important as well.*

### Water Facilities

Water facilities are an important part of the infrastructure needed to provide a clean and reliable water supply for residential development and to stimulate economic growth.

In 2010, the county had 799,874 residents living in 325,735 housing units. Approximately 695,890 people, or 87%, are served by a public water system. Public water systems rely on ground and/or surface water sources, and may be interconnected with other water purveyors.

There are 17 large public water suppliers operating in the county. They include 10 authorities, 4 privately owned companies, and 3 municipal departments (Collegetown-Trappe Joint Public Works Department is owned by both boroughs). The 17 water suppliers manage over 254,000 connections and provide over 152 million gallons of water each day for residential and nonresidential uses.

The public water purveyors in Montgomery County use both surface and groundwater sources. The quantity and quality of these sources is dependent upon geology and precipitation. The *Water Resources Plan* provides an in-depth discussion regarding the relationship of geologic characteristics, land use, and the relationship of water cycle to water supply.

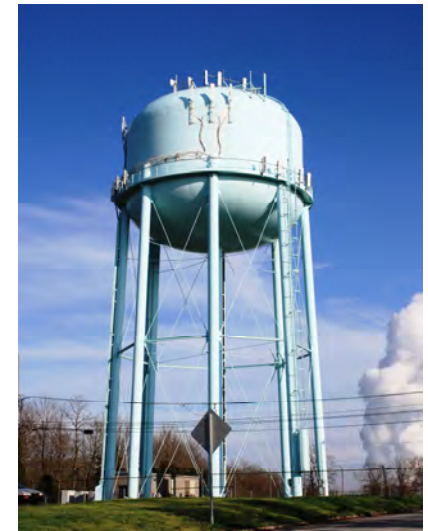
Water resources must be managed and protected to avoid resource degradation and other impacts. Land use can have significant negative impacts on water resources. Impervious surfaces decrease infiltration and increase runoff. This can contribute to lower groundwater levels, reduced base flow in streams, and increase streambank destabilization. Runoff from developed areas can also carry pollutants.

Protecting water resources benefits purveyor and customer alike. Resource protection tools include wellhead protection programs and source water protection programs. Water conservation efforts, including leak detection, billing/rate structures, and public education, also help maintain an adequate and reliable supply of water.

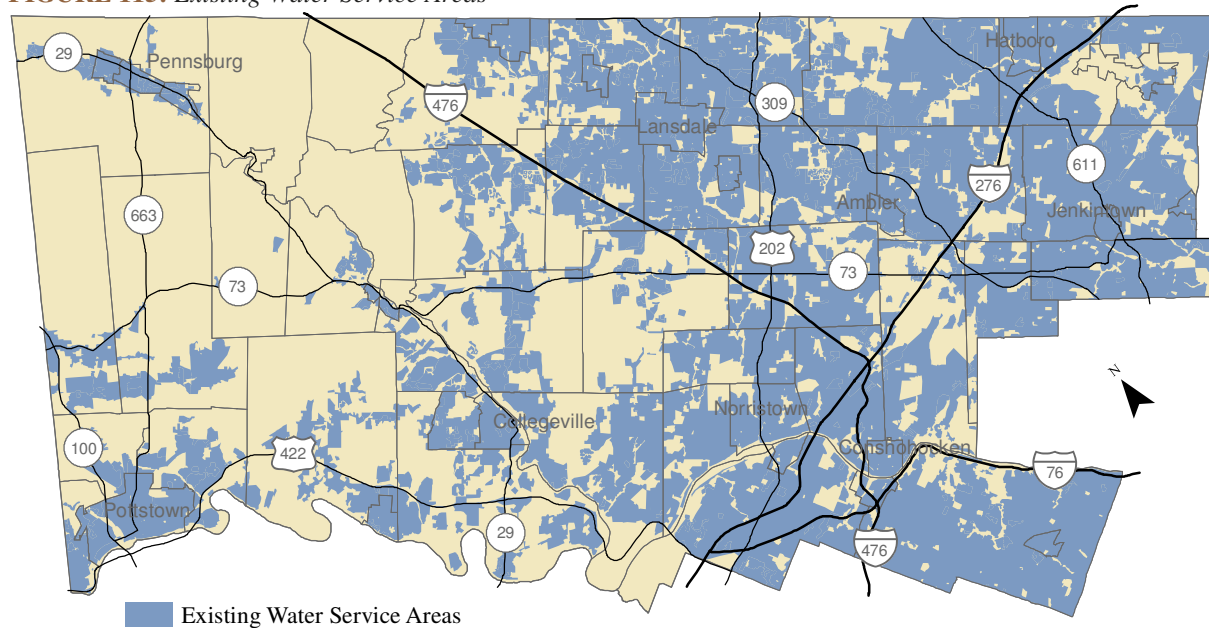
### What's New

- **Comprehensive Water Resource Planning** — Resource planners and water purveyors are looking at water resources comprehensively. This new perspective includes considering the role of stormwater runoff and treated effluent along with rainfall, stream flow and groundwater in the hydrologic cycle. The relationship of land use to water resources is also an important consideration, as development changes the water cycle.
- **Clustering of Wells** — Public water facilities are particularly important in high and medium density areas where wells otherwise would be clustered amid multiple land uses. Dense clusters of wells are more likely to interfere with each other and also provide more ways for contaminants to reach groundwater.
- **Population Trends** — The area served by public water has the greater population. Population density in this area often exceeds 2,000 persons per square mile. However, some of the fastest growing municipalities in the county are either located in the area not currently served by public water or have very limited service.

*The type and size of public water systems varies considerably across the county and reflects the unique development patterns of each municipality.*



**FIGURE 115: Existing Water Service Areas**



Source: Montgomery County Planning Commission



Children enjoying the Pottstown spray park.

### Regulatory Agencies

Public water purveyors operating within the county are subject to federal, state, and local regulations that establish standards for water quality, ground and surface water withdrawal, and consumer water rates. These regulations include:

#### The Pennsylvania Safe Drinking Water Act

Pennsylvania was authorized under the Federal Safe Drinking Water Act to implement its drinking water program under a “primacy” agreement between the PA DEP and the U.S. EPA. Pennsylvania’s program includes regulations and voluntary initiatives for water supply systems that serve at least 15 service connections or 25 or more people. The PA Safe Drinking Water Program establishes maximum contaminant levels (MCLs) to ensure that

drinking water is safe for human consumption, and requires public notification whenever drinking water is not in compliance with state standards.

#### Delaware River Basin Commission Groundwater Protected Area Regulations

The Delaware River Basin Compact was signed into law in the fall of 1961, establishing the Delaware River Basin Commission (DRBC). The compact members are the federal government, and the states of New York, New Jersey, Pennsylvania, and Delaware. DRBC allocates water supplies and regulates projects deemed to have a substantial effect on water resources within the basin area, which includes all of Montgomery County.

#### Public Utilities Commission

The Pennsylvania Public Utilities Commission (PUC) regulates the rates charged by public water purveyors under their jurisdiction and approves franchise or service areas for these water purveyors. All investor-owned companies that charge rates for their service are under the jurisdiction of the PUC.

#### Montgomery County Health Department

The health department has established standards for the location, construction and quality of individual water supply wells and system installation.

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### PLANNING ISSUE

*Per capita rates of municipal solid waste generation continue to increase, while recycling rates decrease in the absence of a concerted public education and promotion program.*

### Solid Waste

“Solid waste” includes daily discards from residential, commercial, industrial, and institutional establishments. Municipal Solid Waste (MSW) refers only to discards from commercial and residential establishments. The county’s Municipal Waste Management Plan addresses MSW through an integrated waste system of waste reduction, recycling, energy recovery (incineration), and landfilling. MSW management includes waste collection, waste transportation, recycling and reuse, composting, landfilling, and incineration.

Act 101 of 1988, the Municipal Waste Planning, Recycling, and Waste Reduction Act, addresses recycling, planning, permitting, and operation of facilities for municipal waste. Counties, instead of townships and boroughs, are given the responsibility of municipal waste planning and disposal. Under Act 101, the county maintains the municipal waste plan, oversees a trash transfer station, promotes recycling, reports recycling data, and manages the household hazardous waste collection program. There are seven existing municipal waste facilities located in the county, and numerous out of county facilities that waste haulers may choose from to process MSW from the county. These are shown on the accompanying map.

Recycling is an important part of waste management. Act 101 mandated municipalities for curbside recycling are shown on the accompanying map. Municipalities with populations of at least 10,000, and those with populations between 5,000 and 10,000 and more than 300 persons per square mile are required to develop curbside recycling programs. Many municipalities that do not meet these thresholds have developed voluntary recycling programs.

The county achieved a 25% recycling goal by 1995. People’s attitudes, packaging materials, and the economy cause the recycling rate to fluctuate from year to year. Residential and commercial educational programs that emphasize the need, ease, and benefits of recycling are usually successful. Recycling data collection has improved recently, enabling the county to document its efforts to achieve the state’s current goal of 35% recycling.

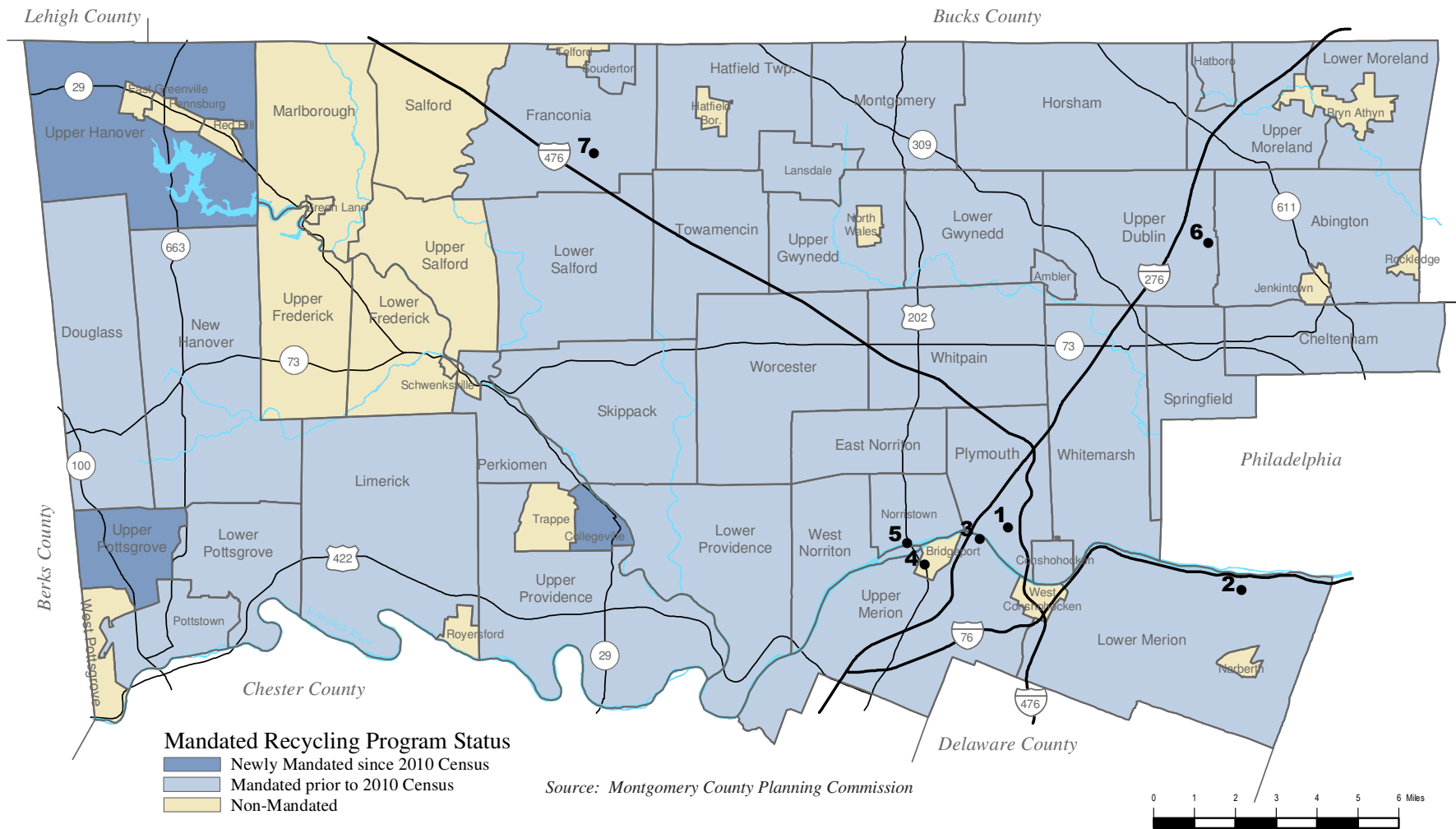
### What’s New

- Waste generation rates for Montgomery County residents continue to rise, though slowly. In 2013, the average rate was 6 pounds per capita per day. This is higher than the national per capita per day average of 4.4 pounds. In the same year, the county recycling rate was 32%.
- The County Municipal Waste Management Plan was adopted in 1990, revised in 1994, and again in 2004 to document 10 years of disposal capacity and plan for recycling programs. A similar update is underway, scheduled for completion in 2015, that will discuss the municipal agreements for the Montgomery County Resource Recovery Facility in Plymouth Township.
- The 1,200 ton per day Montgomery County Resource Recovery Facility is operated by Covanta Energy. It began operation in 1993. Most of the waste going to the facility comes from the Eastern District. In 2011, the tipping fee was \$65 per ton.
- The 276-acre Pottstown Landfill closed for trash disposal and recycling drop-off in October of 2005. The landfill, operated by Waste Management Disposal Services of PA Inc., was the last municipal waste landfill operating in the county. The facility, shown below, had been in operation for more than 70 years.



*The former Pottstown landfill.*

**FIGURE 116: Solid Waste Facilities and Mandated Recycling Municipalities**



**County Facilities**

1. Covanta Plymouth Renewable Energy
2. Lower Merion Transfer Station
3. BFI River Road Transfer Station
4. Great Valley Recycling
5. Norristown Transfer Station
6. Abington Transfer Station
7. J. P. Mascaro Transfer Station

**Facilities Located Outside Montgomery County**

- Brooke County Landfill, Colliers, WV
- Chrin Brothers Landfill, Easton, PA
- Commonwealth Env. Services, Hegins, PA
- Conestoga/New Morgan Landfill, Morgantown, PA
- GROWS North Landfill, Morrisville, PA
- IESI Bethlehem, Bethlehem, PA
- Keystone Sanitary Landfill, Dunmore, PA
- Lanchester Landfill, Narvon, PA

- Tullytown Landfill, Tullytown, PA
- Veolia ES Chestnut Valley, McClellandtown, PA
- Veolia ES Greentree, Kersey, PA
- Pioneer Crossing, Birdsboro, PA
- Wetzel County Landfill, New Martinsville, WV
- Covanta Delaware Valley, Chester, PA
- Covanta Harrisburg, Harrisburg, PA
- Wheelabrator Falls, Morrisville, PA
- Indian Valley Transfer Station, Telford, PA

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#### PLANNING ISSUE

*How do we manage stormwater in a way that restores predevelopment hydrology, reduces flooding, recharges groundwater, and improves water quality in compliance with state programs and within existing budget constraints?*

### Stormwater Management

Stormwater is often seen in terms of flooding. However, it is part of a larger process – the hydrologic cycle – that cleans and distributes water and has a significant impact on the environment, people's lives, and the economy. Protecting and restoring site hydrology minimizes impacts to public water supply and ecosystems. Managing stormwater on a watershed basis reduces flooding. Using stormwater Best Management Practices (BMPs) protects water resources.

Land in a natural state produces little runoff. Rainfall is absorbed and slowly released to groundwater, surface waters and the atmosphere. Vegetation loss, impervious surfaces, and soil compaction from development disrupt site hydrology and greatly increase runoff. Maintaining natural drainage on a site during and after development minimizes this disruption. Stormwater BMPs can preserve and restore site hydrology during development.

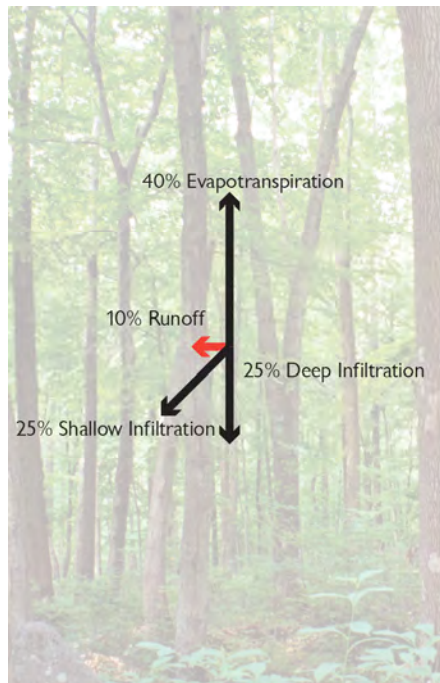
Flooding is an issue that involves zoning and land use, stormwater management, and flood plain regulation. Land use regulations often require large basins be installed at a site's lowest point to manage all the runoff from a development. Over the past few years, there has been a move to a more dispersed strategy that manages stormwater close to its source. Used in tandem and located close to the point of generation, stormwater BMPs have been shown to be more effective than the single basin strategy in mitigating local flooding.

Two state programs that influence stormwater management are the Act 167 Stormwater Management program and Phase II of the NPDES program, often referred to as the MS4 program. Act 167 requires counties to prepare watershed-based stormwater management plans for designated watersheds. Through the watershed approach, upstream control in one municipality resulting in downstream flooding in another municipality is avoided. The county has completed plans for 10 of its 17 watersheds; a county-wide plan is being considered to complete the remaining plans and update the existing ones. The MS4 program requires the county to develop a stormwater program to address stormwater discharges from county facilities.

### What's New

- MS4—Pennsylvania revised and reissued the MS4 permit requirements in 2011. The Municipal Separate Storm Sewer (MS4) program requires the county to manage runoff from county-owned sites. The county's stormwater program must include:
  - Education and Outreach
  - Staff Participation
  - Illicit Discharge Detection and Elimination
  - Stormwater Management During Construction
  - Post-Construction Stormwater Management
  - “Good Housekeeping” in County Operations
- Stormwater BMPs—Best Management Practices (BMPs) treat stormwater as a resource. BMPs are replacing the “one large basin” strategy. Many smaller BMPs are being used in tandem, close to where the runoff is forming. BMPs include:
  - Naturalized basins
  - Reduced or disconnected impervious surfaces
  - Rain gardens
  - Porous pavement
  - Infiltration basins or trenches
  - Sediment forebays
  - Stormwater ponds
  - Constructed wetlands
- Act 167 Planning—Stormwater plans were adopted in 2011, in compliance with Act 167, the Pennsylvania Stormwater Management Act for these watersheds:
  - Tookany-Tacony/Frankford watershed
  - Valley Creek watershed
  - Headwaters of the Perkiomen
  - Pennypack watershed
- The county has developed a model floodplain ordinance that municipalities can adopt to maintain compliance with the National Flood Insurance Program. The ordinance can be found on the county planning commission website.

**FIGURE 117: Impacts to the Hydrologic Cycle from Development**



When rain falls on **undeveloped land**, half of it soaks into the ground, replenishing groundwater or soil moisture.



As land is developed, even at **rural densities**, there is a loss of vegetation, and an increase in hard surfaces. In this scenario, runoff doubles, and there is a corresponding loss of 10% or more in infiltration.



**Suburban style development** has even more hard surfaces, in the form of rooftops, roads, sidewalks, and compacted soil.



Because of impervious surfaces, over 50% of rainfall can become runoff in **boroughs and older urban areas**.



*Stormwater BMPs, like the raingarden on the left and the porous pavement on the right, can be used to capture runoff from impervious surfaces. Once captured, the rainwater can be allowed to infiltrate into soil, or it can be released slowly to prevent flooding. Often the stormwater that flows through a BMP is filtered and cooled, so that impacts to the receiving stream are minimized.*



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#### PLANNING ISSUE

*As conventional energy costs rise, conservation efforts and more affordable and renewable alternatives are sought. The development of natural gas fields in upstate Pennsylvania may significantly change the energy picture in the county.*

### Energy

Energy has become a crucial issue not just for the nation as a whole, but also for Montgomery County, where energy consumption has increased over the past five years by 4.23 %. How the energy that drives our society is created, transmitted, and used is constantly changing.

#### Electricity

The electric distribution system in the county is owned by PECO, PPL, Metropolitan Edison and two municipalities—the boroughs of Lansdale and Hatfield which each own electric distribution systems. Both boroughs purchase bulk amounts of electricity in order to service their residents and businesses. In addition to those who distribute electricity, other companies sell electricity to customers within the county under Pennsylvania's utility deregulation program.

The primary source of public electricity in Montgomery County is the 2,284-megawatt Limerick Nuclear Power Station, the second largest power plant in Pennsylvania. Other public electric power plants operating in Montgomery County include the Covanta Plymouth Waste to Energy Plant and the Cromby Generating Station until it was retired in 2011. Many large private facilities generate their own power, such as Merck West Point Power Plant and the cogeneration facility at Einstein Medical Center Montgomery. Other Montgomery County residential and business electric power needs are met through electricity transmitted into the county from other facilities owned by PECO, Metropolitan Edison, PPL or other electric generators participating in the Pennsylvania Jersey Maryland (PJM) Interconnection. The PJM Interconnection L.L.C., which is based in Montgomery County, provides electrical transmission service and generation marketing to nearly 150 electric generating companies in the mid-Atlantic region and includes 540 generating units with 62,567 megawatts of generating capacity.

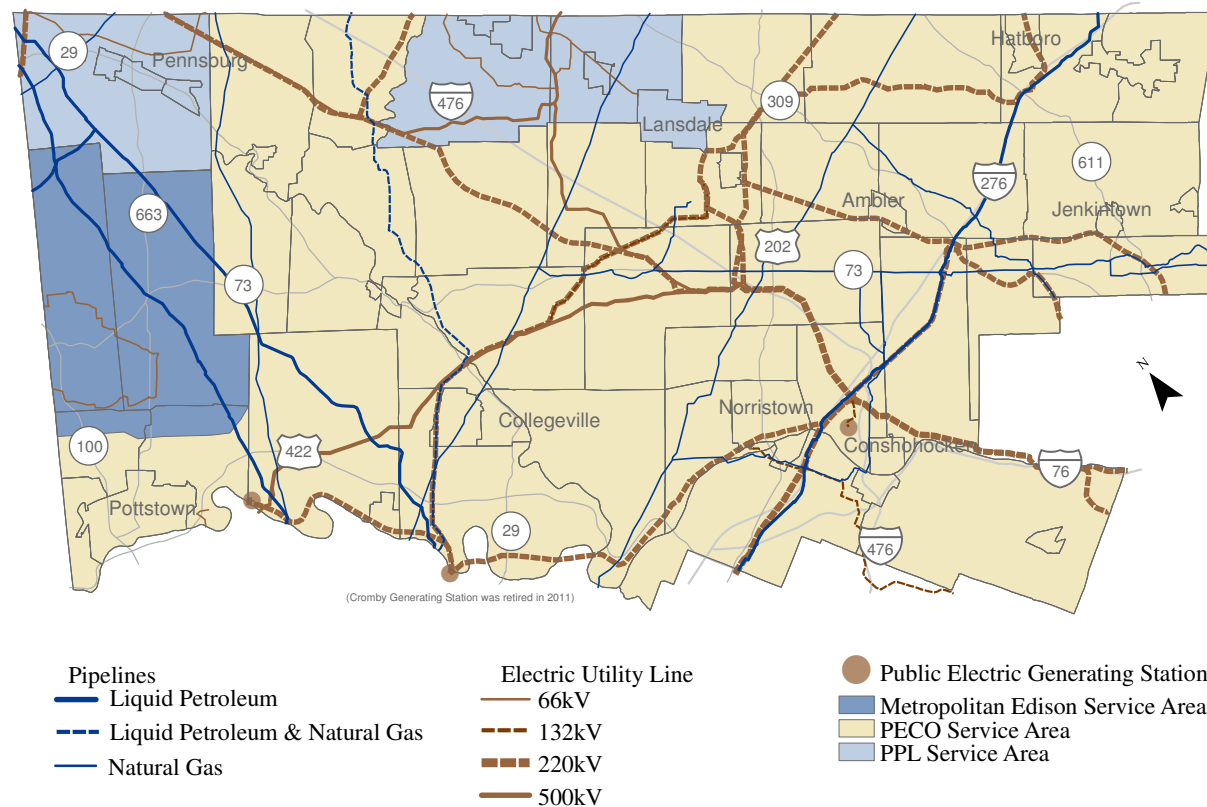
#### Gas Service

PECO provides gas service in most areas throughout the eastern and central portions of the county, while gas in developed portions of western Montgomery County is

### What's New

- Natural gas found in the Marcellus Shale deposits is being extracted, and this impacts Montgomery County in a variety of ways. Natural gas lines run through the county, natural gas products are shipped throughout the county, residents and businesses in the county are consumers of natural gas, and a portion of the county's drinking water comes from the Marcellus Shale region.
- A natural gas deposit, the South Newark Basin, lies beneath a portion of the county. While the South Newark deposit may be large, there appears to be no imminent pressure to begin extracting the gas due to a drill moratorium until 2018 and the lack of economic incentives to drill at this time.
- Montgomery County has seen many renewable energy projects completed over the last decade. These projects include a large number of geothermal systems at schools and other institutions, and solar facilities on residences, businesses and institutions. Some examples include solar installations at the Morris Arboretum and on Colonial School District property. Many of these projects were aided financially through state and federal incentive programs, especially solar projects. As these sources of funding have dwindled, it has become more difficult to fund solar projects. New legislation and creative financial ideas may spur renewable energy projects in the future.
- Electric and natural gas vehicles are becoming more available and are being supported by state incentives. Natural gas fueling stations are located in King of Prussia and are planned for PA Turnpike rest stops throughout the state. Electric vehicle charging stations have been installed at the King of Prussia Mall, Blue Bell campus of Montgomery County Community College, and at the Upper Merion Township Building among other private locations.

**FIGURE 118: Energy Transmission Network**



Source: Montgomery County Planning Commission

**FIGURE 119: Energy Consumption**

SECTOR TYPE	2005 ENERGY DATA	2010 ENERGY DATA	% INCREASE	2010 DVRPC REGIONAL ENERGY DATA
Commercial	2,530,225,190 kWhs	2,547,692,871 kWhs	0.10%	16,873,419,029 kWhs
Industrial	3,276,172,879 kWhs	3,865,065,814 kWhs	1.20%	18,864,077,138 kWhs
Residential	3,239,520,283 kWhs	3,286,547,506 kWhs	1.02%	20,697,378,414 kWhs
Motor Vehicle Trips	48,463 BTUs	49,097 BTUs	1.01%	279,458 billion BTUs
Off-road Vehicles & Equipment	3,477 billion BTUs	3,847 billion BTUs	0.9%	20,927 billion BTUs

Source: The information provided in Figure 113 is provided by DVRPC as part of their Regional Greenhouse Gas Emissions Inventory. For details on DVRPC's methodology and for more information please visit <http://www.dvrpc.org/energyclimate/inventory.htm>

kWhs—kilowatt hours  
BTUs—British thermal units

provided by UGI Corporation. Both providers obtain gas supplies from interstate gas transmission companies.

### Renewable Energy

The use of renewable sources of power and electric energy, including those using sun, wind, geothermal and water power, helps reduce reliance on fossil fuels and nuclear power. Though renewable energy facilities should be encouraged, care needs to be taken in siting them in order to address various safety, aesthetic and other regulatory issues associated with them. Also, cogeneration facilities, such as burning waste for energy, are another source of renewable energy.

### Energy Conservation

Site design and planning considerations can have an impact on the quantity of power used for heating and cooling as well as the fuel required for transportation. Energy conservation can begin with land use decisions. Integrating various types of land uses and promoting alternative transportation can lessen the use of the automobile. Certainly, the revitalization and reuse of existing developed areas and brownfield sites can yield significant energy conservation benefits. Site design decisions involving the enhancement of solar access and the reduction of summer heat through trees are also significant measures to be taken to reduce energy reliance.

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#### PLANNING ISSUE

*Antenna placement continues to be a contentious issue in many communities, despite the need for providers to fill gaps in their service areas.*

### Communications

Communications technologies—radio, television, wireless phone, satellite, cable, and internet services—change constantly, and have radically changed the way county residents communicate and seek out information.

#### *Wired Phone Service*

Verizon provides a wired phone and Internet network throughout the county with the exception of an area around Gilbertsville which is serviced by Windstream Communications (which purchased carrier D & E Communications in 2009). To meet the significant demand for more rapid and clear transmission of data, Verizon has installed fiber optic cable in several areas within the county with large office facilities. More recently, Verizon has begun to offer residential fiber optic service—commonly known as FiOS—across much of Montgomery County. It is a bundled internet access, telephone, and television service. Comcast provides a similar bundle of services under the brand XFINITY to Montgomery County customers; this includes cable, high-speed internet, and phone services.

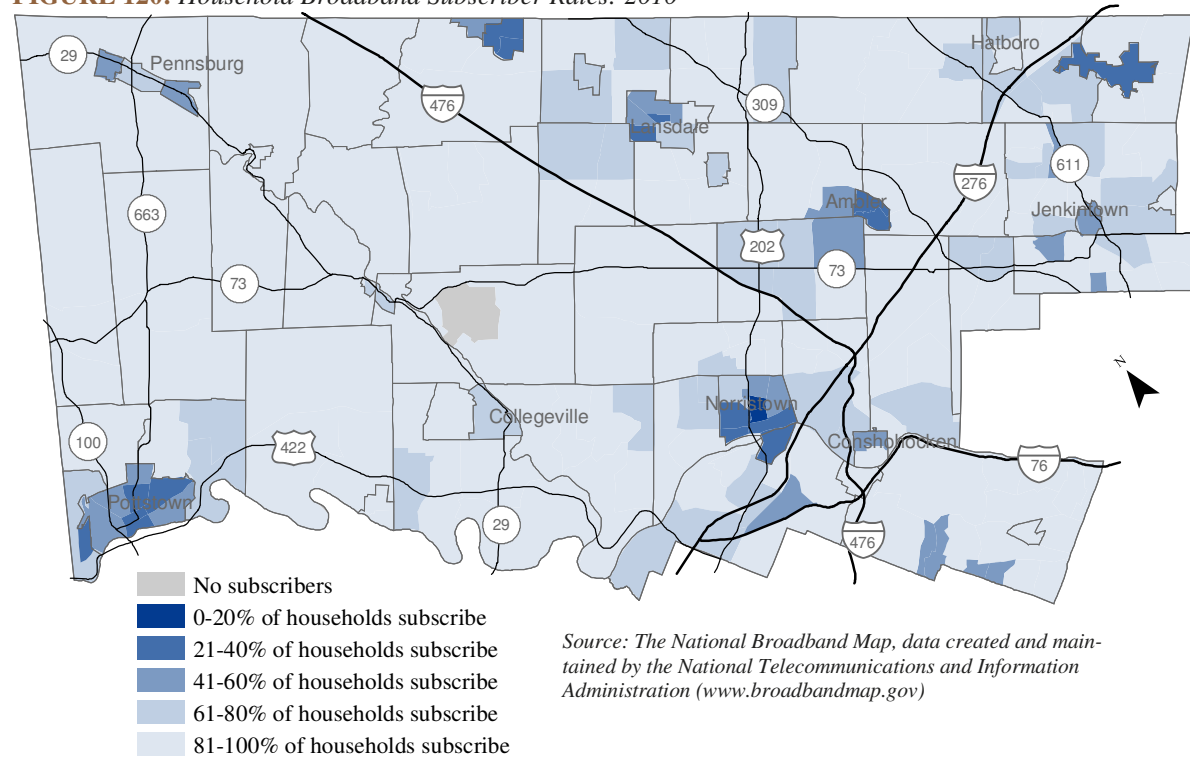
#### *Broadband*

Broadband—that is, a permanent high-speed connection for both transmitting data and telecommunications—has become a vital part of the county's infrastructure and economy. It has connection speeds considerably higher than the standard 56 kbit/s dial-up modem speed. Cable, ADSL, VDSL, and wireless are all types of broadband access. Broadband access is more expensive than dial-up access, yet Americans are increasingly gaining access to the internet through increases in broadband use at home as well as through smartphones. This may change the emphasis on connectivity away from *household* broadband subscribership to investments in high-speed internet access more broadly. The county's future economic growth as an employment hub is intricately tied to easy and affordable broadband access. Subscriber rates, as shown on the next page, vary across the county and seem to be lower in the county's boroughs or similar downtown areas, and may sometimes be lower in areas with lower household median incomes.

### What's New

- The digital divide—that is, the divide between those with high speed internet connectivity and the resulting computer skills and those without—is a growing concern in Montgomery County, the region, and across the country. The cost of owning a computer and having reliable internet connectivity is a cost that not everyone can afford. Those without permanent housing may lack a place to access the internet as well. These barriers to digital literacy may become a barrier to economic growth and the provision of social services as more resources and information are exclusively shared on the internet.
- Many households are getting rid of “landline” telephones and turning exclusively to cellphones. Preliminary results from the January–June 2011 National Health Interview Survey (NHIS) indicate that the number of American homes with only cell phones continues to grow. More than 3 of every 10 American homes (31.6%) had only cell phones during the first half of 2011—an increase of 1.9 percentage points since the second half of 2010. Many people receive all or almost all calls on their cell phones despite also having a landline telephone. This trend, combined with increasing wireless internet access, will put pressure on the wireless cellular network.

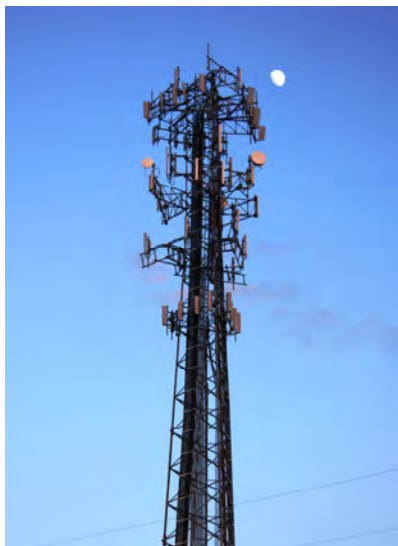
**FIGURE 120: Household Broadband Subscriber Rates: 2010**



**Wireless Phone Service**

Several companies, including T-Mobile, Verizon Wireless, Sprint, AT&T, and Metro PCS, are licensed to operate a cellular service network in Montgomery County. The networks consist of communications cells, which include an antenna and communications equipment to send and receive wireless signals to be connected to wired phone networks. Each antenna can only handle a limited number of calls, so as cellular use in an area grows, additional towers are needed to manage new users.

Many antennas are placed on towers, and normally new towers must allow for the co-location of antennas of multiple providers. When feasible, water tanks, existing buildings, or other structures are used to house antennas. Antenna placement in more developed areas of the county may be a contentious issue if the bulk of the antenna cannot be easily masked. Where new communications towers are needed, the tower structure's design and color can blend into its surroundings. Techniques to further disguise the tower such as artificial tree limbs, flag pole arrangement, or other elements can also be employed if appropriate.



*Wireless communications antennas may be hidden within structures (as in the church steeple on the right), placed in plain view, or put on existing structures like the power line on the left.*



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#### PLANNING ISSUE

*Technological improvements, cooperation, and consolidation have helped the county's fire, police, and ambulance services maintain a high level of emergency services, but fiscal constraints and staffing concerns remain.*

### Emergency Services

In Montgomery County, police, fire, and ambulances provide emergency services.

#### Police

Police services in Montgomery County occur primarily at the municipal level. There are more than 1,200 full time police officers employed by the county's municipal police departments. A regional police force, the Upper Perkiomen Police, covers Pennsburg and East Greenville Boroughs. Perkiomen, Salford, Skippack, Upper Frederick, Upper Hanover, Upper Salford and Worcester Townships, as well as Red Hill, Schwenksville, and Trappe Boroughs are covered by the Pennsylvania State Police barracks located in Skippack Township. Additional law enforcement presence includes a branch field office of the Federal Bureau of Investigation, the county's Office of the District Attorney and its Detectives Bureau, and the county Sheriffs.

#### Fire

Volunteers partially or completely staff all fire departments in the county. Some municipalities have full-time or part-time paid professional firefighters alongside the volunteer staff, and municipalities may provide some funding through committed taxes or from operating budgets. Many municipalities have a fire marshal who is responsible for fire prevention, as well as the local municipal and volunteer fire companies. The county's Department of Public Safety operates the Montgomery County Fire Academy, which trains and certifies firefighters from this and other counties. There are currently 108 stations across the county.

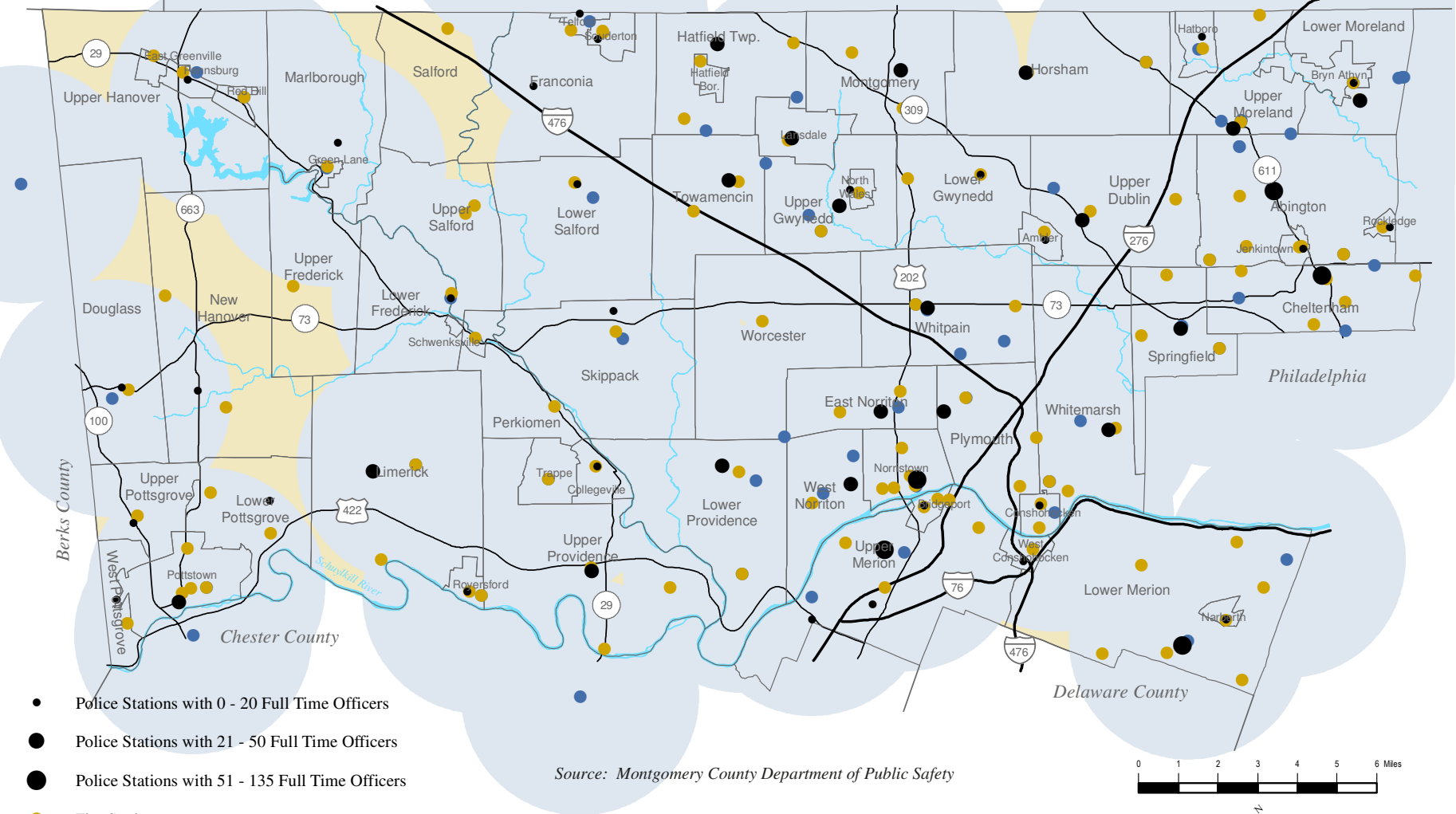
#### Ambulances

Ambulance services are primarily provided by state-licensed private nonprofit organizations. Ambulance services are a part of emergency medical services (EMS), which include paramedics, emergency medical technicians, and quick responders. The county's EMS system is coordinated by the Department of Safety within the EMS Division by the State's Act 45 of 1985. Many municipalities provide limited funds for ambulance companies. Ambulance stations generally have a combination of paid and volunteer staff.

### What's New

- The county established its 911 system in 1996 and will launch Next Generation 911 in 2014, which will include a comprehensive upgrade to the current emergency radio system. The current dispatch system is in need of an upgrade, as well as a lot of new equipment and software, including nearly all of the police radios. These components have reached the end of their useful life, with parts and service no longer available.
- The consolidation of local fire companies has become more common lately, as both willing volunteers and budgets have gotten tighter. A recent merger of the Humane Fire Co. with the Norristown Hose Fire Co., for example, has dropped the number of stations in Norristown from five to four.
- Improvements in technology have changed the way the county responds to requests for help. For example, all emergency and police dispatch calls are now routed through the county's 911 call center, located at the county's Emergency Operations Center (EOC) in Eagleville, which was expanded and upgraded in 2007. In addition to the call center, the EOC houses the emergency operations control room, and specialized vehicles and equipment needed for responding to different emergency events. And emergency response vehicles are equipped with computer aided dispatch mapping programs that help pinpoint the home address or cell phone call location of the request for assistance.
- Social media resources have changed how the county communicates information. The county's Department of Public Safety posts information to its Facebook page about local emergencies as well as emergency preparedness. And ReadyNotifyPA is a text messaging alert system available to Southeast Pennsylvania residents looking to receive updates on emergencies, severe weather situations, and road closures. More information about this service can be found at <http://www.readynotifypa.org>.

**FIGURE 121: Emergency Service Locations**  
Lehigh County



Source: Montgomery County Department of Public Safety

**FIGURE 122: State and County Crime Statistics: 2010**

	TOTAL PT 1 CRIME INDEX	CRIME RATE (PER 100,000 POPULATION)	VIOLENT CRIMES	PROPERTY CRIMES	MURDER	RAPE	ROBBERY	BURGLARY
Montgomery County	16,953	2,141.5	1,565	15,388	18	123	519	2,161
Pennsylvania	322,314	2,537.4	46,310	276,004	657	3,455	16,314	54,845

Source: PA Uniform Crime Reporting System (UCR) and the PA State Data Center

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#### PLANNING ISSUE

*Investment in some buildings, particularly county-owned facilities, has been limited over the years as budgets have tightened and costs have been reigned in.*

### Other Governmental Facilities

The county is home to a variety of government facilities, including buildings associated with federal, state, county, and municipal governments.

#### Federal Facilities

The 80 or so post offices in the county are our most common federal government facility. Post offices can be divided into two categories: delivery and nondelivery (which provide post office boxes only and do not deliver mail to residences and businesses). Some smaller nondelivery post offices are privately owned; most larger delivery post offices are owned and operated by the United States Postal Service (USPS). Although the general trend has been for the USPS to close smaller post offices and consolidate services, no post offices in Montgomery County have closed in recent years.

Other federal offices include the United States Department of Agriculture Eastern Regional Research Center in Springfield Township and sites owned or operated by the Nuclear Regulatory Commission, Internal Revenue Services, National Park Services and the Federal Bureau of Investigation. The Willow Grove Air National Guard Base, as it is now called, closed in September 2011 but the Air Force will retain administrative offices on the property.

#### State Facilities

One major state facility is the State Correctional Institution at Graterford in Skippack Township. Built in 1929, it now detains approximately 3,000 inmates, about 8% of the state's total prison population and the largest population of all prisons operated by the Pennsylvania Department of Corrections. The official capacity of the facility is about 2,550 inmates.

A recent addition to the county's state facilities is the Department of Environmental Protection's offices in Norristown, which was constructed on a brownfield site and opened its doors in 2004. And besides the PennDOT District 6-0 headquarters in Upper Merion, there is the District 6-1 maintenance office and a driver testing facility in East Norriton Township.

### What's New

- An expansion at the State Correctional Institution at Graterford is currently underway. This project, which has a total allocation of \$400 million, entails the construction of a new prison facility which will replace the existing Graterford facility. There will be 4,100 beds—a big increase—as well as administrative and support buildings, all located in the immediate vicinity of the existing facility.
- A recent expansion at the county's correctional facility created space for more than five hundred prisoners on work-release or serving sentences for DUI and other nonviolent crimes. This construction, which took place from 2010 to 2011, has helped prevent overcrowding. Originally built to house 1,240 inmates and later expanded to accommodate 1,500 inmates, the population has exceeded 1,700 prisoners in recent years.
- Municipalities looking to the future have built new municipal buildings and other facilities over the last ten years, including Red Hill Borough and Lower Salford Township. Hatfield Township replaced its municipal pool facility with a new complex in 2007 that includes two pools and a bathhouse. Horsham Township built a new library in 2004, close to the township building as well as several local schools.



*Hatfield's new pool is a big draw for local residents.*

Among the oldest state facilities in the county is the Norristown State Hospital, built in 1879. The Department of General Services and the Department of Public Welfare oversee the hospital; the future use(s) of this 200+ acre site are unclear.

There are additional state owned or operated facilities in the county, including several buildings in Evansburg State Park—one is used as headquarters for the park and others serve as maintenance facilities. Other state owned parks include the Norristown Farm Park and Fort Washington State Park.

### County Facilities

The county owns buildings in several of its 62 municipalities. The Montgomery County Correctional Facility is in Lower Providence with about 1,000 inmates. The county’s Human Services Center, at the site of the former Sacred Heart Hospital, primarily consists of offices and related uses. The county purchased this building soon after the hospital closed, but sold it in early 2014. The county owns the office building known as One Montgomery Plaza, which was bought in 2006 and is located across the street from the county’s courthouse.

The courthouse was built in 1849 and has been renovated over the years. It provides offices, courtrooms, and meeting rooms for the county’s court system. The county also has thirty district court offices in places like Bridgeport, Ardmore, and Limerick. The Eastern Montgomery County Courthouse Annex is in Willow Grove, with branch offices of various county services. The county owns the former county prison in Norristown, which is currently used for storage space. Other facilities, such as the two community college campuses, are discussed elsewhere in this publication.

### Municipal Buildings

Each municipality in the county has a building for conducting business. Municipal buildings may include ancillary uses such as police stations, libraries, firehouses, public works facilities and ambulance stations—although some of these uses may be housed in satellite locations.



*Government facilities in Montgomery County include county facilities like its courthouse and Emergency Operations Center, as well as federally-owned and operated post offices, municipal buildings, and state offices.*





**CULTURAL AND  
EDUCATIONAL RESOURCES**



### Historic Resources

Scenic Roads and Vistas

Schools

Child Day Care

Libraries

Arts and Culture

#### PLANNING ISSUE

*Though many of the county's historic properties are preserved and well-maintained, this has not prevented many other historic homes, barns, and commercial buildings from being demolished every year.*

### Historic Resources

The preservation of Montgomery County's historic buildings and settings maintains the county's unique heritage but also creates new opportunities for these sites to become 21st century destinations. From boroughs that sprang up around railroad depots to homes where George Washington (literally) slept, the county has a compelling history that shines through these many resources.

#### *Historic Resource Surveys and Inventories*

Several surveys and resulting inventories of historic resources have been conducted over the last several decades. In 1975, the Montgomery County Planning Commission published the Inventory of Historic and Cultural Resources, an inventory of historic resources then considered to be significant, but did not include documentation of all buildings 50 years old or older. A follow-up survey of historic resources in some municipalities was conducted in 1986. More recent surveys have been prepared by the Conservancy of Montgomery County, a nonprofit preservation organization. And as part of their own historic preservation initiatives, local municipalities or local historic societies ranging from Lower Merion to Schwenksville have conducted historic resource surveys.

#### *Historic Districts*

Many of the county's municipalities have established historic districts to maintain additional controls over local historic sites. Pennsylvania law allows historic districts to be established in two ways: (1) as a historic preservation ordinance/district within a municipal zoning ordinance under the state's Act 247 (the Municipalities Planning Code) or (2) historic preservation ordinances/districts overseen by a Historical Architectural Review Board (HARB) as authorized under Act 167 (the Local Historic District Act) of 1961. Generally, districts established under Act 167 have the strictest standards, are more complex, and require more time and expertise than those authorized by Act 247. Regardless of the method, municipalities have the right to establish historic districts and to regulate the erection, reconstruction, alteration, restoration, demolition or razing of buildings within historic districts.

### What's New

- In June 2012, Pennsylvania became the 30<sup>th</sup> state to have a historic state tax credit. The Historic Preservation Incentive Act will be a companion to the very successful federal tax credit program, and offers a 25% state tax credit for the rehabilitation of historic structures also using the 20% federal tax credit.
- The county has many historic preservation success stories. Springfield's Black Horse Inn was in active use through much of the 20th century but was sold to a developer with plans to develop this site into a CVS. With much support from the local community, Springfield Township took ownership of this property in 2004 and began restoration work.
- Much controversy arose over the teardown of the La Ronda property, in Lower Merion Township. After being sold, it was razed in the fall of 2009 despite much public outcry. This site lacked Class I designation under the township's historic ordinance, which left no legal remedies to prevent a teardown once the township's 90-day teardown moratorium expired. A more recent (and also controversial) demolition request was submitted for the William Penn Inn, which dates to 1799 and now houses 5 apartments on Lancaster Avenue.



Springfield Township's Black Horse Inn

One of the newest historic districts in the county is in Souderton Borough, with a district overlay within the downtown area. Cheltenham Township also has a HARB that oversees historic districts in LaMott and Wyncote. However, the township is also considering an overlay district to protect properties outside of these areas. Lower Merion Township has both an overlay district across the entire township as well as a HARB that oversees historic districts in Ardmore, Gladwyne, Mill Creek and Haverford Station.

*National Historic Landmarks and the National Register of Historic Places*

The Historic Sites Act of 1935 allows for historic resources to be designated as National Historic Landmarks—resources with a high degree of historic integrity which are significant to the nation and its history. The Secretary of the Interior, working with the National Park Service, is responsible for designating and maintaining the list of National Historic Landmarks, of which there are 13 in the county.

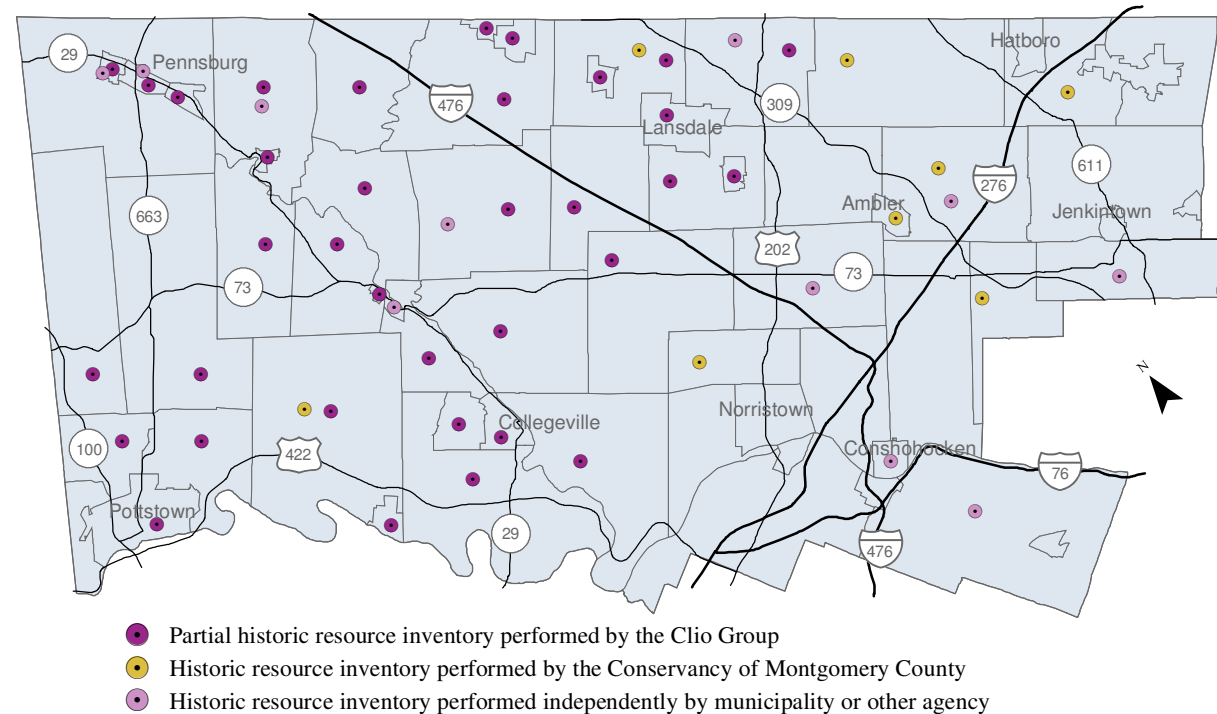
The National Register of Historic Places is the official federal list of important historic resources. This list goes beyond just National Historic Landmarks and includes buildings, structures (like bridges), objects, sites (such as cemeteries), and districts (such as the local districts mentioned above).

The Pennsylvania Historical and Museum Commission maintains and publishes a list of state historic resources that are listed (or are eligible to be listed) on the National Register of Historic Places. Sometimes the only reason a resource isn't in the National Register is simply

*Historic sites in Montgomery County range from religious to revolutionary. The Beth Shalom Congregation's synagogue, designed by Frank Lloyd Wright, is on the right. The bottom photo is a Civil War reenactment at Pennypacker Mills.*



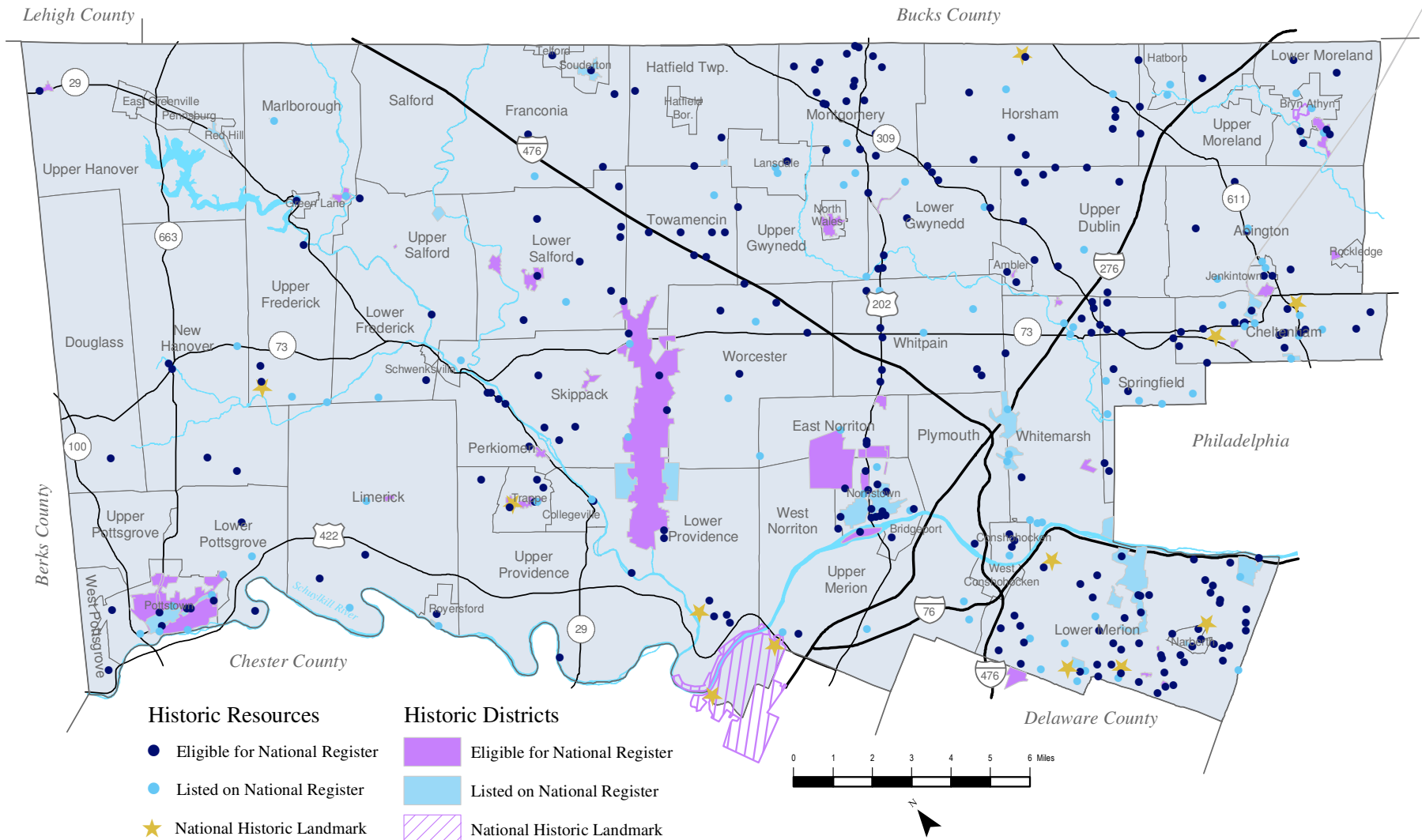
**FIGURE 123:** *Communities with Historic Resources Inventories*



*Source: Montgomery County Planning Commission*

**CULTURAL AND EDUCATIONAL RESOURCES**

**FIGURE 124: Historic Properties (National Register)**



Source: 2012 Pennsylvania Historical and Museum Commission data

**FIGURE 125: Montgomery County's National Historic Landmarks**

- ★ Bryn Athyn Bor—Pitcairn Residences
- ★ Cheltenham Twp—Beth Sholom Synagogue
- ★ Cheltenham Twp—Grey Towers
- ★ Horsham Twp—Graeme Park (Keith House)
- ★ Lower Merion Twp—M. Carey Thomas Library
- ★ Lower Merion Twp—Merion Friends Meeting
- ★ Lower Merion Twp—Merion Cricket Club
- ★ Lower Merion Twp—Woodmont
- ★ Lower Providence Twp—Mill Grove
- ★ Trappe Bor—Augustus Lutheran Church
- ★ Upper Frederick Twp—Henry Antes House
- ★ Upper Merion Twp—Valley Forge National Historic Park
- ★ Upper Merion Twp—Washington's Headquarters (in Valley Forge National Historic Park)

because no one had requested that it be listed. Listed and eligible properties include the five historic resources that are owned by Montgomery County:

- **Mill Grove** - Built in 1762 and home of John James Audubon, the well known naturalist. The property is a National Historic Landmark.
- **Peter Wentz Farmstead** - Established in 1744 by Peter and Rosanna Wentz, the Wentz farm served as the Revolutionary War headquarters for General Washington during the fall of 1777.
- **Pottsgrove Manor** – Built in 1752 for John Potts, ironmaster and founder of Pottstown. Once situated on a 1,000 acre plantation, only four acres of property remain today.
- **Sunrise Mill** - The grist and sawmill, built in 1767 on the Swamp Creek, supplied ground grain and sawn lumber to generations of farmers, and to the troops during the American Revolution.
- **Pennypacker Mills** – This home was originally built in 1720 and is fully furnished with antiques collected by the former Governor Samuel W. Pennypacker.

The county’s buildings and sites listed in or eligible for the National Register are shown in Figure 124. Eligible structures like bridges and railroad lines are not on this map. A few of these sites are listed below to illustrate the range of resources in the county and how diverse its historic landscape has become.

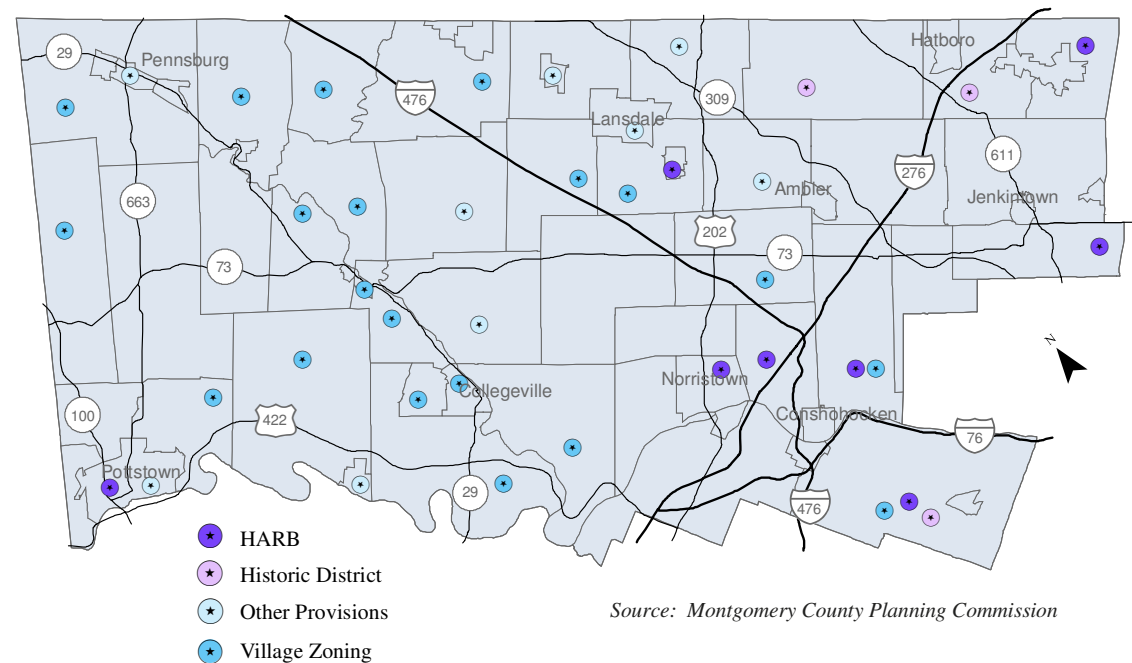
- **Montgomery Cemetery** - In West Norriton Township, this cemetery was founded in the late 1840s and is the final resting place of several high-ranking Civil War officers and a former Pennsylvania governor.
- **Evans-Mumbower Mill** - This site in Upper Gwynedd Township is home to a historic grist mill that was in use until 1930.
- **Henry Antes House** - The Antes House, in Upper Frederick Township, is significant for its builder (Henry Antes) being a notable religious and political figure of his time. In addition, this home (built in 1736) is an example of Moravian settlement houses.

- **Barley Sheaf Inn** - Once a historic inn and tavern in East Norriton Township, this 2.5 story, plastered stone building was once home to Montgomery County’s first courthouse.
- **The Keswick Theatre** - In Abington Township, this theater is significant for its architecture, commerce, recreation and culture. Open since 1928, it is a restored theater that attracts top acts from around the world and crowds from around the region.



People have been dying to get into West Norriton Township’s Montgomery Cemetery, one of the county’s historic resources, for more than 150 years.

**FIGURE 126:** Communities with Historic Districts, Review Boards, and Other Similar Zoning Elements



Source: Montgomery County Planning Commission

## CULTURAL AND EDUCATIONAL RESOURCES

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### Scenic Roads and Vistas

Roads can be so much more than a way to get from place to place. A scenic road provides a visually pleasant experience for drivers, bicyclists, pedestrians, and other travelers.

The federal government established the National Scenic Byways Program in 1991, and since then has funded more than 3,000 national or state byway projects across the 50 states. This program designates certain roads as National Scenic Byways or All-American Roads based on their archaeological, cultural, historic, natural, recreational, and scenic qualities.

Pennsylvania's Byways Program was started in 2001 and is coordinated by the state's Department of Transportation. Local byways are designated at the request of local communities; the state currently has 19 state-designated byways, the local Blue Route (Route 476) among them. However, this is more than just a scenic road preservation program, since so many roadways have more than just scenic qualities.

Scenic roads and vistas contribute to the quality of life of Montgomery County residents as well. The visual beauty, charm, and history of the county's landscapes enrich daily life. As time passes, the county's scenic roads and the views from them are lost as farms and other open spaces develop.

The roads shown in Figure 127 have qualities that could be recommended for future designation. Roads should be designated only if protective measures are taken to maintain their scenic qualities.

### PLANNING ISSUE

*Scenic roads have qualities that people care deeply about but ultimately are difficult to protect. Although many communities encourage roadside beautification, most don't have the tools in place to preserve scenic roads and the views they offer.*

### What's New

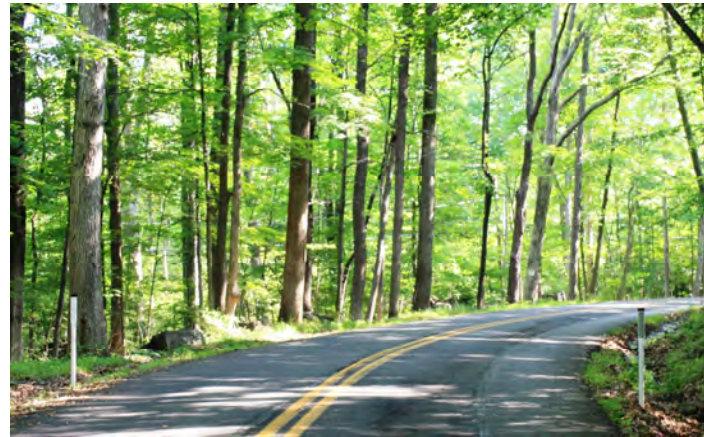
- Lately, billboard companies have brought challenges against many municipalities. These legal challenges have caught many officials off-guard, and have left some municipalities vulnerable to having billboards placed in less-than-optimal areas. Some municipalities, such as Hatboro Borough, are taking a proactive stance by passing billboard overlay ordinances to designate appropriate areas for billboards...before a legal challenge takes place.
- Worcester Township's 1997 Land Preservation District helps to preserve scenic views by requiring that "(v)iews of neighborhoods from exterior roads and abutting properties shall be minimized by the use of changes in topography, existing vegetation or additional landscaping..."
- Over the past decade, many municipalities have invested in streetscaping initiatives to make local roadways more pleasant. Places like Souderton, Royersford, and Cheltenham have made their main thoroughfares much more attractive. This, in turn, has attracted new businesses, residents, and visitors.
- Other municipalities have looked to overlays along local corridors—think Ridge Pike in West Norriton Township—to encourage more landscaping and walkability as new development takes place.



*This new bridge along Kratz Road was designed in a context-sensitive way to be a good fit for its scenic surroundings.*

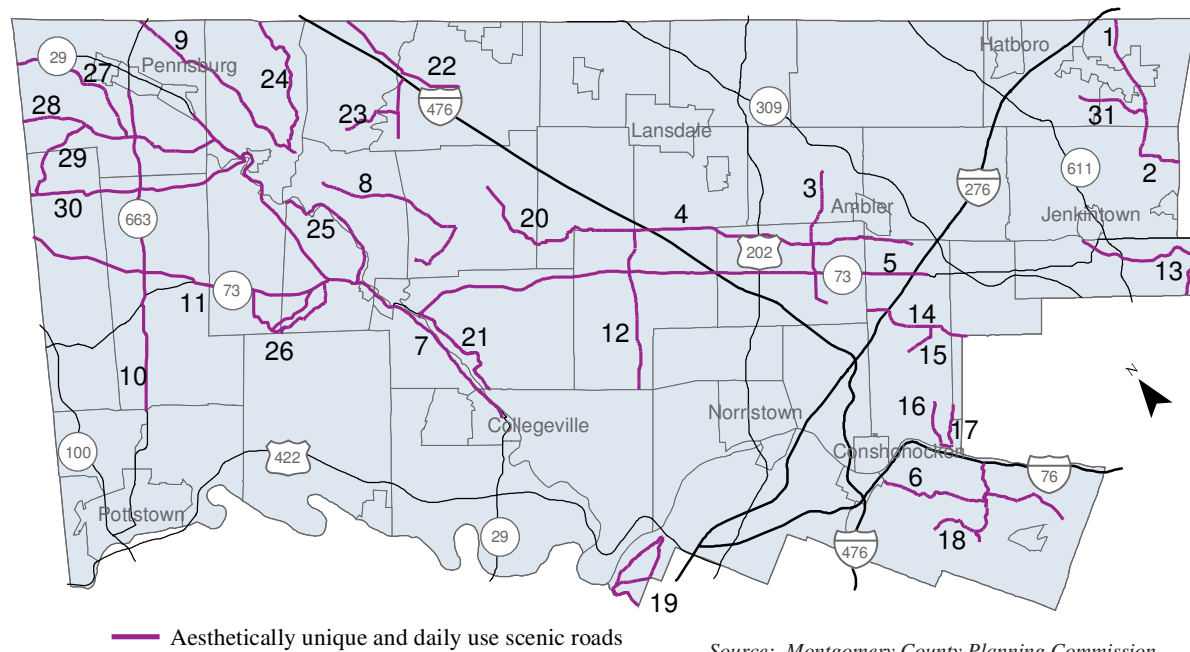
**What Makes a Road Scenic?**

- Distance and expanse of the viewshed
- Types of landscapes traversed
- Natural or built roadside features
- Reactions that the road evokes
- The broader setting of the area



Swamp Creek Road, in Marlborough Township, is among the county's scenic routes.

**FIGURE 127: Scenic Roads**



Source: Montgomery County Planning Commission

**Scenic Roads in Montgomery County:**

*Daily Use Roads*

1. Huntingdon Road
2. Moredon Road
3. Penllyn Pike
4. Morris Road
5. Skippack Pike
6. Conshohocken State Road
7. Route 29
8. Old Skippack, Bergey, and Salfordville Roads
9. Geryville Pike
10. Layfield Road
11. Hoffmansville and Big Roads
12. Valley Forge Road

*Aesthetically Unique Roads*

13. Tookany Creek Parkway
14. Stenton Avenue
15. Flourtown Road
16. Harts Lane
17. Manor Road
18. Old Gulph, Mill Creek and Williamson Roads
19. Valley Forge, North Gulph, Valley Creek Roads and Outer Line Drive
20. Stover, Quarry, Bridge, and Kriebel Roads
21. Perkiomen Creek, River and Creek Roads
22. Allentown Road
23. Morwood and Camp Roads
24. Swamp Creek Road
25. Hendricks, Salford Station, Kratz, Clemmer's Mill and Spring Mountain Roads
26. Faust, Grebe, Yerger, and Gerloff Roads
27. Water Street and Church Road
28. Philadelphia and Kutztown Road and Knight Road
29. Miller Road
30. Niantic Road
31. Terwood Road

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### PLANNING ISSUE

*For most school districts, the era of consistent high enrollment growth is over. In some places, schools may close, while in others there may be a need for modest school additions or redistricting.*

### Schools

Montgomery County has an excellent educational system that includes universities, colleges, public schools, and private schools. This system is known throughout the region and state as providing a strong education to its students. In the 2013-2014 school year, the system consisted of:

- Twenty-two active school districts serving 108,524 students. (Five of the school districts include areas outside of Montgomery County. Although Bryn Athyn is the twenty-third school district, it has no facilities.)
- A large variety of private schools accounting for approximately 20% of all students. This ratio has been slowly declining; it was approximately 26% in 1990 and 21% in 2000.
- Twenty-two colleges or universities with over 40,000 students. These range from national liberal arts colleges like Bryn Mawr, Haverford, and Ursinus to private for-profit schools, from small theological schools to the Montgomery County Community College with approximately 14,000 students on two campuses.)

After rapid increases, some school districts have experienced recent declines in enrollment, particularly districts where high population growth rates have slowed down. For example, the North Penn District's enrollment declined by about 900 students from 2000-2001 to 2011-2012 and is projected to continue declining over the next decade.

Other school districts in older areas, such as Upper Merion, have grown and are projected to continue growing. Some of this is due to new families moving into older housing, particularly as older generations move out. The Valley Forge Towers, for example, has had many long-time residents move to the Shannondale retirement community who have subsequently been replaced by young immigrant families.

**FIGURE 128:** *Public School Enrollment*

YEAR	ENROLLMENT
2000 - 2001	106,295
2013 - 2014	108,524
2020 - 2021	112,814

Source: PA Department of Education

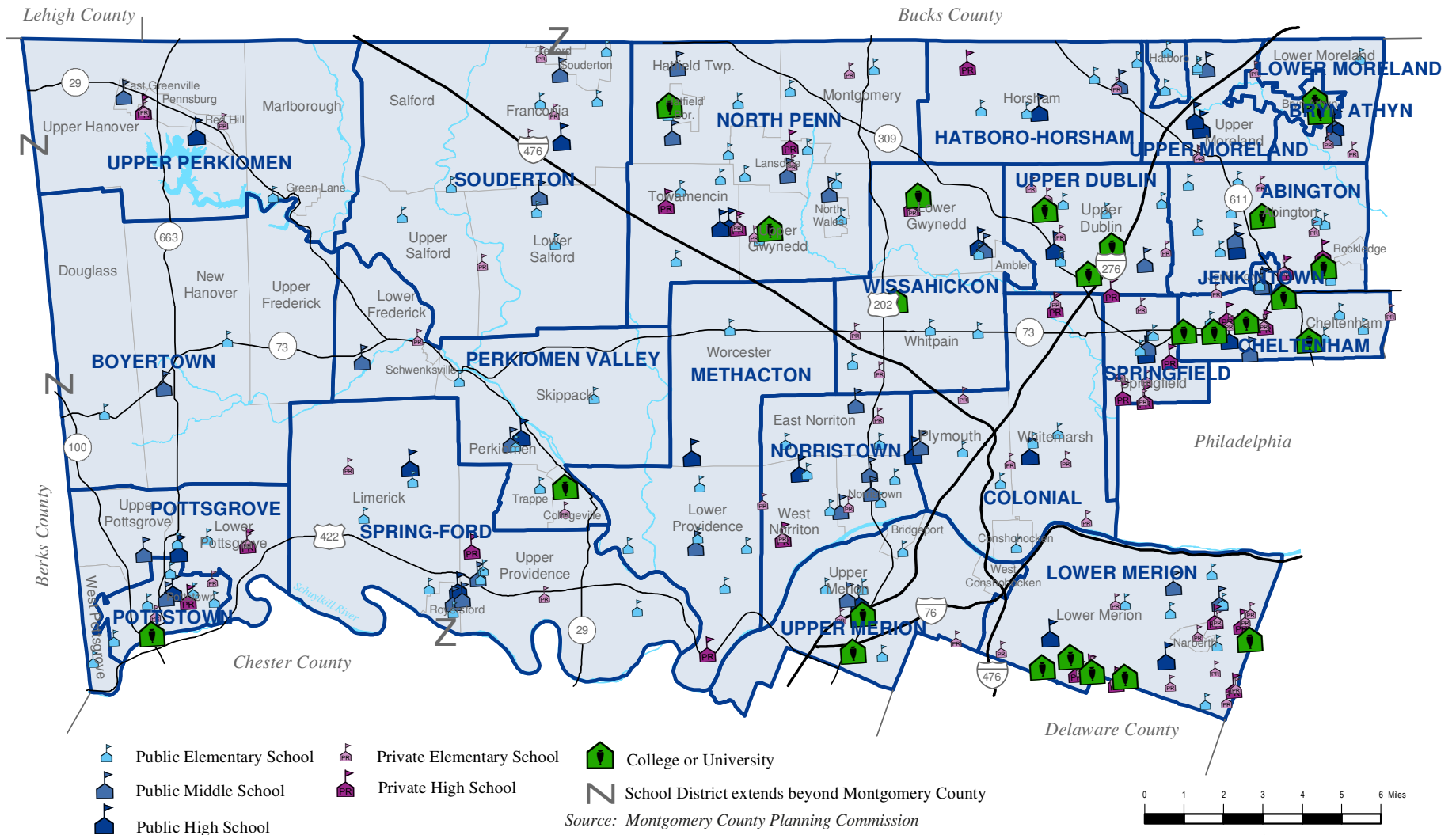
### What's New

The past decade was a busy time for the county's schools and colleges as many of them rehabilitated, replaced, expanded, and upgraded their school buildings.

- Lower Merion built two new high schools; Souderton moved its high school; Upper Dublin built a new high school; Perkiomen Valley built a middle school; Spring-Ford built grade centers for the middle years; and a number of districts added, replaced, or expanded elementary schools in addition to improvements at their middle and high schools.
- A number of private schools, such as Haverford, Germantown Academy, and the Shipley School added new buildings. The Archdiocese of Philadelphia closed and consolidated many elementary schools while also combining the Kennedy-Kenrick and St. Pious X High Schools into the new Pope John Paul II High School.
- Temple University moved its art program from Cheltenham to its main campus while Eastern University moved its Palmer Seminary from Lower Merion to Radnor. Episcopal Academy moved out of Lower Merion and sold its property to St. Joseph's University.
- A few school districts are considering closing an elementary school, including the Souderton, Perkiomen Valley, and Wissahickon Districts.



**FIGURE 129: Schools and Colleges**



**FIGURE 130: Montgomery County School-Aged Population**

YEAR	1970	1980	1990	2000	2010	2020	2030	2040
Total Population	623,799	643,371	678,111	750,097	799,874	823,564	873,361	894,486
Population Age 5 - 17	162,095	127,270	107,068	133,855	136,194	131,050	137,426	143,100
Percent of Total Population	26%	20%	16%	18%	17%	16%	16%	16%

Sources: U.S. Census, MCPC interpolation of DVRPC forecasts

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*Access to day care in the county's employment centers is sometimes limited.*

### Child Day Care

Nowadays, with many single-parent or two working-parent households, child day care is a critical component of the county's landscape, making life easier for families while increasing the size and flexibility of the county's workforce.

Child day care is primarily used by children who are 4 and under, although older children do use it for kindergarten and after school programs, with children up to age 12 sometimes in these programs. Most day care facilities close by 6 PM, and parents who work at night or in the evening often have trouble finding good care outside of typical working hours.

There are three types of child day care facilities regulated by the state, and one type, day care centers, has become more popular over the past decade.

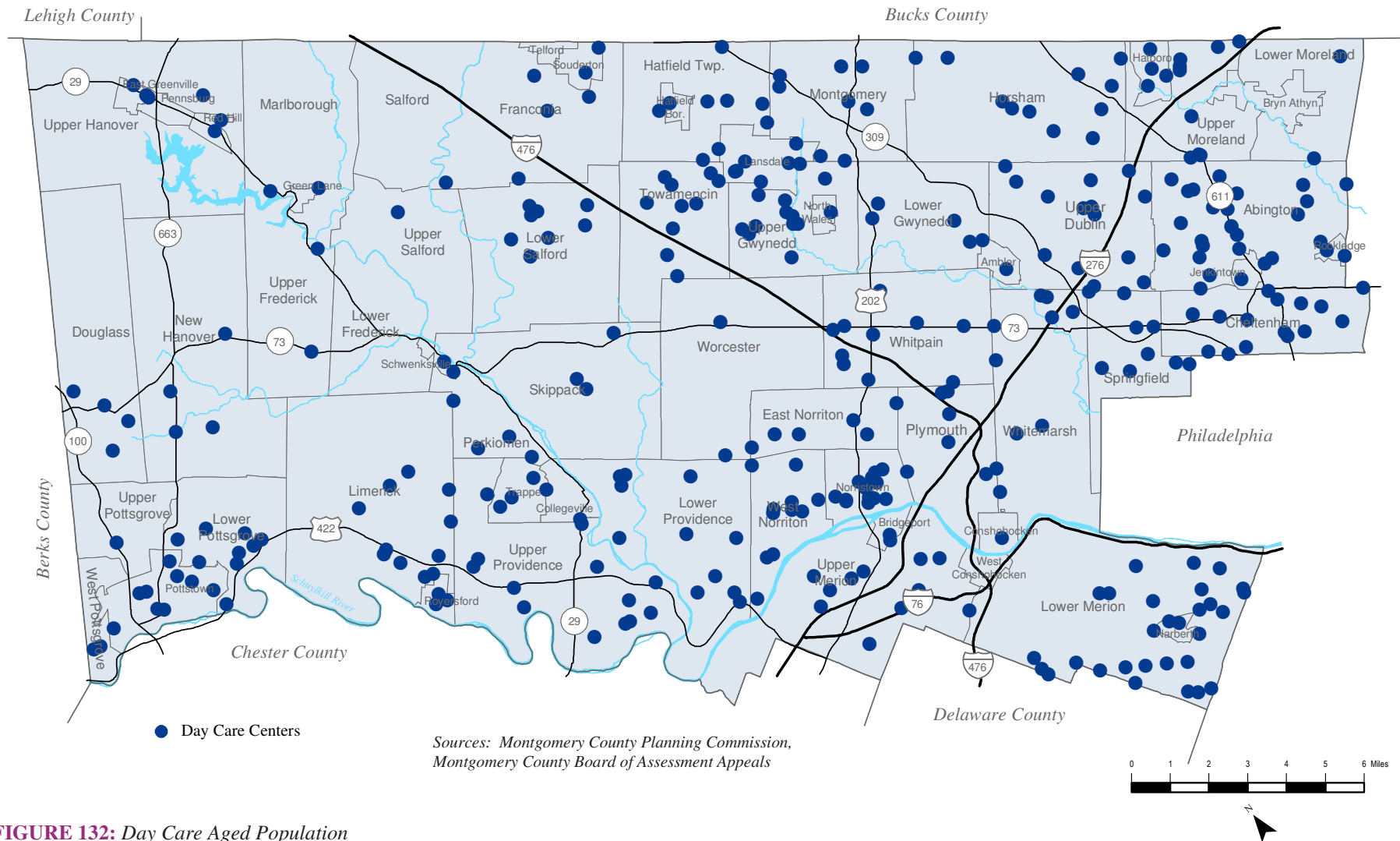
- Family Day Care Homes are family residences with up to six children. In 2012, there were 55 family day care homes in the county, as compared to 138 in 2001.
- Group Day Care Homes are family residences with up to twelve children. In 2012, there were 10 group day care homes, as compared to 16 in 2001.
- Day Care Centers, the most common type of child day care, are licensed facilities serving 7 or more children. In 2012, there were 356 day care centers, a significant increase from the 325 existing in 2001.

The need for child day care has increased. In 2011, there were 39,833 children under age 6 living in families where both parents work or their single parent was in the labor force. This was 72% of the children under 6 who were living with their parents, while in 2000 it was only 62% and a total of 34,647 children.

After remaining flat over the past decade, the number of children ages 0 to 4 is expected to increase slowly over the upcoming decades. Even so, if the trend of more families with small children having both parents work continues, there may be more demand for day care services.



**FIGURE 131: Day Care Centers**



**FIGURE 132: Day Care Aged Population**

YEAR	1970	1980	% CHANGE 1970-1980	1990	% CHANGE 1980-1990	2000	% CHANGE 1990-2000	2010	% CHANGE 2000-2010	2020	% CHANGE 2010-2020	2030	% CHANGE 2020-2030	2040	% CHANGE 2030-2040
Total Population	623,799	643,371	3%	678,111	5%	750,097	11%	799,874	7%	823,564	3%	873,361	6%	894,486	2%
Population Age 0 - 4	24,515	36,147	47%	45,837	27%	47,290	3%	47,305	0%	49,634	5%	52,330	5%	51,149	-2%

Sources: U.S. Census, MCPC interpolation of DVRPC forecasts

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*Libraries play an important role in any community—made only more challenging in tough financial times when funding falls short. Keeping libraries both fiscally strong and cutting-edge is a continuing challenge.*

### Libraries

Libraries not only give access to books, storytelling, and information, but also provide resources and activities for seniors, supply reference materials for entrepreneurs and job seekers, make computers and internet access available to anyone, and advance democracy by creating educated constituencies. Libraries are also meeting places, social outlets, and sources of entertainment—they show movies, host clubs and groups, present speakers and provide health screenings—frequently in places that don't always have other focal gathering spots.

As of 2010, about 49% of the county's population had a library card—about the same level reported in the last comprehensive plan. However, the circulation levels per capita have gone up—on average, an individual within the countywide population of library patrons checked 6.9 items out of the library per year.

There are a total of 35 libraries in the county. Aside from several township-level library systems, the Montgomery County–Norristown Public Library is a group of member libraries located across the county, many in smaller communities that might not otherwise be able to support a strong library on their own. And the Montgomery County Library and Information Network Consortium (MCLINC) provides both an information sharing network and interlibrary loans for many of the county's libraries.

In addition, the Montgomery County–Norristown Public Library operates several bookmobiles that make regular trips to municipalities without libraries, communities for the elderly, and day care facilities. There are also libraries in the county associated with colleges and universities, historical societies, businesses, religious organizations, environmental groups, legal groups, and medical groups. The library at Montgomery County Community College is open to all residents of the county. The Law Library of Montgomery County, located in the county courthouse, provides materials to the general public for legal research.

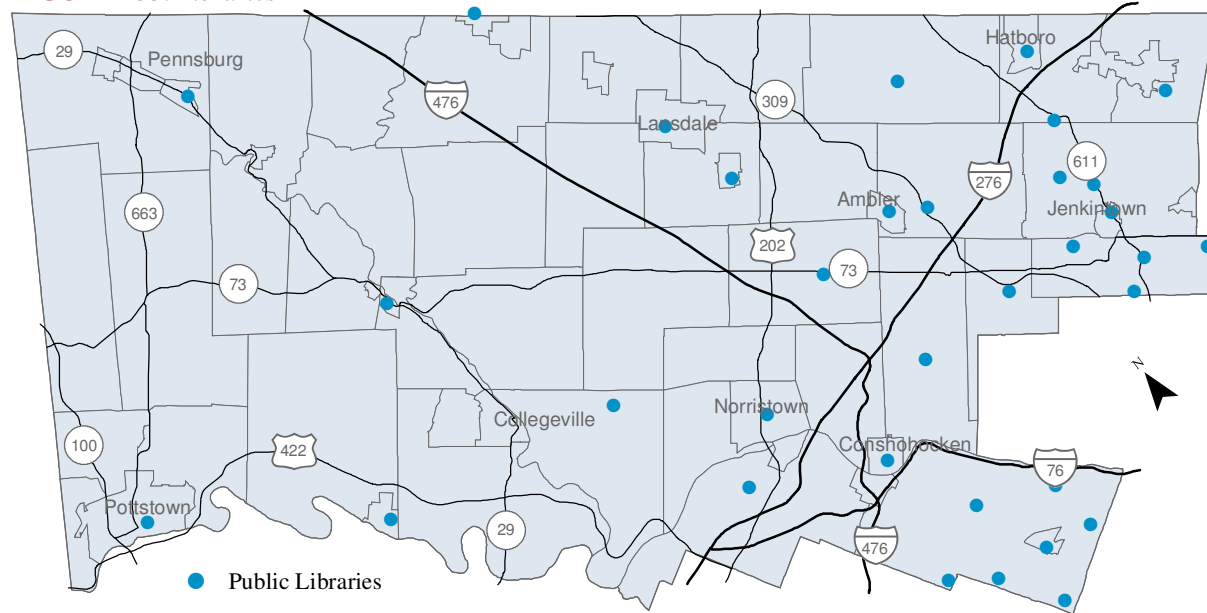
### What's New

Many of the county's libraries have moved, expanded, or renovated over the past decade:

- Horsham Township's library opened in October 2004 in a new 25,000 square foot building. A meeting room offers space for community events and book discussion groups, popular speakers, weekly storytime events, and afterschool programs.
- The Lower Merion Library System is in the midst of an ambitious renovation project at all of its branch libraries. Its main branch, the Ludington Library, reopened in September 2012. The Bala Cynwyd Library's renovations were completed in 2013.
- The North Wales Area Library moved into a newly-renovated space in the former Koaxis, Inc. factory in January 2010. Since opening, circulation rates for library materials have doubled and the number of users (as well as the staff to serve them) have been on the rise. The library now has over 3,600 registered patrons from eight nearby municipalities, as well as from outside the local area.



**FIGURE 133: Libraries**



Source: Montgomery County Planning Commission

**FIGURE 134: Library Statistics (as of 2012)**

LIBRARY	CARD HOLDERS	CIRCULATION
Abington Township Public Library <sup>1</sup>	32,177	492,701
Cheltenham Township Library System <sup>2</sup>	19,546	451,005
Free Library of Springfield Township	10,004	189,335
Horsham Township Library	14,074	364,482
Huntingdon Valley Library	6,054	90,865
Indian Valley Public Library	38,578	447,174
Jenkintown Library	3,438	69,056
Lansdale Public Library <sup>3</sup>	6,679	97,232
Lower Merion Library System <sup>4</sup>	31,472	972,675
Lower Providence Community Library	9,399	254,703
Montgomery County Library System—Norristown <sup>5</sup>	138,783	623,512
Narberth Community Library	2,877	99,618
North Wales Library	5,095	72,934
Pottstown Public Library	17,072	113,531
Union Library Company of Hatboro	8,429	24,318
Upper Dublin Public Library <sup>6</sup>	10,739	340,705
Upper Merion Township Library	25,236	225,396
Upper Moreland Public Library	10,797	196,197
William Jeanes Memorial Library	8,465	144,515
Wissahickon Valley Public Library <sup>7</sup>	15,663	359,129
<b>Total</b>	<b>374,179</b>	<b>5,722,824</b>



1. Includes Roslyn branch.
2. Includes East Cheltenham, Elkins Park, Glenside and La Mott branches.
3. The Lansdale Public Library is the sole library in the county that does not receive state assistance.
4. Includes Ardmore, Bala Cynwyd, Belmont Hills, Gladwyne, Ludington and Penn Wynne branches.
5. Includes Norristown Public Library, Conshohocken Free Library, Perkiomen Valley Library at Schwenksville, Royersford Free Public Library and the Upper Perkiomen Valley Public Library.
6. The Upper Dublin Public Library statistics include the North Hills Branch, which is closed.
7. Includes Ambler branch.

Source: Pennsylvania Department of Education, Office of Commonwealth Libraries, Bureau of Library Development (Pennsylvania Public Libraries Annual Reports, 2012).

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### Arts and Culture

#### Arts and Culture

The county's location provides easy access to top-notch museums, concerts, theater and film...both here and in downtown Philadelphia. Arts and culture helps foster better places to live. According to a 2008 survey by the National Endowment for the Arts, Americans who attend art museums and live arts performances are much more likely to vote, volunteer, and take part in community events than those who do not attend.

Outlets for people's creativity abound in the county. There are dozens of schools at which to learn ballet and tap ...but also hula, if you choose. Art centers, like the Abington Art Center or the Greater Norristown Art League have classes ranging from painting to pottery for students of all ages.

The county has a range of creative employment opportunities—including creative organizations that employ people with a variety of skills (such as an architecture firm employing more than just architects) and traditional businesses with creative employees (such as a writer for a pharmaceutical company). The creative sector contributes more than 35,000 jobs to the county's economy.

There are world class contributions to arts and culture in the county. Collegeville's Ursinus College is home to the Berman Art Museum, which houses more than 4,000 pieces of art—as well as many large outdoor sculptures that are placed throughout the campus. If comedy's more your thing, the Stoogeum is a local museum of Three Stooges memorabilia. A love of the outdoors might bring you to the Morris Arboretum or Norristown's Elmwood Park Zoo.



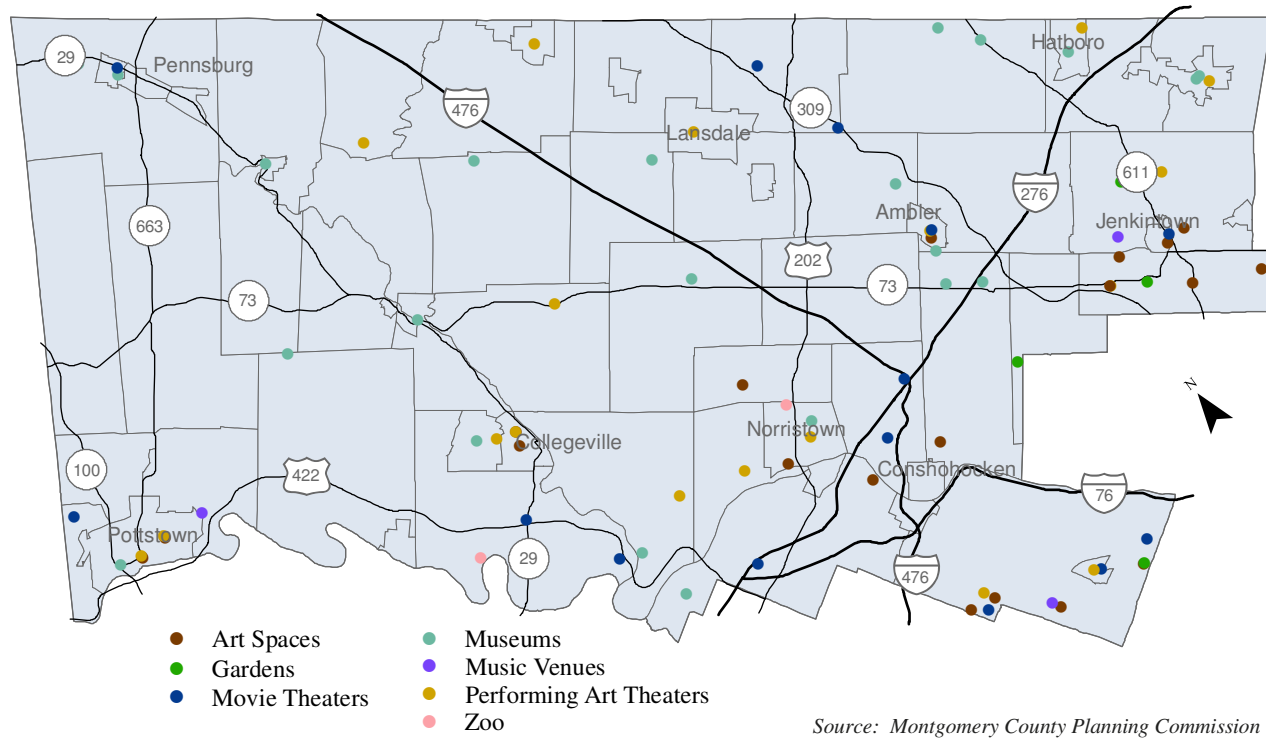
#### PLANNING ISSUE

*Arts and culture offerings have thrived and expanded across the county over the last ten years, though the challenges of being in the shadow of Philadelphia and financial instability during tough economic times still persist for many groups.*

#### What's New

- Norristown has thrown its support behind its “Arts Hill” neighborhood. This small stretch of Dekalb Street is home to the Montgomery County Cultural Center, Centre Theatre, Iron Age Theatre Company, and more recently, Theatre Horizon.
- A big arts and culture loss is the Barnes Foundation's move of its art collection to a new home in downtown Philadelphia. However, the Barnes' mansion and gardens remain in Lower Merion Township; its arboretum is seasonally open to the public and the horticulture program continues to offer classes at this site.
- The *Creative MontCo* plan was released in 2012, with background information and statistics showing the local economic impact of arts and culture. It recommends a variety of steps aimed at strengthening local arts and culture. More information can be found at its website: [creativemontco.org](http://creativemontco.org).
- Arts and culture is important for local revitalization strategies. The county's museums, movie houses, and performing arts spaces have become focal points for their surrounding communities—Abington's Keswick neighborhood, Bryn Mawr, Pottstown, and Souderton are just some examples.
- Historic movie houses have returned to prominence. East Greenville's Grand Theater, the Ambler Theater, and Jenkintown's Hiway Theater are a few of the lovingly restored theaters that pack in the crowds. And the Bryn Mawr Film Institute recently expanded to show films on four screens at its current home on Lancaster Avenue.
- Theater troupes increasingly call the county home, with dedicated facilities across the county. Souderton's Montgomery Theater, Ambler's Act II Playhouse, and Pottstown's Steel River Playhouse—all in the heart of their respective downtowns—provide local theater patrons with plenty of opportunities to see a show.

**FIGURE 135: Arts and Culture Venues**



Source: Montgomery County Planning Commission

Earnings from jobs in Montgomery County's creative industries accounted for over \$1.62 billion in wages in 2011. That can purchase one year's\* worth of:



groceries for 437,601 families



gas for 899,001 families

\*Based on the Philadelphia Metropolitan Statistical Area from the Bureau of Labor Statistics, Consumer Expenditure Survey, 2009-2010



It's all happening, not just at the zoo, but at the movie theaters, museums, and playhouses that populate Montgomery County. From left, the Hiway Theater in Jenkintown, Ursinus College's Berman Museum of Art in Collegetown, and the Elmwood Park Zoo in Norristown.





# GOVERNMENTAL STRUCTURE



**Federal and State Role**

Regional and County Role

Municipal Cooperation

Local Municipal Role

Existing Municipal Types

**PLANNING ISSUE**

*On the federal level, the rules for spending, especially for highway improvements, are onerous and create significant delays. On both the federal and state levels, more funding is needed, particularly for transportation.*

**Federal and State Role**

*Federal Role*

Generally, the federal government’s role in planning and land development is indirect. For example, the federal government provides significant funds for transportation improvements and has many design rules about highway construction, but the decisions on how and where to spend this money are made at the state and regional level.

Although there are many federal environmental regulations, the Environmental Protection Agency (EPA) delegates the enforcement of most of these regulations to Pennsylvania’s Department of Environmental Protection (PADEP), except for the following:

- The Army Corp of Engineers does issue permits for projects that have a large impact on wetlands.
- The Federal Emergency Management Agency (FEMA) adopts flood insurance rate maps, and local property owners cannot get flood insurance unless their municipality adopts a floodplain ordinance that meets FEMA’s standards.

Other federal departments and agencies also have an impact on development and planning. The Department of Housing and Urban Development (HUD) provides block grant and housing funds; the Department of Agriculture has a variety of programs used by county farmers, as well as a large research facility in the county; and the National Park Service runs Valley Forge National Historical Park.

**FIGURE 136:** *Federal Presence in Montgomery County*

Number of Federal Employees	2,900 employees
Amount of Federal-Owned Land	3,200 acres

**What’s New**

- The federal government has allocated less money for transportation, other infrastructure, environmental improvements, community development, and planning than in the past. New transportation legislation does not have designated enhancement money.
- Federal funding for housing and community development block grants has gone down, and HUD wants affordable housing to be geographically deconcentrated, with more money used for family housing rather than elderly housing.
- The Willow Grove Naval Air Station has closed, which has reduced the military’s impact in Horsham Township. Other smaller military facilities have also closed in the county over the past decade.
- With the passage of Act 89 in 2013, transportation funding at the state level has improved significantly. Projects that were stalled are now moving forward, and new projects are now anticipated for the future.



*Federal highway construction rules create beautiful highways but add significant delays and cost to projects.*

**State Role**

Through its legislation and regulation, the Commonwealth of Pennsylvania plays a significant role in planning and development. The state’s Municipalities Planning Code governs local zoning, land development, and comprehensive planning.

State departments and agencies also have a significant role, including:

- The Department of Environmental Protection issues permits and enforces environmental regulations for wetlands, sewage discharges, air quality, stream crossings, etc.
- The Department of Transportation controls many local highways and interstate highways and issues driveway occupancy permits for these roads.
- The Turnpike Commission operates the turnpike system, which has a significant presence in Montgomery County.
- In addition to parks and forestry, the Department of Conservation and Natural Resources (DCNR) enforces protection of endangered and threatened species through its Natural Diversity Index. Evansburg is the largest state park in the county.

Other state departments and agencies also have an impact on the county. For example, the Department of Community and Economic Development (DCED) has grants and educational programs for local municipalities; the state Historical and Museum Commission lists historic properties; the Department of Agriculture administers the farm preservation program; the Department of Corrections runs a large prison, Graterford, in the middle of the county; and the Department of Public Welfare runs Norristown State Hospital.

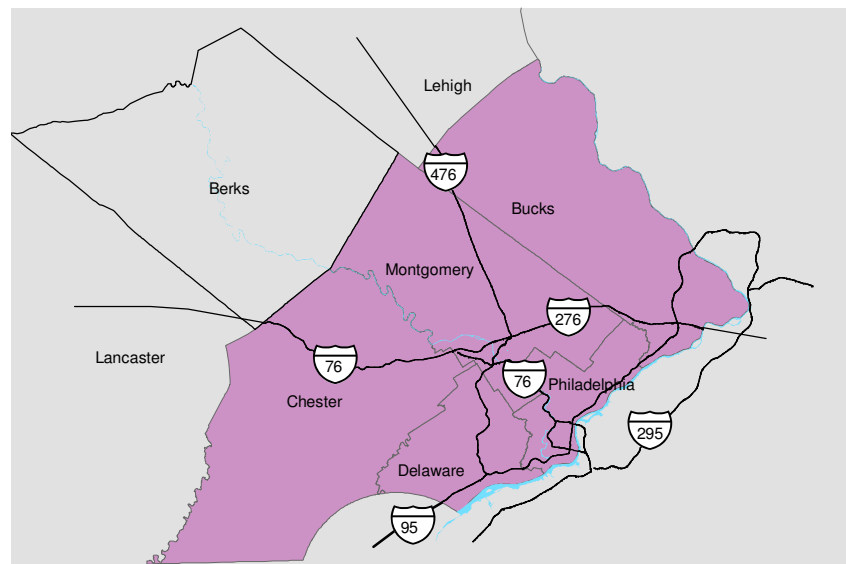
**FIGURE 137: State Presence in Montgomery County**

Number of State Employees	4,800 employees
Amount of State-Owned Land	7,700 acres



*The PADEP building in Norristown is a green building with LEED certification.*

**FIGURE 138: PennDOT District 6 and PADEP Southeast Region Service Areas**



*Sources: Pennsylvania Department of Transportation, Pennsylvania Department of Environmental Protection*

## GOVERNMENTAL STRUCTURE

### Federal and State Role

### Regional and County Role

#### Municipal Cooperation

#### Local Municipal Role

#### Existing Municipal Types

### Regional and County Role

#### Regional Role

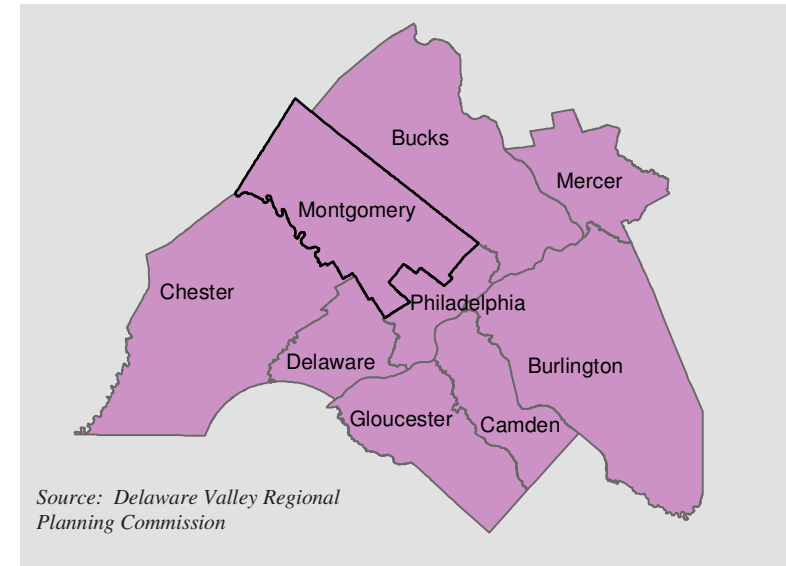
There are many Philadelphia regional organizations that play a role in Montgomery County, such as the Greater Philadelphia Chamber of Commerce or the Greater Philadelphia Cultural Alliance. The role of most of these organizations is fairly specialized and limited; however, there are three regional organizations with a more significant impact on the county's landscape - DVRPC, DRBC, and SEPTA.

- **Delaware Valley Regional Planning Commission -** DVRPC is the regional planning agency, as designated by Pennsylvania and New Jersey. DVRPC manages federal transportation funding for the region, as well as provides supportive planning work, demographic analysis, employment projections, and population projections for the region.
- **Delaware River Basin Commission -** DRBC is a four-state agency—encompassing Pennsylvania, New Jersey, Delaware, and New York—that regulates water quality and supply within the Delaware River drainage area. Any entity proposing to withdraw 10,000 gallons per day or more of groundwater within the basin must get a permit from DRBC.
- **Southeastern Pennsylvania Transportation Authority -** SEPTA is a regional transit company that provides regional rail, subway, trolley, and bus service to Philadelphia and its Pennsylvania suburbs.



SEPTA train

**FIGURE 139:** Delaware Valley Regional Planning Commission Area

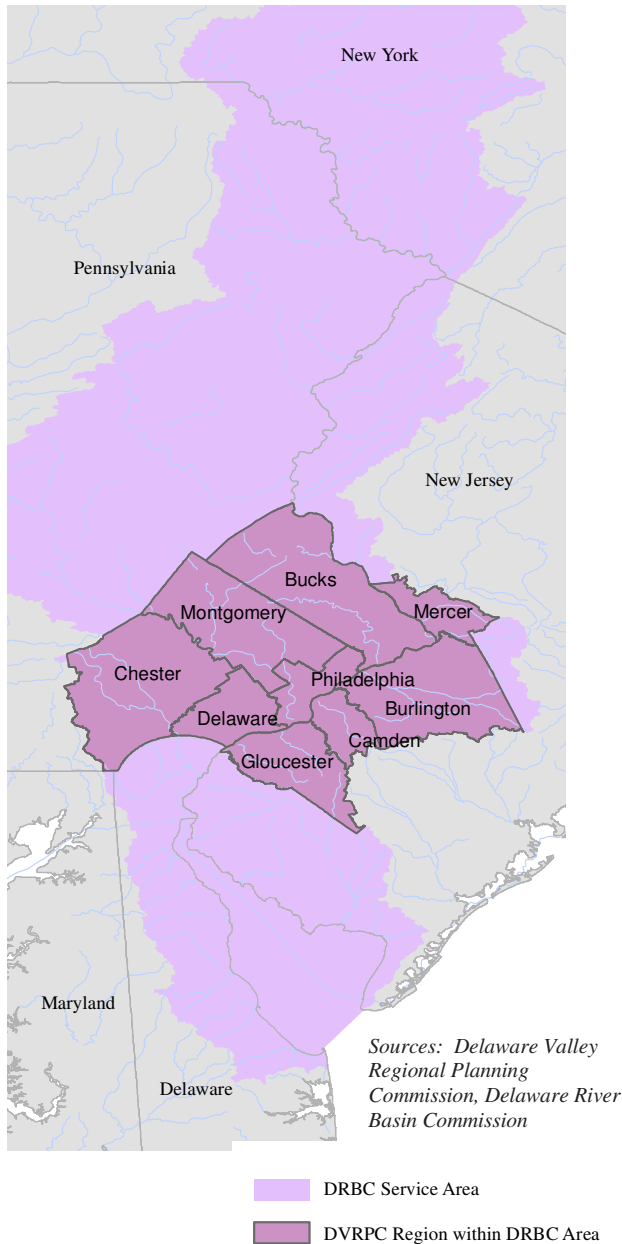


Source: Delaware Valley Regional Planning Commission



The Schuylkill River is part of the Delaware River Basin.

**FIGURE 140:** Delaware River Basin Commission Area



### County Role

Montgomery County does not control zoning or local land development; the county does, however, play a significant role by:

- Providing planning advice and technical services to local municipalities. (*Planning Commission*)
- Prioritizing state transportation improvements for the county. The county also owns many roads and bridges and issues highway occupancy permits for its roads. (*Planning Commission and Assets and Infrastructure*)
- Supporting economic development projects. (*Commerce*)
- Maintaining county parks and building regional trails. (*Assets and Infrastructure*)
- Providing affordable housing. (*Housing and Community Development*)

The county's major focus is on the court system, property records, voter services, and social services. The courts and judicial system include the Coroner, Register of Wills, Probation, Correctional Facility, Public Safety, Sheriff's Office, and the various courts. The social service system includes Health, Behavioral Health, Aging and Adult Services, Children and Youth, and the Youth Center.



The county courthouse is in Norristown.



Central Perkiomen Valley Park

## GOVERNMENTAL STRUCTURE

Federal and State Role

Regional and County Role

### Municipal Cooperation

Local Municipal Role

Existing Municipal Types

### Municipal Cooperation

The county's 62 municipalities are independent entities; however, they often work together to accomplish common goals through groups like the Montgomery County Consortium, local Councils of Governments, and the township and borough associations.

In addition, four groups of municipalities have created multi-municipal planning groups. These are:

- Upper Perkiomen Valley
- Indian Valley
- Pottstown Metropolitan Area
- Central Perkiomen Valley

Each municipality in each region has adopted their regional comprehensive plan and agreed to make their zoning consistent with the regional plan. Representatives of each community meet on a regular basis as part of a regional planning commission to discuss developments of regional impact and other cross-municipal issues and policies.



*Central Perkiomen Valley Region*



*Upper Perkiomen Valley Region*



*Indian Valley Region*

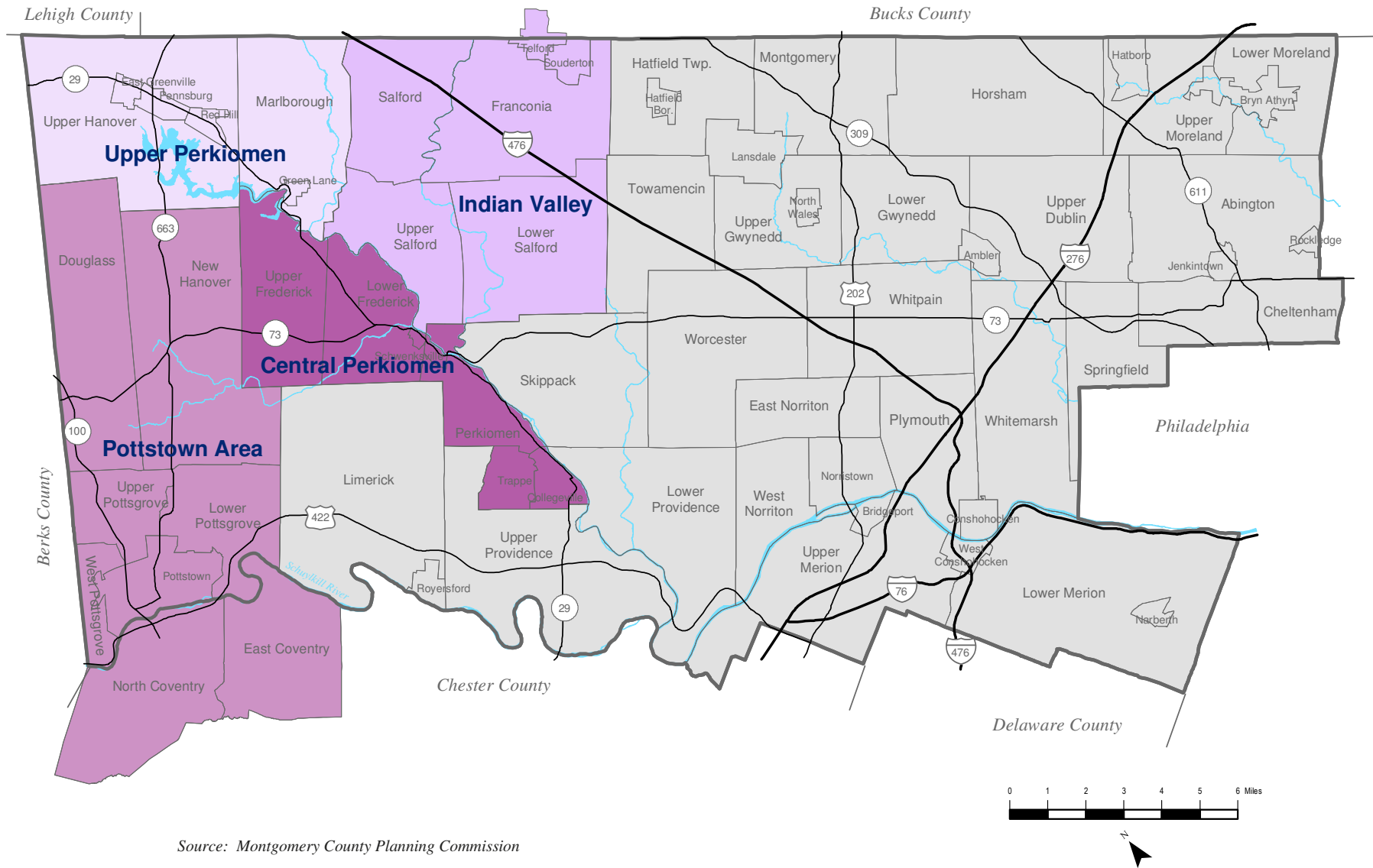


*Pottstown Metropolitan Region*

### PLANNING ISSUE

Many development impacts, including traffic, stormwater, light pollution, and economic development, go beyond local municipal borders; yet no strong framework exists to address these impacts.

FIGURE 141: Multi-Municipal Planning Regions



Source: Montgomery County Planning Commission

## GOVERNMENTAL STRUCTURE

Federal and State Role

Regional and County Role

Municipal Cooperation

### Local Municipal Role

Existing Municipal Types

#### PLANNING ISSUE

The process of development is often too time consuming, confusing, and confrontational for local officials, residents, and property owners.

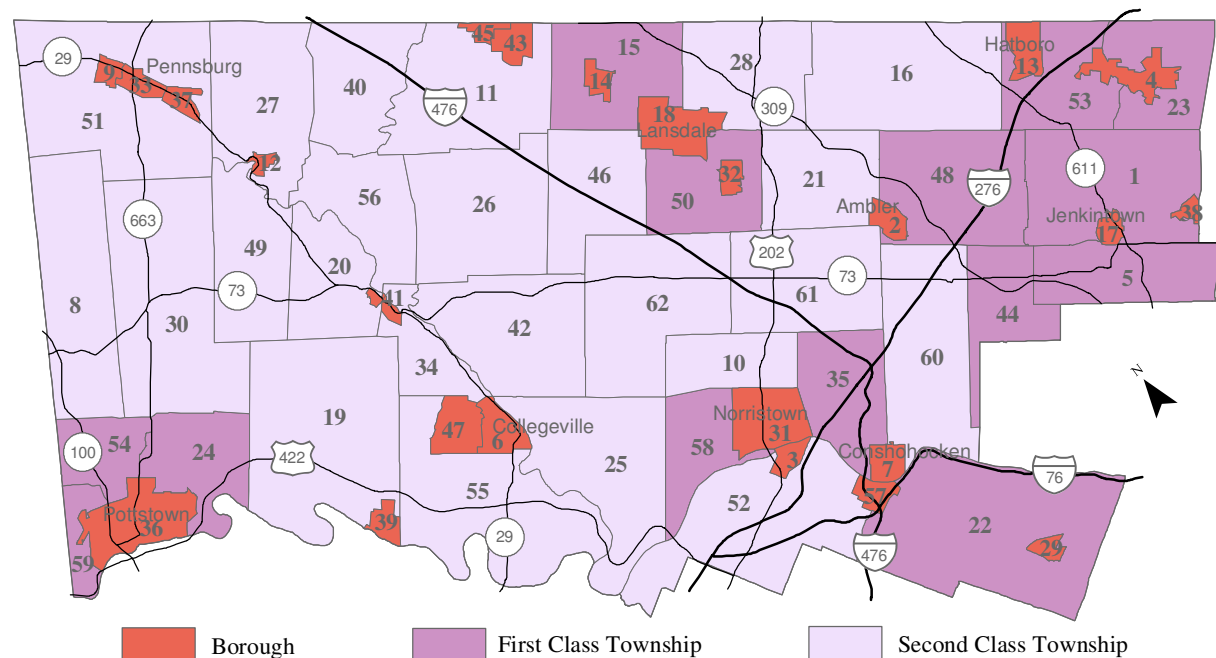
### Local Municipal Role

The 62 municipalities of the county control much of the planning and land development that occurs in the county. All of these communities have zoning ordinances and subdivision and land development ordinances; the vast majority also have adopted comprehensive plans. Local municipalities:

- Adopt zoning and approve zoning changes; grant variances through zoning hearing boards.
- Approve subdivisions and land developments.
- Control local roads.
- Are allowed to impose traffic and park impact fees but not other types of impact fees; however, user fees for sewer, water, and other utilities can also be imposed.
- Regulate stormwater runoff in accordance with state law and watershed plans, if one exists.
- Provide sewage treatment in many cases.
- Can provide parks, police protection, and volunteer fire protection; sometimes have libraries and other cultural facilities.

Local municipalities can create independent authorities for specific governmental purposes. The most common type of authority in the county is for sewers; however, authorities also exist for water, parking, transportation, economic development, solid waste, and recreation.

**FIGURE 142:** *Municipal Classifications*



Source: Pennsylvania Bureau of Municipal Services

**FIGURE 143: Municipal Comparison**

#	NAME	MUNICIPAL CLASSIFICATION	2010 POPULATION	2010 EMPLOYMENT
1	Abington	Township, First Class	53,310	30,421
2	Ambler	Borough	6,417	2,969
3	Bridgeport	Borough	4,554	2,180
4	Bryn Athyn	Borough <sup>1</sup>	1,375	1,400
5	Cheltenham	Township, First Class <sup>1</sup>	36,793	15,353
6	Collegeville	Borough	5,089	2,423
7	Conshohocken	Borough	7,833	8,684
8	Douglass	Township, Second Class	10,195	3,339
9	East Greenville	Borough	2,951	623
10	East Norriton	Township, Second Class	13,590	8,537
11	Franconia	Township, Second Class	13,064	6,952
12	Green Lane	Borough	508	263
13	Hatboro	Borough	7,360	3,919
14	Hatfield Borough	Borough	3,290	1,208
15	Hatfield Township	Township, First Class	17,249	16,005
16	Horsham	Township, Second Class <sup>1</sup>	26,147	30,872
17	Jenkintown	Borough	4,422	4,082
18	Lansdale	Borough	16,269	8,265
19	Limerick	Township, Second Class	18,074	9,962
20	Lower Frederick	Township, Second Class	4,840	860
21	Lower Gwynedd	Township, Second Class	11,405	9,354
22	Lower Merion	Township, First Class	57,825	49,592
23	Lower Moreland	Township, First Class	12,982	7,813
24	Lower Pottsgrove	Township, First Class	12,059	4,484
25	Lower Providence	Township, Second Class	25,436	11,926
26	Lower Salford	Township, Second Class	14,959	7,894
27	Marlborough	Township, Second Class	3,178	742
28	Montgomery	Township, Second Class	24,790	15,284
29	Narberth	Borough	4,282	1,895
30	New Hanover	Township, Second Class	10,939	1,753
31	Norristown	Borough <sup>1</sup>	34,324	15,816

#	NAME	MUNICIPAL CLASSIFICATION	2010 POPULATION	2010 EMPLOYMENT
32	North Wales	Township, First Class	3,229	1,407
33	Pennsburg	Borough	3,843	1,458
34	Perkiomen	Township, Second Class	9,139	2,147
35	Plymouth	Township, First Class <sup>1</sup>	16,525	23,034
36	Pottstown	Borough	22,377	10,812
37	Red Hill	Borough	2,383	600
38	Rockledge	Borough	2,543	842
39	Royersford	Borough	4,752	1,533
40	Salford	Township, Second Class	2,504	604
41	Schwenksville	Borough	1,385	404
42	Skippack	Township, Second Class	13,715	4,205
43	Souderton	Borough	6,618	2,724
44	Springfield	Township, First Class	19,418	8,037
45	Telford <sup>2</sup>	Borough	2,665	667
46	Towamencin	Township, Second Class	17,578	6,737
47	Trappe	Borough	3,509	2,053
48	Upper Dublin	Township, First Class	25,569	18,779
49	Upper Frederick	Township, Second Class	3,523	801
50	Upper Gwynedd	Township, First Class	15,552	18,413
51	Upper Hanover	Township, Second Class	6,464	4,197
52	Upper Merion	Township, Second Class	28,395	57,118
53	Upper Moreland	Township, First Class	24,015	15,654
54	Upper Pottsgrove	Township, First Class	5,315	1,229
55	Upper Providence	Township, Second Class	21,219	15,963
56	Upper Salford	Township, Second Class	3,299	1,001
57	West Conshohocken	Borough	1,320	6,131
58	West Norriton	Township, First Class	15,663	8,541
59	West Pottsgrove	Township, First Class	3,874	1,056
60	Whitemarsh	Township, Second Class <sup>1</sup>	17,349	19,102
61	Whitpain	Township, Second Class	18,875	18,940
62	Worcester	Township, Second Class	9,750	3,205

<sup>1</sup> Home rule municipality

<sup>2</sup> Montgomery County portion only of Telford Borough

## GOVERNMENTAL STRUCTURE

Federal and State Role

Regional and County Role

Municipal Cooperation

Local Municipal Role

### Existing Municipal Types

#### PLANNING ISSUE

*The county's municipalities, which range from urban to rural, are wrestling with very different development issues.*

### Existing Municipal Types

Existing land use and historic development trends can be used to categorize Montgomery County's 62 municipalities by type of municipality.

#### *Towns and Redeveloping Areas*

Places like Ambler, Pottstown, Jenkintown, or Lansdale are among the towns and redeveloping areas in the county. Older, redeveloping areas in the county have been affected by the loss of population and jobs, but many of these places have also been the focus of intensive revitalization efforts over the past decade. Infrastructure improvements and beautification projects have improved appearances and these communities aggressively seek to attract new businesses and residents. These older communities tend to be pedestrian- and transit-friendly places that can appeal to younger residents and empty nesters looking for a more traditional and urban environment.

#### *Mature Suburbs*

Places like Abington, Cheltenham, West Pottsgrove, or Lower Merion have already undergone a significant amount of growth and development. Many of these places saw the majority of their population growth and development take place just before World War II or just after, during the 1950s and 1960s. These communities are dealing with aging infrastructure, infill development that may or may not match existing neighborhood character, older housing, and recreation needs for a denser population. They are also often home to small downtown areas with objectives similar to those of the county's towns and redeveloping areas.

#### *Suburban Communities*

Newer suburban communities like Horsham, Whitpain, and Upper Merion are characterized by a greater separation of land uses. Many retail developments have become regional destinations, but they were designed for the automobile and tend to discourage pedestrian activity. These places still have opportunities to reinvent their commercial areas and employment centers, as well as preserve community open space and trails that link residents to the places they travel.

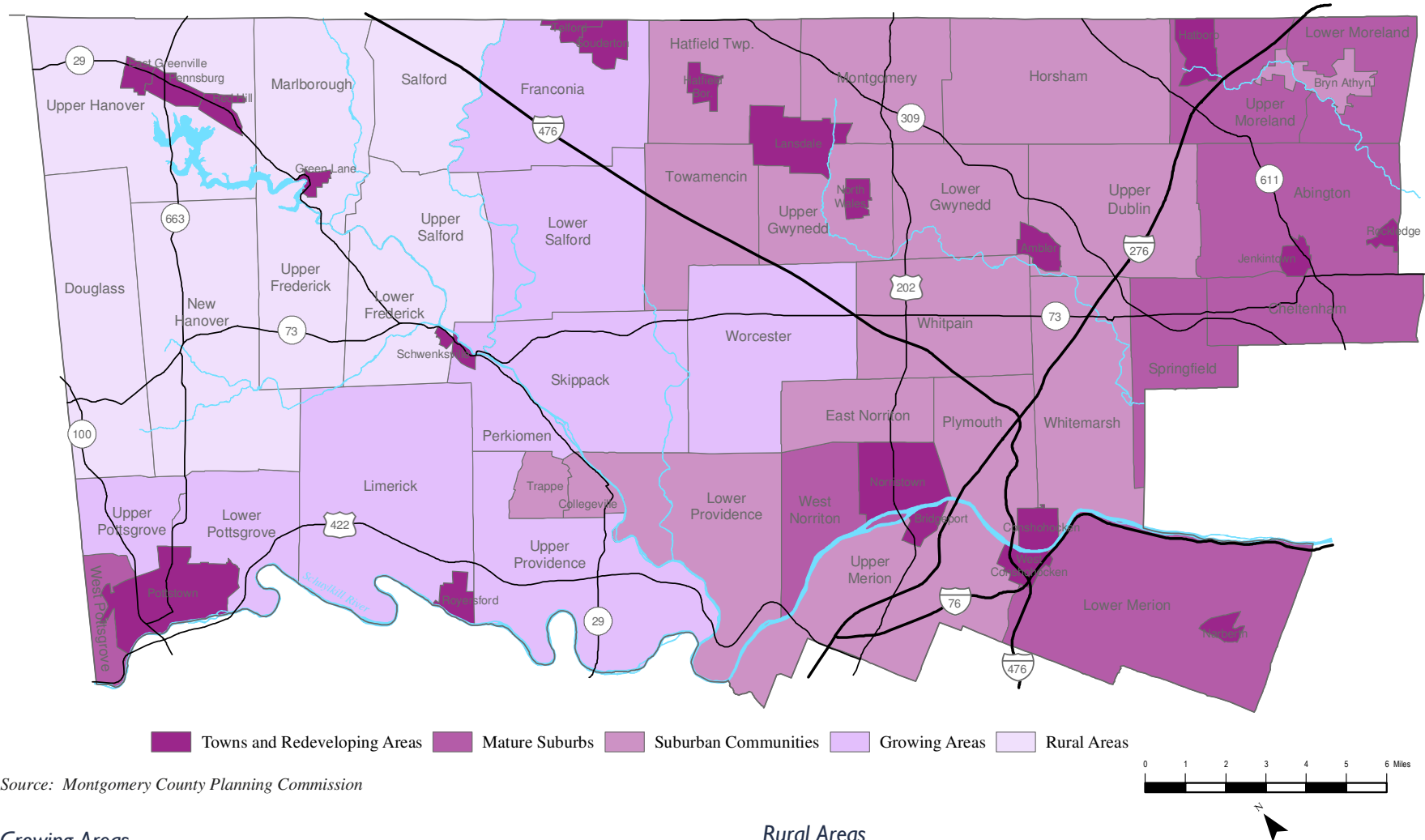


*Keswick is in a mature suburb.*



*King of Prussia is part of a suburban community.*

**FIGURE 144: Existing Municipal Types**



Source: Montgomery County Planning Commission

**Growing Areas**

Places like Limerick, Franconia, and Worcester are still likely to experience a significant amount of development pressure in the future. Sensible planning in these communities can help protect existing natural features and ecosystems while accommodating market rate growth and creating new places. These communities may experience issues such as traffic congestion on local roads, and the need for increased municipal services.

**Rural Areas**

Places like Douglass, Upper Hanover, Marlborough, or Upper Salford are rural municipalities with significant active farming areas and natural features that may not be permanently preserved. Since public sewer and water systems do not extend into all of the rural areas of the county, growth in these areas can be limited. The rural character of these places can be maintained with the preservation of farms, villages, woods, hills, and streams.

## GOVERNMENTAL STRUCTURE



# GLOSSARY

## GLOSSARY OF PLANNING TERMS

Term	Description	Term	Description
Adult Day Care	A non-residential facility supporting the health, nutritional, and daily living needs of elderly or disabled adults in professionally staffed, group settings.	Arterials	A federal highway functional classification, arterials are either “principal” or “minor,” and provide greater mobility for longer trips, but offer more accessibility than expressways. Principal arterials in the county include roads like Bethlehem Pike (PA 309), Old York Road (PA 611) in Upper Moreland, and US 202 Dekalb Pike.
Affordable Housing	In general, housing for which the occupant(s) is/are paying no more than 30 percent of his or her income for gross housing costs, including utilities.	Best Management Practices (BMPs)	A term used to describe water pollution controls, frequently for stormwater management, in which structural or engineered control devices and systems ameliorate the negative effects of polluted and/or excess stormwater.
Affordable Housing Trust Fund	As of 1993, a fund authorized by county ordinance to increase the recording fees of deeds and mortgages to support the county’s local affordable housing efforts. The funds raised are deposited in the general fund of the county, and the increased revenues must be used to fund affordable housing.	Brownfield	Abandoned or underused industrial and/or commercial facilities available for re-use, at which expansion or redevelopment may be complicated by real or perceived environmental contamination.
Agricultural Area Security Law (Act 43 of 1981)	This legislation allows for the creation of joint municipal agricultural security areas, which promote more permanent and viable farming operations over the long term.	Collectors	A federal highway functional classification, collectors are either “major” or “minor” and channel traffic to or from higher classification roads. Examples of major collectors include Conshohocken State Road in Lower Merion and Susquehanna Road in Abington.
Agricultural or Undeveloped Land	As shown on the Existing Land Use Map, generally land that is undeveloped and not wooded. Mostly this is farmland, but vacant land in urban areas is also included. Farmhouses, barns, and other buildings on farms are included in this category.	Community Supported Agriculture (CSA)	A locally-based economic model of agriculture and food distribution in which a network or association of individuals pledge to support one or more local farms, with growers and consumers sharing the risks and benefits of food production. CSA members or subscribers pay at the onset of the growing season for a share of the anticipated harvest; once harvesting begins, they receive weekly shares of what is in season.
Airport Hazard Zoning Act (Act 164)	Passed in 1984, this state legislation restricts the heights of objects around airport areas to provide for safe aircraft flight paths. Ultimately this requires zoning overlay districts at a local level for affected municipalities.	Continuing Care Retirement Communities (CCRCs)	Communities with a mix of independent and personal care units, as well as nursing facilities that offer a tiered approach to providing for the needs of aging residents.
Ambulatory Surgery Center	A facility which provides day-surgery services for patients who require less than 24-hour medical attention.		
American Community Survey	An ongoing statistical survey by the U.S. Census Bureau, sent to approximately 250,000 addresses monthly (or 3 million per year), which gathers information previously contained only in the long form of the decennial census.		

<b>Term</b>	<b>Description</b>	<b>Term</b>	<b>Description</b>
Delaware River Basin Commission (DRBC)	A four-state agency, encompassing Pennsylvania, New York, New Jersey and Delaware, that regulates water quality and supply within the Delaware River drainage area.	General Acute Care Hospital	An institution, whether operated for profit or not, which maintains and operates facilities for the diagnosis, treatment or care of two or more non-related individuals suffering from illness, injury or deformity and where emergency, out-patient, surgical, obstetrical, convalescent or other medical and nursing care is rendered for periods exceeding 24 hours.
Delaware Valley Regional Planning Commission (DVRPC)	A regional planning agency that has served the Philadelphia region for more than 40 years, covering a nine-county, two state area on key issues of transportation, land use, environmental protection and economic development.	Historical Architectural Review Board (HARB)	A public advisory body created by state and local laws. HARBs operate under the authority of the State of Pennsylvania's Historic District Act, General Assembly #167 of 1961, as amended 1963.
Expressways	A federal highway functional classification, expressways are the highest class and include divided multi-lane limited-access highways like the Blue Route (I-476).	Household	A household includes all the people who occupy a housing unit. A housing unit is a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied (or if vacant, is intended for occupancy) as separate living quarters. The occupants may be a single family, one person living alone, two or more families living together, or any other group of related or unrelated people who share living arrangements.
Family	A family consists of a householder and one or more other people living in the same household who are related by birth, marriage, or adoption. All people in a household who are related to the householder are regarded as members of his or her family. A family household may contain people not related to the householder, but those people are not included as part of the householder's family in tabulations.	Housing Choice Voucher Program (formerly Section 8)	A federal program for assisting very low-income families, the elderly, and the disabled to afford decent, safe, and sanitary housing in the private market which is administered on a local level by public housing agencies.
Floodplain	An area of land adjacent to a stream or river that experiences flooding during periods of high discharge. It includes the floodway, which consists of the stream channel and adjacent areas that actively carry flood flows downstream, and the flood fringe, which are areas inundated by the flood, but which do not experience a strong current.	Independent Living Facilities	Communities where units are restricted to households where at least one member is at least age 55; residents live independently without nursing care.
Floodway	The channel of a watercourse and adjacent land areas that must be reserved in order to discharge a base flood without cumulatively increasing the water surface elevation more than a designated height.	Industrial	As shown on the Existing Land Use Map, lands with heavy industrial uses, such as oil refineries, chemical plants, steel and metal fabrication facilities, and manufacturing facilities - as well as lighter industrial uses, warehousing and distribution centers, mini-storage facilities, body shops, junkyards, and other outdoor storage facilities.

## GLOSSARY OF PLANNING TERMS

<b>Term</b>	<b>Description</b>	<b>Term</b>	<b>Description</b>
Institutional	As shown on the Existing Land Use Map, a land use category that includes a wide variety of governmental and non-profit services, such as government centers, educational facilities, places of worship, cemeteries, hospitals and medical centers, nursing homes, life care facilities, and correctional facilities.	Mining	As shown on the Existing Land Use Map, a land use category that is limited to quarries.
Intelligent Transportation Systems (ITS)	Advanced applications which aim to provide innovative services relating to different modes of transport and traffic management and enable various users to be better informed and make safer, more coordinated, and 'smarter' use of transport networks.	Mixed Use	As shown on the Existing Land Use Map, areas including traditional main street or village corridors, featuring retail, residential, and office facilities with little separation among uses.
Land Bank	The aggregation of parcels of land for future sale or development to effectively manage and repurpose an inventory of abandoned or foreclosed property.	Mobile Home Park	As shown on the Existing Land Use Map, Residential developments with mobile or manufactured homes
Leadership in Energy and Environmental Design (LEED)	A voluntary, consensus-based, market-driven program that provides third-party verification of green buildings.	Montgomery County Workforce Investment Board (MCWIB)	A board, which meets every other month, which seeks to increase awareness of workforce development issues and to strengthen the county's workforce development system by developing partnerships with business, government and community-based organizations.
Local Roads	A federal highway functional classification, these consist of all roads not defined as arterials or collectors and which primarily provides access to land rather than allow through traffic for vehicles. This class includes all residential side streets.	Moving Ahead for Progress in the 21st Century (MAP-21)	This transportation bill was signed into law on July 6, 2012. Funding surface transportation programs at over \$105 billion for fiscal years (FY) 2013 and 2014, MAP-21 is the first long-term highway authorization enacted since 2005.
Location Quotient (LQ)	A ratio that compares a region to a larger reference region according to some characteristic or asset, such as the strength of a particular industry	Multifamily	As shown on the Existing Land Use Map, residential buildings that contain more than one dwelling unit, with units usually horizontally separated, such as apartments, including garden-style apartment complexes, and duplexes.
Meal Delivery Provider	A service providing meal delivery service to the elderly or home-bound, such as Meals on Wheels	Multimodal	In relation to transportation, involving more than one means of transport (such as biking and walking).
Medicaid	The federal program for families and individuals with low income and resources. It is a means-tested program that is jointly funded by the state and federal governments, and is managed by the states. People served by Medicaid are citizens or legal permanent residents, including low-income adults, their children, and people with certain disabilities. Poverty alone does not qualify someone for Medicaid.	Municipal Separate Storm Sewer (MS4) program	This program aims to prevent harmful pollutants from being washed or dumped into an MS4, and requires operators to obtain a NPDES permit and develop a stormwater management program. Phase I, issued in 1990, requires medium and large cities or certain counties with populations of 100,000 or more to obtain NPDES permit coverage for stormwater discharges. Phase II, issued in 1999, requires regulated small MS4s in urbanized areas, as well as small MS4s outside the urbanized areas that are designated by the permitting authority, to obtain NPDES permit coverage for stormwater discharges.
Millennials	The demographic cohort following Generation X, primarily born from 1980 to 2000.		

Term	Description	Term	Description
Municipal Waste Planning, Recycling, and Waste Reduction Act (Act 101)	A 1988 act, Act 101 mandates recycling in the state’s larger municipalities, requires counties to develop municipal waste management plans, and provides for grants to offset expenses.	National Register of Historic Places	Established in 1966, the nation’s official list of districts, sites, buildings, structures, and objects deemed worthy of preservation. A property listed in the National Register, or located within a National Register Historic District, may qualify for tax incentives derived from the total value of expenses incurred preserving the property.
Municipalities Planning Code (MPC) (Act 247)	The MPC (Act of 1968, P.L.805, No.247), as updated, empowers counties and municipalities, individually or jointly, to plan their development and to govern the same by zoning, subdivision and land development ordinances, and additional tools.	Nonfamily	A household comprised of a group of unrelated people or of one person living alone.
National Flood Insurance Program	A federal program created through the National Flood Insurance Act of 1968 which enables property owners in participating communities to purchase insurance protection from the government against losses from flooding. This insurance is designed to provide an insurance alternative to disaster assistance to meet the escalating costs of repairing damage to buildings and their contents caused by floods.	Nursing Homes	A facility licensed to provide health care under medical supervision and continuous nursing care for 24 or more consecutive hours.
National Highway System (NHS)	A network of strategic nationwide highways, including the Interstate Highway System and other roads serving major airports, ports, rail or truck terminals, railway stations, pipeline terminals and other strategic transport facilities. The roads within the system were identified by the United States Department of Transportation in cooperation with the states, local officials, and metropolitan planning organizations and approved by the United States Congress in 1995.	Office	As shown on the Existing Land Use Map, land occupied by office buildings and associated parking, research and development facilities, hotels, and/or convention centers
National Historic Landmarks	Nationally significant historic places designated by the Secretary of the Interior because they possess exceptional value or quality in illustrating or interpreting the heritage of the United States.	Personal Care Homes	A facility that is licensed to provide room and board and to assure that assisted living services are available when needed. Units typically house no more than two residents and have a lockable door on the unit entrance.
National Pollutant Discharge Elimination System (NPDES)	As authorized by the Clean Water Act, the NPDES permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States.	Personal Care Subcontractor	Agencies which provide personnel for non-skilled services to individuals in their homes or other independent living environments. These services may include assistance with self-administered medications; personal care such as assistance with personal hygiene, dressing, and feeding; homemaking such as assistance with household tasks, housekeeping, shopping, meal planning and preparation, and transportation; companionship; and respite care such as assistance and support provided to the family.

## GLOSSARY OF PLANNING TERMS

Term	Description	Term	Description
Pennsylvania Farmland and Forest Land Assessment Act of 1974	Better known as “Clean and Green” or Act 319, this legislation provides a real estate tax benefit to owners with land in agricultural use, agricultural reserve, or forest reserve and are enrolled in the “Clean and Green Program,” enabling the land to be assessed according to use rather than its prevailing market value.	Rail Safety Improvement Act of 2008	A federal law enacted to improve railroad safety. Among its provisions, the most notable was the mandate requiring positive train control (PTC) technology to be installed on most of the US railroad network by 2015. This was spurred by the 2008 Chatsworth train collision the month prior to passage of the act.
Pennsylvania Historical and Museum Commission	As of 1945, the official history agency of Pennsylvania, which is responsible for the collection, conservation, and interpretation of the state’s historic heritage.	Recreation and Parkland Fields	As shown on the Existing Land Use Map, a land use category pertaining only to outdoor recreational uses, both public and private, and parkland fields, even if not currently developed for active recreation, including parkland fields, golf courses, picnic areas, camps, fairgrounds, swimming pools, and zoos.
Pennsylvania Land Recycling Program	A 1995 state law known as Act 2, this law encourages the voluntary cleanup and reuse of contaminated commercial and industrial sites by allowing an owner or purchaser of a brownfield site to choose any one or combination of cleanup standards to guide remediation. When one or a combination of the background standards are met, the remediator receives liability relief for the property.	Retail	As shown on the Existing Land Use Map, land predominately used for the sale of goods and services, including commercial strips, malls, big box stores, shopping centers, gas stations, convenience stores, and restaurants.
Pennsylvania Sewage Facilities Act (Act 537)	A 1966 act which requires municipalities to develop and implement Official Sewage Facilities Plans to ensure adequate sewage service for existing needs and new growth.	Senior Center	A non-residential facility and community focal point where independent older adults come together for shared services and activities.
Pennsylvania Stormwater Management Act (Act 167)	Enacted in 1978, this Act was in response to the impacts of accelerated stormwater runoff resulting from land development. It requires counties to prepare and adopt watershed based stormwater management plans, as well as municipalities to adopt and implement ordinances to regulate development consistent with these plans.	Single-Family Attached	As shown on the Existing Land Use Map, residential areas with homes that share at least one vertical wall with a neighboring house, including housing types like rowhomes, twins, townhomes, and quadruplexes
Positive Train Control (PTC)	A system of functional requirements for monitoring and controlling train movements to provide increased safety through (1) train separation or collision avoidance, (2) line speed enforcement, (3) temporary speed restrictions, and (4) rail worker wayside safety.	Single-Family Detached	As shown on the Existing Land Use Map, residential areas with homes which do not share party walls and have yards of varying sizes on all sides.
Pottstown Area Rapid Transit (PART)	A multi-line bus service, owned by the Borough of Pottstown, that serves Pottstown and several surrounding municipalities.	Single-Family Detached Low Density	As shown on the Existing Land Use Map, residential areas with the same characteristics as Single-Family Detached, but with larger lot sizes (typically an acre or more) and more rural character, generally found in areas without public sewer service.
		Southeastern Pennsylvania Transportation Authority (SEPTA)	A regional transit company that provides regional rail, subway, trolley and bus service to Philadelphia and its Pennsylvania suburbs.

<b>Term</b>	<b>Description</b>	<b>Term</b>	<b>Description</b>
Specialty Hospital	A type of hospital that restricts its admissions to a particular group of persons or class, such as a children’s hospital, but also a hospital that specializes in a specific type of treatment, such as a drug rehabilitation or mental health facility.	Workforce Housing	A subset of affordable housing, this is housing that is generally aimed at those in the workforce that do not make enough money for appropriate market-rate housing but do not qualify for housing subsidies. This housing may be aimed at particular segments of the workforce, such as teachers or first responders.
Transportation	As shown on the Existing Land Use Map, areas dedicated to the movement of people or goods, including public transportation centers, highways, highway interchanges, roads, and airports		
Transportation Improvement Program (TIP)	The regionally agreed upon list of priority transportation projects, as required by federal law (ISTEA, TEA-21, SAFETEA LU). The TIP document must list all projects that intend to use federal funds, along with all non-federally funded projects that are regionally significant.		
Transportation Management Associations (TMAs)	Non-profit, member-controlled organizations that provide transportation services in a particular area, such as a commercial district, mall, medical center or industrial park. They are generally public-private partnerships, consisting primarily of area businesses with local government support.		
Travel Demand Management (TDM)	A tool to reduce single occupancy vehicle (SOV) travel as well as facilitate mobility options for area residents. It increases the efficiency of the transportation system through the promotion and facilitation of alternative modes of travel.		
Utilities	As shown on the Existing Land Use Map, areas including power generators and substations, water filtration and storage tanks, wastewater treatment plants, landfills, and recycling centers.		
Water	As shown on the Existing Land Use Map, a category that, because of the scale of the map, only includes rivers and the Green Lane Reservoir.		
Wooded	As shown on the Existing Land Use Map, a category that shows areas which are heavily forested, even in developed portions of the county. Interconnected woodlands along streams running through developed and lotted areas have been put into this category.		





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