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## Chapter 2

### Needs Assessment

## Introduction

The planning team evaluated a variety of demographic information and land development data to help quantify the preservation needs of Cumberland County. This chapter will review and analyze population trends, development patterns, development activity, loss of prime farmland, the status of land preservation and municipal land use planning across the County. This assessment, together with the public participation findings, will serve as the basis for the goals and policies of *Land Partnerships*.

### Population Trends

Population growth is one of the most important demographic trends to be considered in this plan. Since the end of the Great Depression, Cumberland County has experienced significant growth in population. Between 1940 and 1970, the County population more than doubled, growing by over 111 percent. The County's population began to moderate between 1970 and 1990, growing by 12.86 percent between 1970 and 1980 and 9.36 percent between 1980 and 1990. Between 1990 and 2000 there was a population increase of 9.4 percent. Table 2-1 shows the population growth statistics from 1930 to 2030.

Population growth in Cumberland County has far out paced growth in Pennsylvania. Between 1970 and 2000, the County grew by over 35 percent. During that same time period, Pennsylvania's population grew by only 4 percent.

Population projections indicate that Cumberland County will grow to nearly 250,000 residents by 2010, to 270,000 residents by 2020 and to 285,000 residents by 2030. These figures represent increases of 16.91 percent, 7.83 percent and 5.83 percent respectively.

**Table 2-1**  
**Population Growth 1930-2030**

Year	Total Population	Population Change	
		Number Increase	Percent Increase
<b>1930</b>	68,667	NA	NA
<b>1940</b>	74,806	6,139	8.94
<b>1950</b>	94,448	19,642	26.26
<b>1960</b>	124,816	30,368	32.15
<b>1970</b>	158,177	33,361	26.73
<b>1980</b>	178,541	20,364	12.87
<b>1990</b>	195,257	16,716	9.36
<b>2000</b>	213,674	18,417	9.43
<b>*2010</b>	249,813	36,139	16.91
<b>*2020</b>	269,375	19,562	7.83
<b>*2030</b>	285,089	15,714	5.83

Source: US Census Bureau, PA State Data Center  
\* Population projections prepared by PA State Data Center

## Development Patterns

Cumberland County is a diverse county with varying development patterns from the east to the west. In order to effectively plan for the County's needs it is important to understand and acknowledge the character and type of development in each region of the County. For planning purposes, the County is divided into three regions, as shown in Figure 2-1. The boundaries were drawn based on similar characteristics and land development patterns.

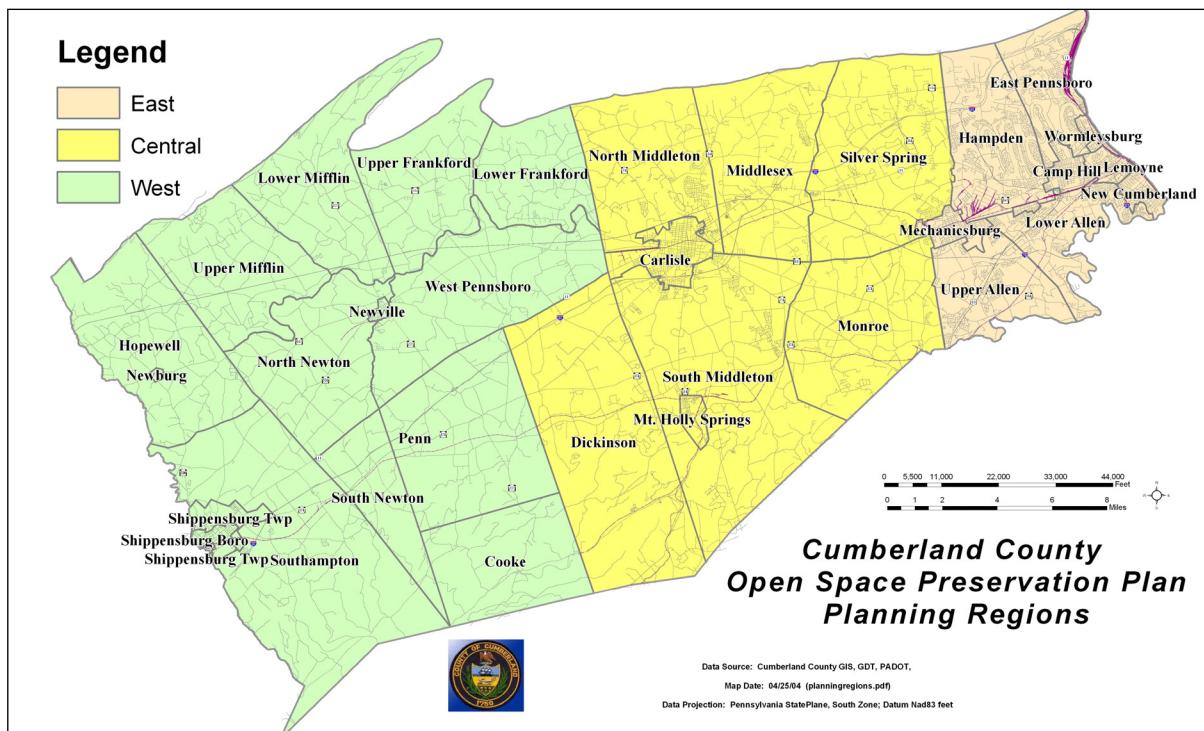


Figure 2-1 Planning Regions

Contemporary development in the County occurs markedly in the vicinity of employment centers and along major transportation corridors, and particularly where the two conditions coincide. Carlisle, Mechanicsburg and Shippensburg areas are the current growth centers in Cumberland County, though residential subdivisions are dispersed across the regions.

The East planning region of Cumberland County stretches from the Susquehanna River west to Mechanicsburg and contains the densest development of the County. The boroughs in this region – Camp Hill, Lemoyne, New Cumberland, Wormleysburg, Shiremanstown and Mechanicsburg – are approaching a completely developed condition. Residential lots are typically less than one acre, buildings are multi-story and street and sidewalk patterns are well connected. Housing is often smaller in size than in other regions. The townships in this region – East Pennsboro, Hampden, Lower Allen and Upper Allen – are rapidly accommodating growth and nearing build out as well. Commercial strip development is common along major road corridors, while residential subdivisions front minor arterials and connectors.

Corridor type growth extends south and west along US Routes 11/15 from the Susquehanna River. These routes have become major commercial corridors between Camp Hill and Carlisle (US Route 11) and between Camp Hill and Dillsburg (York County, US Route 15).

Recent growth centers in the eastern region include East Pennsboro, Hampden, Lower Allen and Upper Allen Township's. Frontage along US Route 15 is developing as a major commercial use, while residential subdivisions are locating along connecting roadways. Residential development is scattered along PA Route 944 at the base of Blue Mountain and connecting local roadways.

The Central planning region is focused around the County seat of Carlisle and the transportation nexus of I-76, I-81 and US Route 11. Carlisle is the largest borough and Mount Holly Springs and Boiling Springs provide well-developed small town environments. The neighboring townships - Middlesex, Silver Spring, North Middleton and South Middleton have received significant residential development in recent years; Dickinson and Monroe Townships have remained relatively rural to date. Commercial and industrial development remains in the vicinity of the highway interchanges. Development in this region swells outward from Carlisle along the major thoroughfares.

In the central region, growth is occurring throughout the townships adjacent to Carlisle, particularly along US Route 11 and PA Route 641. Warehousing and related development continues to thrive in the Carlisle area where companies have access to east-west and north-south mid-Atlantic distribution corridors, as well as, driver services.

The Western region of Cumberland County is characterized by crossroads, villages and rural landscapes with agriculture as the primary land use. The boroughs of Shippensburg, Newburg, and Newville, as well as Shippensburg Township are more densely developed and distinguish themselves from the rural landscapes of the remaining townships - Cooke, Hopewell, Penn, Upper and Lower Frankford, Upper and Lower Mifflin, North and South Newton, Southampton and West Pennsboro Township. The road network is sparse in some areas, where agriculture clearly dominates the scale of land use patterns. Large lot residential development with onsite water and sewer characterizes housing patterns in this region. Development pressure is centered in the Shippensburg area where sewer and water infrastructure attracts denser residential development and commercial and industrial services.

In the western region, Shippensburg and Southampton Townships have carried the greatest proportion of residential growth. Commercial development has occurred throughout the area, though at a much more limited rate. Strong growth south of the Mason Dixon line has intensified development pressure in this area.

## Development Activity

An analysis of subdivision and land development activity was conducted to assess development trends and the pace of development across the County. Table 2-2 represents all final subdivision and land development activity approved in Cumberland County between 1990 and 2004 for residential, commercial and industrial uses. (Note: Acreage shown in Table 2-2 represents total site acreage, not actual acres of earth disturbed or impervious cover.)

Trends reveal extensive residential subdivision and land development activity. Single family housing dominates the market (57 percent), though townhouses represent approximately 25 percent of the housing options. Between 1990 and 2004, over 23,600 residential dwelling units were approved for development throughout the County. On average, 1,575 new dwelling units were approved each year. Residential development spiked in 1990, 1996 and 2003 with over 2,000 new dwelling units proposed each year.

Between 2000 and 2004, the actual number of approved housing units exceeded the housing demand by nearly 10 percent. In a 2005 analysis by a local realtor, it was determined that the projected housing demand was approximately 7,470 units.<sup>1</sup> During that time frame, 8,179 residential housing units were approved for development.

Trends lines for commercial and industrial activity remained fairly moderate between 1990 and 2004 peaking in the late 1990's. Commercial activity spiked in 1998 and 2002 while industrial development spiked in 1997 and 2001.

In order to more accurately represent land consumption, total site acreage data was adjusted to exclude lot additions and other plan submissions that do not involve the conversion of land to another use and may unfairly skew the data. Table 2-3 depicts an adjusted acreage for subdivision and land development activity between 1990 and 2004.

In total over the last 15 years, nearly 45,000 acres of land (13 percent of the County) was proposed for residential, commercial or industrial development. On average between 1990 and 2004, about 3,000 acres was proposed for development each year. An analysis of this data at 5 year intervals shows that land consumption continues to rise, increasing approximately 6 percent between 1995 and 1999; and increasing 10 percent between 2000 and 2004.

### Housing Demand vs. Housing Approved

Projected demand for housing units (2000-2004)  
= 7,470 units or  
1,494/year on average

Actual number of approved housing units (2000-2004)  
= 8,179 units or  
1,635/year on average

**Between 2000 and 2004, the actual number of approved housing units exceeded the housing demand by nearly 10 percent!**

<sup>1</sup> Cumberland County Housing Demand, (<http://liveharrisburg.blogspot.com>: Greg Rothman, RSR Realtors, October 16, 2005).

<b>Table 2-2</b> <b>Approved Final Subdivision and Land Development Plans 1990-2004, Units by Land Use Type</b>								
<b>Year</b>	<b>Single Family</b>	<b>Multi Family</b>	<b>Town House</b>	<b>Total Residential Units</b>	<b>Commercial</b>	<b>Industrial</b>	<b>Other</b>	<b>Total Site Acreage</b>
<b>1990</b>	837	831	494	2,162	76	24	146	3,226
<b>1991</b>	859	292	76	1,227	49	16	185	5,025
<b>1992</b>	781	12	427	1,220	71	15	115	2,344
<b>1993</b>	1,195	94	369	1,658	119	22	103	3,417
<b>1994</b>	851	311	173	1,335	100	32	111	3,347
<b>1995</b>	760	82	116	958	108	41	156	3,691
<b>1996</b>	938	552	678	2,168	114	35	151	3,865
<b>1997</b>	851	417	393	1,661	129	51	141	3,573
<b>1998</b>	999	45	475	1,519	134	34	223	3,994
<b>1999</b>	789	92	673	1,554	136	21	219	3,256
<b>2000</b>	1,111	237	416	1,764	102	29	235	5,166
<b>2001</b>	816	470	393	1,679	122	47	113	3,857
<b>2002</b>	883	123	258	1,264	69	25	144	4,295
<b>2003</b>	1,072	380	788	2,240	93	12	158	3,450
<b>2004</b>	836	276	113	1,225	70	8	155	3,481
<b>Totals</b>	<b>13,578</b>	<b>4,214</b>	<b>5,842</b>	<b>23,634</b>	<b>1,492</b>	<b>412</b>	<b>2,355</b>	<b>55,987</b>

Source: Cumberland County Planning Commission Annual Reports, 1990-2004

<b>Table 2-3</b> <b>Land Consumption 1990-2004</b> <i>Approved Final Subdivision and Land Development Plans</i>				
	<b>Total Site Acreage</b>	<b>Adjusted Total Acreage</b>	<b>Adjusted Average Annual Acreage</b>	<b>Adjusted Daily Acreage</b>
<b>1990-2004</b>	55,987	<b>44,790</b>	2,986	8.2
<b>1990-1994</b>	17,359	<b>13,887</b>	2,777	7.6
<b>1995-1999</b>	18,379	<b>14,703</b>	2,941	8.1
<b>2000-2004</b>	20,249	<b>16,199</b>	3,240	8.9

Source: Cumberland County Planning Commission Annual Reports, 1990-2004

## Loss of Farmland

The best soils in the County for farming are also the most compatible soils for development. This results in a conflict that brings pressures on farmers to sell farmland for development and raises the cost of farmland. *The American Farmland Trust, Farming on the Edge* report notes that this conflict is occurring nationwide with our highest quality farmland threatened by development. "We're losing our best land – most fertile and productive – the fastest. The rate of conversion of prime land was 30 percent faster, proportionally, than the rate for non-prime rural land from 1992-1997. This results in marginal land, which requires more resources like water, being put in [agricultural] production."<sup>2</sup> According to the American Farmland Trust, south central Pennsylvania is part of the second most threatened agricultural landscape in America.

In 1959, Cumberland County had approximately 1,873 farms on 204,239 acres of land, based on the United States Department of Agriculture (USDA), National Agricultural Statistics Service. In 2002, there were 1,116 farms occupying 143,159 acres in Cumberland County. In approximately 40 years, over 750 farms and 61,080 acres of land were converted from agricultural production to other uses.

While loss of farmland has been significant in the past 40 to 50 years, it has accelerated dramatically in recent years. In 1997, the USDA listed 1,274 farms occupying 153,076 acres. Between 1997 and 2002, there was a loss of 158 farms and 9,917 acres of farmland in just five years. This represents an average loss of approximately 2,000 acres of farmland each year.

The current farmland preservation programs and policies are not keeping up with the pace of development, given the current rate of farmland loss (approximately 2,000 acres a year) and current rate of farmland preservation through the easement program (approximately 400-600 acres/year). For every one acre preserved, approximately 4 acres of farmland are developed.

*For every one acre of farmland preserved, approximately 4 acres of farmland are developed.*

### Farmland Loss

	Acres Farmland	Number of Farms
1959	204,239	1,873
1997	153,076	1,274
2002	143,159	1,116

#### Farmland loss between 1959-2002

61,080 acres - 757 farms Average loss = 1,420 acres/year

#### Farmland loss between 1997-2002

9,917 acres – 158 farms Average loss = 1,983 acres/year

Source: United States Department of Agriculture, National Agricultural Statistics Service

<sup>2</sup> *Farming on the Edge – Sprawling Development Threatens America's Best Farmland*, (Washington, D.C.: American Farmland Trust, 1997, 2002).

## Status of Land Preservation

To establish a baseline of land protection for *Land Partnerships*, an inventory of developed and preserved land was prepared. An analysis of 2004 data from the Cumberland County Tax Assessment Office concluded that approximately 18 percent ( $63,000 \pm$  acres) of the County is currently developed. For the analysis, developed land included all parcels currently identified for residential, commercial and industrial uses.

The *Protected Land/Water Map (Map 2-1)* is a composite illustration of lands that are currently protected. An inventory of preserved land revealed that approximately 18 percent ( $63,000 \pm$  acres) of the County is permanently protected for public benefit. Accordingly, approximately 64 percent ( $228,500 \pm$  acres) of the County is undeveloped and vulnerable to unplanned development.

Table 2-4 details protected lands by ownership status. Together these areas provide economic, ecological and social benefit to the community. The land in federal ownership includes the Appalachian Trail and its associated land holdings.

Over 75 percent of the protected lands in the County are owned by the Commonwealth of Pennsylvania as State Forests, State Game Lands, State Parks, or Fish and Boat Commission lands. The primary function of these areas is natural resource protection. These natural areas provide limited, passive recreation opportunities.

Farmland preserved through the County conservation easement program does not provide for public access, but rather serves to protect and enhance the agricultural community. The Mount Holly Marsh Preserve, Cumberland County's only open space area, is an important natural area and provides limited recreation.

Municipal parkland accounts for 3 percent of the preserved lands in the County and serves the local recreation needs of the community. This category generally includes municipal parks and other public open space areas, owned by a homeowners association, non-profit organization or conservancy, available for public use. In 2004, 92 acres of parkland and open space was dedicated for public use through the municipal subdivision and land development process.

<b>Cumberland County is:</b>	
✓	18 % Developed
✓	18 % Preserved
✓	64 % Undeveloped & Unprotected

Source: Cumberland County Tax Assessment Database, 2004.

<b>Table 2-4</b> <b>Protected Lands of Cumberland County</b>	
<b>Ownership</b>	<b>Acreage</b>
Federal	2,734
State Parks	2,423
State Forests	39,870
Game Commission	4,445
Fish & Boat Commission	815
Cumberland County	913
Agricultural Conservation Easements	9,530
Municipal Park and Recreation Facilities	2,060
<b>TOTAL</b>	<b>62,790</b>

Source: Cumberland County Planning Commission, 2005

## Smart Growth Planning

An inventory of municipal land use planning and regulatory documents was conducted to assess the current level of planning for open space preservation and smart growth and to determine the need for additional planning assistance. Table 2-5 details all municipal land use plans and ordinances adopted within the County and following is summary of those tools:

### Comprehensive Planning

- 31 municipalities have a comprehensive plan
- 2 municipalities lack a comprehensive plan
- Of the 31 existing plans, 22 are over 10 years old
- 24 municipalities (73 percent) need a new or updated comprehensive plan

### Subdivision and Land Development Ordinances

- 33 municipalities have a subdivision and land development ordinance
- Of the 33 existing ordinances, 19 are over 10 years old and are in need of revision
- 19 municipalities (58 percent) need an updated subdivision and land development ordinance

### Zoning Ordinances

- 28 municipalities have zoning
- 5 municipalities lack zoning
- Of the 28 existing ordinances, 14 are over 10 years old and are in need of revision
- 18 communities (55 percent) need a new or updated zoning ordinance
- Only 2 municipalities have effective agricultural preservation zoning provisions

### Open Space, Park and Recreation Planning

- 7 municipalities have an adopted park and recreation or open space preservation plan
- 26 municipalities lack an open space, park and recreation plan
- Of the 7 existing plans, 4 are over 10 years old and are in need of revision
- 29 communities (88 percent) need a new or updated open space, park and recreation plan

**Table 2-5**  
**Municipal Plans and Ordinances**

Municipality	Comprehensive Plan	Zoning Ordinance	Subdivision Ordinance	Open Space, Park & Recreation Plan
<b>Boroughs</b>				
Camp Hill Borough	1972	1987	1993	*
Carlisle Borough	2002	1997	1989	*
Lemoyne Borough	1975	1992	1986	*
Mechanicsburg Borough	1971	1991	1968	*
Mt. Holly Springs Borough	1970	2001	2000	*
Newburg Borough	*	1987	1987	*
New Cumberland Borough	1993	1981	1997	*
Newville Borough	1995	2000	1973	1995
Shippensburg Borough	2005	1995	1988	*
Shiremanstown Borough	1975	1975	1973	*
Wormleysburg Borough	1971	1998	1998	*
<b>Townships</b>				
Cooke Township	2000	*	2004	*
Dickinson Township	1990	1994	1997	*
East Pennsboro Township	2005	1999	1999	2005
Hampden Township	1994	1998	1995	*
Hopewell Township	1990	1998	2001	*
Lower Allen Township	1986	1997	1986	*
Lower Frankford Township	1991	1994	1993	*
Lower Mifflin Township	1992	1993	1978	*
Middlesex Township	2003	1991	1990	1995
Monroe Township	1994	1998	1998	1995
North Middleton Township	1995	1999	1986	*
North Newton Township	1973	*	2001	*
Penn Township	1997	Pending	1999	*
Shippensburg Township	2005	1990	1991	*
Silver Spring Township	1995	2003	2003	2005
South Middleton Township	1999	1999	2001	1995
South Newton Township	1971	1987	1997	*
Southampton Township	1989	2004	1994	*
Upper Allen Township	1999	2004	1993	2002
Upper Frankford Township	1992	*	1993	*
Upper Mifflin Township	*	*	1990	*
West Pennsboro Township	1991	1993	1998	*

\* None adopted

Source: Cumberland County Planning Commission, 2005.

## Needs Assessment Findings

A review and analysis of Cumberland County's population trends, development patterns, development activity, farmland loss, land preservation status and municipal land use planning found a variety of needs for open space preservation and smart growth planning. A summary of findings is detailed below:

### Status of Land Preservation

Cumberland County is fortunate to have the amount and diversity of public land holdings, yet extensive acreage is undeveloped and unprotected and contains significant natural resources and valued open space characteristics. Approximately 64 percent of the County is currently undeveloped and unprotected.

### Population Expansion

Cumberland County has experienced significant population growth over the last 50 years and population projections indicate population growth will continue into the near future. As a result, acquisition of parks and open space must be increased to keep pace with the population expansion.

An increasing population and thriving economy also create additional pressure on the environment and our natural ecosystem. To ensure ample, clean drinking water, fresh air and plant and animal habitat diversity, natural resource protection must be increased and balanced with economic development needs. The amount of environmentally sensitive lands that should be protected is determined by natural systems, not by human needs. The more sensitive the land the higher priority it should have for preservation.

### Pace of Development

The current rate of development appears economically and environmentally unsustainable for Cumberland County. Cumberland County subdivision and land development activity and Agricultural Statistics Service data shows that approximately 2,000 and 3,000 acres of open space and farmland is proposed for conversion to residential, commercial or industrial uses each year. Further, approved residential development activity exceeds local demand by nearly 10 percent.

If the current rate of development were to continue into the future the remainder of the County's undeveloped land could be consumed in approximately 75 years. Sustainability requires a sensitive balance of economic objectives, social goals and environmental resources.

## Smart Growth Planning

A review of municipal land use plans and ordinances established that planning documents are in need of revision. Cumberland County is rapidly changing and plans and ordinances must be up to date to plan for growth.

The Pennsylvania Municipalities Planning Code (Article III, Section 301(c)) requires municipal comprehensive plans to be reviewed at least every ten years. At present, over 70 percent of the local comprehensive plans are over 10 years old and due for update.

Municipalities collecting recreation fees must have an adopted recreation plan (MPC Article V, Section 503(11)(iv)). Currently, only 12 percent of the municipalities in Cumberland County have an open space, park and recreation plan.

There also appears to be a strong need for subdivision, land development and zoning ordinance assistance and revision. 4 municipalities currently lack zoning ordinances and 55 percent of all ordinances are over 10 years old and may not reflect current planning trends and best management practices.

Open space preservation goals are most efficiently achieved through sound planning practices. Regrettably, many existing ordinances are encouraging undesirable land use patterns rather than promoting attractive, livable communities.

To conclude, the following needs were identified during the assessment process:

- A significant majority of Cumberland County's land resources are unprotected and vulnerable to unplanned growth.
- The population of Cumberland County is growing rapidly and is expected to continue to grow. Land preservation efforts must respond to the increasing population.
- The current pace of development does not appear to be economically and environmentally sustainable.
- The current pace of development exceeds the pace of land preservation efforts.
- Many municipal land use plans and ordinances are outdated and do not reflect current planning trends and best management trends.
- A balanced approach to open space preservation is needed to respond to the unique needs of the County. Land acquisition, investments in existing communities and smart growth techniques should be used to address these diverse needs.